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*From Domestic Manufacture
to Industrial Revolution*

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*From Domestic Manufacture
to Industrial Revolution*

The Case of the Rhineland
Textile Districts

HERBERT KISCH

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*This book is dedicated to
Frederika Wehle Kisch (1893–1988)
in loving memory*

P R E F A C E

Herbert Kisch was born on June 12, 1924, in Prague and died on March 9, 1978, in East Lansing, Michigan—too early to complete his lifework. The manuscript representing his principal work was finished before he died and is published here for the first time in English. It was initially translated into German and published in 1981 as a volume in the series of the Göttingen Max-Planck-Institut für Geschichte—*Die hausindustriellen Textilgewerbe am Niederrhein vor der industriellen Revolution. Von der ursprünglichen zur kapitalistischen Akkumulation. Veröffentlichungen des Max-Planck-Instituts für Geschichte, Band 65* (Göttingen, Vandenhoeck und Ruprecht, 1981). During the last years of his life Herbert Kisch had formed close and friendly ties of cooperation and discussion with Peter Kriedte, Hans Medick, and Jürgen Schlumbohm, all three research associates from the Max-Planck-Institut. It is with great pleasure that they have joined with Richard Tilly, Kisch's long-standing friend and colleague, and with his widow, Clara Kisch, to greet the publication of the English edition by Oxford University Press.

Herbert Kisch's work deserves much wider recognition than it has thus far received. Indeed, it may be said that in taking up the subject of this book—cottage industries in the transition to industrial capitalism—and in writing this book in an exemplary synthesis of analytic and narrative styles, Kisch anticipated both a subject matter and a mode of investigating and representing economic and social history that has become increasingly important since his untimely death. In embracing the best traditions of both European and American historiography, Kisch attempted to return to economic history its quality and distinction as part of the humanities. This is surely an endeavor which deserves the attention not only of present and future generations of economic historians but also of a much wider public.

East Lansing, Mich.
Göttingen
Münster
August 1988

C.K.
P.K., H.M., J.S.
R.T.

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This volume was completed in its present form on the eve of the tenth anniversary of the untimely death of its author, Herbert Kisch. As editor and acting author, I am indebted to those individuals in this country and in Germany who have provided me with the technical assistance and moral support to finish this mammoth task. I am also indebted to the editors of several scholarly journals in the United States, England, and Italy who graciously granted permission to reprint articles and monographs that were originally published in their journals.

First and foremost, I wish to thank Jonathan R. T. Hughes, professor of economics at Northwestern University, whose early negotiations with Oxford University Press ultimately resulted in the acceptance for publication of this long-dormant manuscript. Throughout the lengthy editorial process Professor Hughes provided me with unfailing encouragement and assistance.

Longtime family friend Richard Tilly, professor of economic and social history at the Westfälische Wilhelms-Universität and director of the Institut für Wirtschafts- und Sozialgeschichte, Münster, West Germany, wrote the thoughtful introductory essay "Herbert Kisch: The Man and His Work." He also contributed the important concluding essay, bringing meaning and unity to the volume's various chapters. Additionally, Tilly cited, brought up to date, and analyzed the relevant literature published during the past decade.

I offer my appreciation to the "Göttingen Three"—Peter Kriedte, Hans Medick, and Jürgen Schlumbohm—researchers at the Max-Planck-Institut für Geschichte, Göttingen, West Germany. Working with the Vanderhoeck and Ruprecht Press, they translated the original manuscript into German and in 1981 published it as *Die hausindustriellen Textilgewerbe am Niederrhein vor der industriellen Revolution*. I was pleased to meet with them in Göttingen last spring to discuss the content and format of the present volume. I am grateful to them for their enthusiastic efforts to publish this book in English.

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For whatever shortcomings and mistakes still remain in this book, I alone take full responsibility.

Michigan State University
March 1988

C. K.

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*From Domestic Manufacture
to Industrial Revolution*

Prologue: Herbert Kisch, the Man and His Work

Richard Tilly

Herbert Kisch was born into a prominent and well-to-do Jewish family in Prague in 1924. In 1938, however, the Munich Agreement cast its shadow over the future of Jews in Central Europe and he left Prague. At first he was sent to France to be with his uncle, Egon Erwin Kisch. But as war broke out and a German invasion threatened, he moved on to Britain, where he completed his secondary school education. He then joined the Czech Armored Brigade of the British Army and subsequently saw action in the closing phases of the war (1944–45). After the war, he returned to Britain, studying at the London School of Economics and Political Science (LSE), taking a degree in economics and economic history. He emigrated to the United States in 1950 and began his postgraduate study in economics and economic history, first at the University of Washington in Seattle, then at the University of California at Berkeley and, finally, again at the University of Washington where he received his Ph.D. in 1958. He began his career as a university teacher in the Department of Economics at Michigan State University in East Lansing, Michigan, in 1959, moving through the ranks from assistant professor to full professor. There he stayed until his untimely death in 1978, teaching money and banking, development economics, the history of economic thought and, only occasionally, economic history. His principal research field, economic history, was thus extracurricular, a field to which he could devote only his spare time and the occasional sabbatical and fellowship years in Europe (1958–59, 1961–62, 1967–68, and 1974–75).

These bits of biographical data point to a youth interrupted by flight and refugee existence, to a young manhood spent as soldier and then as foreigner in a very cosmopolitan academic environment, to a professional career as teacher of economics and part-time researcher in the field of economic history. But neither such data nor the following evaluation of his work can begin to capture the warmth and exuberance of his personality. Envy was foreign to him. He shared in his friends' success as if they were his own. His interest in sharing the life of his friends was part of his character's most striking feature: an overpowering interest in other people, motivated by a sociologizing instinct which continually sought to identify the social coordinates of those with whom he came in contact—their social origins, family

and occupational background, economic advantages and ambitions, their political views and *weltanschauung*. This powerful interest endowed him with an amazing gift of observation, though one which could occasionally cause his friends some discomfort. I can recall many occasions—on the streets of a large city, in crowded elevators, or in the stillness of an archive's reading room—when he sought to deduce a man's social position from the cut of his suit or the instruments peering out of a breast pocket. And if indirect observation failed him, he took the direct approach and began interviewing the object of his curiosity. These were sometimes moments of embarrassment but, especially in retrospect, moments of enrichment as well. I dwell on this characteristic of his personality because it is so inseparable from his scholarly work. Before turning to the work itself, I would like to interject a few comments on the connection between Herbert Kisch, the man, and his scholarship.

First and foremost, there is his sympathy for what he liked to speak of as "the Marxist view of the world." In part, it derives from his family situation—from his famous journalist uncle, Egon Erwin Kisch, to whom he was close in the early years of emigration. In turn, this was related to the appeal of Marxism to Central European intellectuals of the time, as a consistent answer to fascism. But an additional important factor was the high quality of work produced by British Marxist economists and historians such as Eric Hobsbawm, Christopher Hill, Maurice Dobb, and Joan Robinson in these formative years of the 1940s and early 1950s. The vitality of this group of scholars made a lasting impression upon Herbert Kisch. Beyond these special factors, one may finally mention the obvious relevance of Marx's work for any scholar whose main theme is the history of European industrial capitalism.

A second important force in shaping Herbert Kisch's *weltanschauung* and general approach to economic history was his anglophilism. Despite the country's considerable economic difficulties in the postwar period, Britain remained for him a model nation, the world's most civilized, most human, most appealing society—not least of all because of its considerable tolerance for minority opinions, and its capacity for compromise in the solution of social problems. Britain's role as refugee home since 1939 accounts for one obvious reason for Kisch's anglophilism. But there is also a more explicitly intellectual influence of the latter on his work, related to the nexus between Marxist and non-Marxist British thought.

Herbert Kisch was impressed by the theoretical achievements of British classicists such as Adam Smith and David Ricardo, and by their incorporation in Marx's own thought. He saw in Marx's position a further step in the tradition of the social thought of Adam Smith and the "Scottish School of Historical Sociology," whose materialism he shared, and also as a "British" achievement.¹ Transmuting this vision into his own times, he noted the willingness of British Marxists to take up seriously the challenge and possibilities of non-Marxist thought, and to discuss their scientific problems in its terms (the hallmark of their own originality), and at the same time saw in it proof of the ongoing vitality of British intellectual life. But the influence of non-Marxist

thought in Britain also deserves mention. There is no doubt that Richard H. Tawney, one of Kisch's teachers in London School days, served as a model for his own work.² Alfred Marshall, whose doctrines were quite in vogue at LSE during the late 1940s, was another important influence. These peculiarly British influences may explain why Marxist thought remained in the background of his work, instead of serving as a banner to be carried into battle against one's intellectual foes.³ It is clear that British thought and—because British thought, in Kisch's view, reflected the country's historical development—its society generally served him as a norm. This extended to using British economic and social development as a standard by which the experience of other European countries was to be judged. As Kisch knew, such a procedure has both advantages and disadvantages.

Third, intellectually speaking, Herbert Kisch was and remained an "outsider." To some extent this derived from his status as Jewish emigrant in Great Britain and the United States; even after he became a U.S. citizen.⁴ But it also had to do with his Marxist sympathies, which he did not openly attempt to propagate in the organized political arena and which were hardly shared by his fellow graduate students or colleagues in the field of economics during the 1950s and 1960s.⁵ These sympathies came close to, and were no doubt enriched by, a peculiarly American strain of thought which one might call "radical populism" into which Kisch was initiated during his graduate school days at Seattle and Berkeley. Here he came to know a group of young graduate students and instructors whose radicalism stemmed partly from the intellectual influence of Robert Brady and Leo Rogin but also from the specific political situation of the times, including the "loyalty oath" battle in California university life between 1949 and 1950. This strain of thought did not become an important influence in American academic economics or history in the following decades, and so Kisch's continued intellectual commitment to Marxist and kindred radical views of the world probably hindered his career chances.⁶

This "outsider" status did not mean that Kisch lived the life of a scholarly recluse. On the contrary, his extensive personal contacts in many countries and languages (those who knew him well will miss his frequent and long, handwritten letters, at once gossipy and intellectual in tone), led to a continual reassessment of his intellectual perspective, including those involving his own research. In conjunction with his Marxist and anglophile sympathies, it is not surprising that he should have approached his lifework and main field of research, modern German economic history, with unorthodox questions and perspectives.

Fourth, despite his internationalist and multinational contacts, Herbert Kisch was an intensive observer of the political environment around him. He was fascinated by the phenomenon of political power and by the ambitions and machinations of power-seeking individuals at all political levels, whether international, national, local, or especially at the university level, which he knew best. Kisch invested a considerable portion of his energies to the collection, processing, and dissemination of information concerning questions of

power—questions which had little to do with his own research, but which nevertheless belonged to what was the quintessence of his intellectual being and his scholarly endeavors: his interest in identifying the myriad mechanisms by which material advantages motivated human behavior and in seeking to appraise the societal consequences of free, individualist pursuit of that advantage. He was particularly interested in the historical range of one theoretical answer to this large question—the materialist interpretation of the Scottish “historical school” of the eighteenth century,⁷ and in testing this interpretation on the concrete example of the history of the German bourgeoisie of the eighteenth and nineteenth centuries. To the furtherance of this, knowledge of current political struggles seemed to contribute as much as the historical source materials did.

This political orientation shaped his work in various ways. It probably caused Kisch’s research to proceed more slowly than it would have, had he devoted less time and energy to the political “inputs,” and it led him to produce selective versions of economic history, emphasizing power relationships at the expense of purely economic ones. But this approach also made it easier for him to see parallels between contemporaneous problems of the poor countries of the Third World and European industrialization in the eighteenth and nineteenth centuries.⁸ This connection was furthered by the then growing interest of economic history which was particularly strong in the research of his teachers at Berkeley, M. M. Knight and R. A. Brady. Their emphasis on the power dimensions of economic backwardness strengthened his own preconceptions of this area.

These four factors, and the diffuse influence of his Jewish origins and contacts, help to explain Herbert Kisch’s highly original contributions to economic history. It is not economic in the usual sense of the word. For the economic history of the Rhenish textile industry serves Kisch mainly as a means for discussing the rise of the Rhenish industrial bourgeoisie—in Kisch’s view a classic example of that most important component of the process Marx called “original (or ‘primitive’) accumulation.” Other themes, such as technical change, the growth of markets, or even the formation of the industrial labor force (the other side of Marx’s “original accumulation”), receive merely perfunctory treatment as background data to illustrate certain phases in the development of the bourgeoisie. The power struggle within the protoindustrial and industrial bourgeoisie are well described, as are the relationships between this bourgeoisie and its power-holding class rivals, the “feudal” aristocracy. In this connection, it is of some interest to note that Kisch originally approached the history of German textile centers through an analysis of that traditionally Marxist problem, the history of the industrial working class—its social origins, factory discipline, living conditions, its class consciousness—and for that purpose, produced merely a superficial description of the industrial bourgeoisie.⁹ One wonders why his interest in these two sides of development shifted so pronouncedly over time. From conversations with him, I know that he found no genre of economic and social history less interesting than that which centered on the misery of working-class life, and that he was

attracted to only those examples of "history from below" which jointly considered the links with the bourgeoisie.¹⁰ The topic which held him in its grip became the story of the ambitious, upwardly mobile bourgeois. The topic, no doubt, lay closer to his own life experience than did working-class problems. Perhaps it was also related to his belief that the truly creative and progressive phase in the historical development of the German bourgeoisie belonged not to the nineteenth, but to the eighteenth, century. In any case, that is a thesis that informs the following chapters. It may be useful therefore, to discuss briefly some of its historiographical implications.

The Work

Taking European, and especially German, economic and social history as a frame of reference, what new insights are found in Kisch's work? I present a more complete answer to this question at the conclusion of this volume. Here I merely draw attention to four points which identify Kisch's contributions to German economic historiography:

1. The significance of *regional* industrialization
2. The periodization of German industrialization.
3. The significance of capitalist market forces in shaping German industrialization.
4. The connection between socio-political and economic development.

The Significance of Regional Industrialization

German economic historians do not need to be convinced that regional differences are important for understanding their country's industrialization. Nevertheless, Kisch's investigation into the path-breaking development of Rhenish textile centers shows the value of the regional perspective for German industrialization more clearly than any other comparable study I know. The pioneering role of these Rhenish centers is seen to question the usefulness of popular typologies of industrialization (such as those of Rostow or Gerschenkron) that build on national aggregates.¹¹ Such typologies imply that overaggregate, highly diverse local experiences reflect divergent social and political influence on economic variables, and obscure significant interregional and sectional linkages. Of particular importance in this connection was Kisch's comparison of Rhenish and Silesian conditions, for here his main differentiating "variable" was "social structure" and regional comparison quite explicit.¹² In short, Kisch's work is a strong argument for the regional approach.

Periodization of German Industrialization

Kisch's study of textile regions is unsystematic with respect to quantitative indicators of economic development and does not cover all of Germany's

dynamic textile centers. Nevertheless, his documentation of progress in the Rhenish regions (Aachen, Krefeld, Wuppertal), strongly suggests that German industrialization was well underway by the beginning of the nineteenth century. Given the apparently great economic importance of such centers on neighboring regions, and postulating a similar important impact of centers not investigated by Kisch (such as Saxon ones), it could be claimed that the foundations of German industrialization were well established by the early 1800s. According to Kisch, significant structural changes accompanied the development of these textile regions: the growth of foreign trade, the concentration of capital in the hands of risk-taking merchant capitalists, the spread of rural domestic production of textiles dependent upon merchant capitalists, population growth (especially in rural areas), and among the lower classes of society, the commercialization of agricultural production and the development of internal markets for agricultural products, and so on. The list of changes adds up to weighty arguments in support of the concept of "protoindustrialization."¹³ Kisch did not initially have this concept in his research program, and even after he recognized its relevance, he did not seriously explore its demographic implications. Nevertheless, his work emphasizes the same transitional phase and has the same implications for the periodization of German industrialization: it is pushed back well into the eighteenth century, downgrading such conventional dates at 1794 (Ratingen spinning mill), 1806–7 (Jena and the advent of Prussian reforms), 1834 (the Zollverein) or even the 1840s with their railroad building and the emergence of heavy industry. Though his quantitative evidence is unsystematic and his argument far from airtight, Kisch's work poses a serious challenge to all adherents of "industrial revolution" or "big spurt" interpretations of German industrialization which utilize such time points.¹⁴

On the Significance of Capitalist Market Forces

Comparative historical investigations, such as those by B. Moore and A. Gerschenkron, typically emphasize the peculiarities of German development, such as its "revolution from above" or the "Prussian way" of agrarian modernization, in order to explain why that development deviated so clearly from the path taken by the first industrial nation—Britain (whose development is more or less implicitly taken as the normal path of modernization). Such studies have attributed great importance to the weakness of the German bourgeoisie, which is judged responsible for a lack of capital, of entrepreneurial talent, and of markets for which—given the (assumed) "goal" of industrialization—only conscious state action could adequately compensate. Mercantilism, bureaucracy, and enlightened absolutism are thus seen as substitutes for the spontaneous capitalism and a broad middle stratum of society that allegedly propelled British development.¹⁵

Herbert Kisch's findings cast doubt on this interpretation of German development, which in one of its variants can be described as the "Hohenzollern legend." In Kisch's view, the true carriers of industrial development in these

textile regions were individual capitalist entrepreneurs. These began at the end of the medieval period as well-to-do peasants engaged in trade as a sideline, evolving later into specialized traders and “putter-outers,” and finally as merchants and factory owners with hundreds of dependent workers. This thesis is elaborated in chapter 2 where the successful Krefeld silk industry, built almost exclusively by private entrepreneurship, is contrasted with the less successful Berlin industry, which was heavily dependent upon the assistance of the Prussian state. As the French physiocrat Count Mirabeau observed, “Unhappy those factories, upon which Prussia’s monarch bestows his loving attention.”¹⁶

The same judgment is applied to the development of other Rhenish textile centers, though not so explicitly. In these centers one can find examples of state intervention of a mercantilist kind; for example, the creation in 1527 of the *Garnnahrung* in Wuppertal, an institution which conferred monopoly rights on Elberfeld yarn merchants and bleachers, but which aggressive, upwardly mobile private entrepreneurs were able to evade and render harmless by having extensive amounts of yarn bleached in the low-wage surrounding countryside. It is also necessary to add that the *Garnnahrung*, like many similar institutions elsewhere, was flexible. It tolerated violations and adapted its rules to significant changes in economic conditions. The dynamic factor here is not the state and the institution it created, but the entrepreneurs associated with it.¹⁷

This analysis could be taken as supporting the views of economic liberalism, in the nineteenth-century sense. But though such an interpretation of Kisch’s study is not completely without merit, it should be supplemented by the recognition that it represents a case study in the general process Marx described as “original accumulation”—a case study emphasizing capital and entrepreneurs, and containing only light sketches of the workers’ development.¹⁸ This combination of analysis of economic development, dynamic entrepreneurs, and Marxist allusions reminds one of Joseph Schumpeter, a scholar Herbert Kisch knew well and frequently cited, although Schumpeter mainly analyzed the structure of “developed” capitalism rather than its early stages.¹⁹ Be that as it may, the illumination of the connection between market forces and the concept of original accumulation found here not only identifies an important subject for further research by Marxist and non-Marxist scholars, but also provides a valuable empirical starting point for that research.

The Connection Between Sociopolitical and Economic Processes

Herbert Kisch criticized German economic historians of his period for their failure to use economic theory. He argued that they had no consistent (alternative) theory of economic development with which their well-known rejection of classical doctrines could be fortified. This criticism is somewhat weakened by the fact that Kisch’s work itself contains no clear, explicit statement of the development theory he prefers—at least not in the sense of an easily replicable, falsifiable “model.” Nevertheless, Kisch does have a theoretical

framework—perhaps a conceptional view or “vision” would be a more appropriate word. It corresponds to the worldviews of Adam Smith and Karl Marx, which places at the center the social division of labor, the formation of classes, and the “simple, natural system of liberty” in which the individual pursuit of self-interest generates, via the filter of social and economic competition, social change and economic growth. Of decisive importance for the continued dynamism of the social system is the maintenance of vertical social and economic mobility: the continued or periodic ability or upwardly mobile strata to penetrate (with the help of development of new means of social and economic competition) the barriers periodically created and re-erected by each generation of power and wealth elites. Economic inequality and in particular a phase or phases of spreading mass poverty are seen as fundamental to the “system’s success.” A positive connection is seen between elastic supplies of cheap labor, on the one hand, and entrepreneurial initiative and capital formation, on the other. However, development, even from the perspective of class formation and distribution, is by no means a “zero-sum game.” Dynamic regions are not distinguished solely by capital accumulation, but also by a qualitative upgrading of the labor force and rising real wages, which in turn alter the conditions for the further “realization” and accumulation of capital. Following Smith or Marx, Herbert Kisch formulates a positive judgment of early industrial capitalism without, however, overlooking or failing to comment on the system’s seamy side: the conditions of most of the working-class population in depression phases and in uncompetitive, stagnating regions.²⁰

The foregoing comments are an interpretation of Kisch’s scattered statements on the development process. They are intended to enable us to discuss the methodological consequences which he felt his theoretical visions had for his concrete historical research.²¹ Kisch was probably most concerned with disproving simple development models—above all, those containing only purely economic variables, which treated social and political conditions as “exogenous.” This was perhaps particularly true of his special interest: the explanation of industrial development in the pre-factory phase of the textile industry; or, to put it differently, the explanation of the emergence and growth of protoindustrialized regions. Kisch argued that explanations concentrating on labor surplus alone were inadequate; that such surpluses were historically more frequent than protoindustrialization, because such surpluses in many cases resulted from protoindustrialization, and finally because only a minority of protoindustrial centers effectively paved the way for full industrialization and the factory. Kisch develops a similar line of reasoning to refute the “export-base” theory, according to which a regional development is explainable in terms of the market success of its principal exports—in this case textiles.

Seen positively, Kisch’s methodological interest lay (implicitly) in introducing the social structure and distribution of political power of a given region as key factors in explaining its development. He was thinking of the influence of the landed aristocracy upon the goals of the great merchants, of the institutional conditions for settling propertyless immigrant families on local land as a

potential source of labor, and so on. In their entirety, these aspects of development can be fused together into a "variable" of analysis which Kisch called "social structure" and which was designed to stress the linkage between economic and socio-political development processes. It is a linkage not strictly quantifiable, but indispensable for the broad, long-run perspective that Kisch had in mind.

Kisch's emphasis upon this interdependence is not merely rhetorical. It receives applied expression in his analysis of a number of concrete historical problems—for example, in his treatment of the craft guilds. In Kisch's "development model," guilds are a negative element. Although instruments for the defense of a given group's economic and social interests, their effectiveness is invariably at the expense of the whole regional society. Regions where guilds remain strong can be clearly identified as historical "losers" in the development race during the protoindustrial period.²² But their weight as a developmental hindrance lies in their social and political influence. For it was mainly through this influence—for Kisch, itself a manifestation of the importance of "social structure"—that alternative forms of productive organization could be held back.²³

A second class of problems closely related to that of the guilds, but more fundamental, concerns the rise of the capitalist entrepreneur-industrialist. Seen typologically, the central figure of Kisch's "model" is not the great wholesale merchant—Renaissance merchant princes such as the Fuggers—but the upwardly mobile "man on the make," the well-to-do peasant Kulak whom the times and emerging opportunities transform first into a trader and then into a capitalist entrepreneur. Because such types are "outsiders," only economic innovation can serve them as means of social ascent. Only when their economic base and their wealth have won them social recognition, do the more successful representatives of this genus direct their attentions and energies to the pursuit of noneconomic aims such as ostentatious consumption, politics, or cultural patronage. This chain of argument is not completely closed, for in this period entrepreneurial activity presupposed a certain minimum of political influence, which is generally left unexplained. Nevertheless, relating development successes and failures to interactions between differing combinations of individual economic activity on the one hand and political power and status on the other hand, seems plausible, if not precise.

Kisch's analysis of Rhenish development fits well into the prolonged historical debate initiated by Max Weber's celebrated essay on the relationship between Protestantism and capitalism. For Kisch, however, it is the community of dissenters rather than their dogma that is crucial. In his view, Protestant minorities such as the Mennonites, excluded from political office and landownership, banded closely together and created through their family connections a network or transfer system for commodities, money, and information which—in a world of long and uncertain routes of communication and transport—endowed them with considerable economic advantages, which they single-mindedly exploited. Of particular significance for the economic success of such minorities in the Rhenish case was a sufficiently open social

and political system which provided tolerance and protection. What generated such tolerance is, however, left unexplained.²⁴

Reading through these parts of Kisch's work and reflecting on the very large questions of economic and social history they raise, one realizes that the author's aim is not confined to an explanation of economic development, daunting as that goal alone might seem. Rather, it extends to an attempt to interpret noneconomic phenomena in terms of historical materialism. In the discussion of the relationship between Protestantism and capitalism cited earlier, Kisch is also interested in seeing the Reformation in the light of social and economic possibilities and problems. Analysis of the guilds yields observations on the phenomenon of the social protest that give it mainly an economic interpretation. At several places in his studies are speculations in intellectual history, as when the failure of even a rudimentary "science of society" to appear in the Rhineland is explained and attributed to the dependence of the Rhenish bourgeoisie, including its merchants, upon the aristocratic—princely and nonbourgeois holders of political power. In raising this absence of a bourgeois culture in the Rhineland as a puzzle, Kisch is implicitly applying the British "model" to the Rhenish, and indirectly, to the German case.²⁵ The example may qualify as an anticipation of the frequently discussed "failure of the German bourgeoisie" in 1848–49. Such attempts at linking economic and noneconomic processes serve to illustrate that Kisch's intellectual interests lay in this interdependence, rather than in the economic sphere alone.

These brief remarks are neither an attempt at biography nor a review article. They are not even mainly "facts" but rather reflections on Herbert Kisch's work, based on many years of close, personal communication. Their point of departure is the belief that Kisch's work has been undervalued in the historiography of German economic history, and that a brief discussion of the man, his method, and his aims, in conjunction with this publication of his main studies contribute to an appropriate appreciation of the latter. To recapitulate: these studies are not merely detailed monographs on the history of German textile industry but also attempts to utilize that history to come to grips with the larger question of the economic history of industrialization: Under what conditions does industrial progress begin to accelerate in a backward, traditional world, and with what social and political consequences? These studies offer arguments and concrete historical examples which are of great importance and relevance for all historians interested in the problems of economic and social development.

1

Introductory Comments

Why Study Rhenish Economic History?

This is a study about the development of the Lower Rhine textile districts during the era of domestic manufacture. Considering the length of this account, some introductory remarks about the nature and scope of this inquiry are in order. Specifically, the choice of area, the selection of topics, and last but not least the methodological approach call for some elucidation.

Having opted to do a regional study, I decided to focus on the Rhineland or, to be more precise, on the growth of the Lower Rhine textile districts up to the beginning of the industrial revolution. There are several reasons why I decided on this particular part of the world. For one, I sought a territory within the German lands in which the circumstances leading up to the point of its “take-off” could be studied in detail. Besides, once I realized the significance of examining a society’s period of incipient industrialization in the context of its long-drawn-out past, it seemed to me crucial to select a cluster of localities where nonagricultural activity had been of considerable importance from earliest days.

Over the years this project has proven an exciting venture. Certain impressions stand out, especially some of the unique features of the Rhineland’s evolution. I think it is accurate to say that in terms of centuries, the Rhineland experienced more solid progress than most other sections of Germany. Geography and topography had much to do with it.¹

Advantageously located at the crossroads of what was once civilization, and dominated by the Rhine River, this territory was, since early medieval times, engaged in a thriving entrepôt trade. Definite trading patterns emerged. Goods from the Mediterranean and the Levant were in search of outlets along the North Sea coast in exchange for Dutch manufacturers and fish or gold and silver from Spain and Portugal. At the same time, products from Champagne and Flanders were sold in return for raw materials such as wheat, lumber, and furs from the Baltic.² In all these transactions, the Rhenish merchants, by virtue of their strategic position, probably had a hand in buying and selling and generally facilitating this far-flung commerce. In due course the area became a much envied emporium and Cologne a major metropolis where local operators were

joined by Jewish and Lombard entrepreneurs attracted to this city by the prospect of ever more profitable opportunities.³

So flourishing a transit business provided employment for increasing numbers of local inhabitants, especially for those living close to the main arteries of this traffic. Peasants with holdings close to navigable rivers and burghers of river port towns were among the first to avail themselves of the new openings as packers, handlers, boatmen, and merchants. Such activity quite obviously raised their incomes and their aspirations. After all, persons caught up in the feverish atmosphere of money-making are bound to experience a change in their way of life as well as in their outlook.⁴

One specific feature of this historic conjuncture is worthy of special mention. In the hustling and bustling drama of medieval *entrepôt* trade, fear of shortages was all-pervasive. Early mercantilist policy was to reflect these anxieties, for its main thrust was directed toward overcoming market deficiencies. Consequently, there were always buyers eager to discover new sources of supply. It was therefore only natural that the more enterprising among the Rhinelanders, particularly those in close touch with this type of commerce, should have channeled their efforts toward trying to satisfy this international clientele.⁵ They manufactured or grew items using local resources that were readily available. In this way they came to mobilize native factors of production, which previously were either underemployed or not used at all. Given the right set of circumstances, the impact of such enterprise upon the regional economy had to be profound.⁶

For a population's continuous contact with foreign commerce to lead eventually to indigenous production of exports and import substitutes, is a commonly observed pattern of evolution. By all accounts, the Rhineland, with Cologne in the forefront, was highly successful along these lines. In time, the export of manufactures and produce boomed. However, it would not be accurate simply to attribute the region's subsequent headway to these new contacts. To be sure, an enlarged volume of sales to other parts of the world provides the solid basis for an area's progress. However, this is true only if its social environment is so organized as to transmit the impulses from these newly released energies to society at large. As Kravis has pointed out, exports are not to be viewed as an automatic "engine of growth" but rather as a "handmaiden," a catalyst of economic advance if—and only if—local conditions are ripe for it.⁷

From earliest times, the Rhineland scene appears to have possessed the qualities requisite to allow the area to absorb the wholesome influences emanating from the world beyond. To explain this forward-looking attitude, the late Bruno Kuske, the Rhineland's foremost economic historian, went back to antiquity in order to unravel some of the relevant clues. To Kuske the Roman occupation of this territory was a momentous episode in the long-drawn-out process that endowed the Rhineland with some of the initial ingredients necessary for later progress. For military security, the Romans erected "villas" along the Rhine and then built roads in order to connect these bastions. The civilian consequences of these defense expenditures were significant. The

forts helped to establish law and order throughout the area and, in turn, this security provided the basis for the emergence of organized economic life. Additionally, the opening of the new roads offered possibilities for greater exchange. Also, the occupation forces stimulated local economic activity as the demand for weapons, tools, clothing, and sustenance led to the manufacture of iron and metal wares, the spinning of linen and cloth, as well as the mining of indigenous resources and the cultivation of flax and wool, food and cattle.⁸

In short, the Roman sojourn in these parts had brought with it the higher civilization of the Mediterranean. Undoubtedly, these efforts at introducing new ways of doing things appear to have been successful. Even after the Romans departed, the settlements they founded continued as centers for the preservation and diffusion of their already superior culture. Indeed, these forts survived as cities, even in the threats of the Norman and Franconian era. They later expanded again during the growth periods of the ninth and tenth centuries.⁹

Not surprisingly, the Rhenish districts were adequately developed to take full advantage of Charlemagne's decision to make Aachen and its environs the focal point of his empire.¹⁰ Urbanization was thus strengthened and, even more important, the Rhineland's status as a transit area for East-West exchange was further enhanced. Even though the subsequent centuries may have brought some setbacks—particularly after the “boom” of the twelfth century—the territories on either side of the Rhine were sufficiently resilient to survive adversity. Eventually, they were able to participate in the advances of the late Middle Ages, spurred on by the influences exerted by the developments in neighboring Flanders and Brabant.¹¹

The Rhineland's tendency to long-run advance, reflected in its ability to make the most of the existing trade flows and the spread of urbanization, would not have been possible without the proper agricultural foundations to provide the necessary support.¹² In this context, it should be remembered that the Rhineland was part of a pastoral zone that stretched across northwestern Europe from Brittany to Westphalia where, since earliest times, cattle pastures and sheep walks prevailed. A consequence of this kind of activity was that the single, isolated holding, outside the confines of a commable acre, was able to evolve as the typical form of agricultural organization. Consequently, loosely structured village communities became the rule. In turn, this is supposed to have helped instill in the Rhenish husbandman an independence and individuality that was to prove one of his characteristic traits.¹³

It is important to point to this North-West European zone (of which the Rhineland was an integral part) as an area colonized under the auspices of a feudalism conspicuous for its leniency. By the eleventh century, according to some authorities, the Western manorial system reached its apogee, with the villein spared certain obligations and enjoying freedoms usually associated with landownership. During the fourteenth and fifteenth centuries, the local lord-serf relationship was still further tilted in favor of the latter.¹⁴ At the time, powerful forces were ranged against the feudal system. For one, the

price declines of this era raised labor costs and thereby hastened the commutation of feudal dues into fixed money rents.¹⁵ And the opening of Eastern territories offered to Western populations the chance of emigration to new lands of settlement, and as a result improved the bargaining power of those willing to stay behind.¹⁶

Such a progressive loosening of feudal bonds slowly allowed a market economy to evolve. It would be quite ahistoric to exaggerate the extent to which the exchange economy had taken hold of the Rhineland countryside by the twelfth and thirteenth centuries. However, over the next three hundred years, the cumulative impact of incipient capitalism must have been sufficiently pervasive. At least it caused social realignments of momentous significance. On the one hand, a class of cotters emerged—a class always eager to supplement the meager returns from their miniscule plots by hiring themselves out to others. On the other, a class of Kulaks appeared on the Rhenish scene. These were relatively well-to-do peasants, forever in search of additional gain within their wide and diverse spheres of interests.¹⁷

These budding capitalists were obviously in tune with the times. In the course of the early modern period, the growth of town life throughout the Rhineland increased the market demand for food and raw materials, including timber, which only peasants with larger holdings were able to satisfy. There is a strong presumption that they managed to produce the added supply by enlarging their holdings through consolidation and clearance. Such a determined drive at restructuring extant institutions and property relationships was very much part of the syndrome marking the advent of capitalist penetration. From now on, as it were, anything seems legitimate if only it will serve to wrest from nature a larger output for the sake of bigger profits. Given this new ambience, with buccaneering so much to the fore, one may assume that some of those sparsely populated districts of the Rhineland took on the characteristics of frontier existence.¹⁸

By the sixteenth century, this exuberance of the Lower Rhine area was probably reinforced by the absorption of industrial activity into rural districts. This constituted a milestone in economic development. As elsewhere in Western Europe, the more forward-looking among the urban merchants and craftsmen in the Lower Rhine area felt increasingly stifled by the outdated guild regulations. Accordingly, they sought new outlets for their endeavors in a bucolic and low labor cost environment unencumbered by such rules. In this instance, the up-and-coming Kulaks were among the vanguard of those eager to welcome and assist this industrial transplantation. Thus a domestic industry took root here quickly. It spread with relative ease to the villages, once the rural poor were effectively persuaded into transferring their efforts from the time-honored production for use, to working for a market.¹⁹

Several unique factors powered this secular progress in which the Lower Rhine textile districts were so fortunately involved. First, the textile trades' endeavors enjoyed, since their inception, the strategic vicinity of Holland. Initially, the southern parts of the Netherlands—Flanders and Brabant—

generated the stimulus. Their bouyant markets encouraged the Rhineland's cultivation of flax and hemp, and somewhat later the spinning of yarn and the weaving of linen cloth.²⁰

Subsequently Amsterdam and the towns along the North Sea coast (taking the place of Antwerp and its hinterland) became the hub of world commerce. In that capacity, they perpetuated their demand and by their example they fostered the drive for further expansion and improvement throughout the Lower Rhine textile districts.²¹ To judge from all accounts, the principal textile districts of this region—Krefeld, Elberfeld-Barman, and Aachen—seemed to have made the most of this encouragement. Having assiduously adapted their products to the new tastes, they promptly reaped the benefits of these efforts. By the mid-eighteenth century, local producers came to enjoy rising sales and profits as they managed, by way of Amsterdam, to break into the then expanding markets of the North American colonies, the West Indies, and Russia.²²

Second, Cologne, in its role as regional metropolis, played its part in the early industrial development of the Lower Rhine countryside. As an important staple, Cologne had become not only a great medieval emporium, but also an industrial center of some significance. It became famous for its silks, other textiles, and jewelry.²³ However, in the waning years of the medieval period, progress in this imperial city had ground to a halt. As mentioned earlier, Cologne had become the victim of its ossified institutions.²⁴

The more venturesome among the urban entrepreneurs and artisans were the ones most immediately affected by this malaise. They chafed under the restrictions and the mounting intolerance inflicted upon them by the guild regime. As a consequence, they sought new outlets outside the city. Their exodus was epoch-making. It marked a new relationship between town and country as the Cologne traders, in quest of the new ambience, became responsible for the diffusion of their industrial know-how, commercial tradition, and expertise among the hamlets and townships of the Lower Rhine. And, *mutatis mutandis*, the same pattern of evolution, though enacted on a smaller scale, was to be observed with respect to Aachen and its immediate vicinity.²⁵

Paradoxically, the very stagnation of the imperial cities gave an additional impetus to rural development because of the shortages which ensued. In view of the prevailing restrictions, the supply derived from guild output could not keep pace with rising demand. Soon a major production gap opened up which the rural merchant-manufacturers were only too eager to exploit. And so their profits soared and the vitality of their businesses was enhanced.

Third, political fragmentation, in its unique way, helped to bolster Rhineland progress. As is well known, from ancient times up until the Congress of Vienna, petty principalities, bishoprics, and electorates had dotted the regional map. By the eighteenth century, the economic consequences of prolonged balkanization were very much in evidence. Because of their size, these dwarf states could not press measures of forced industrialization as practiced during this era in the larger states by a Richelieu, Colbert, or Frederick the

Great. Nor could these mini-potentates have pursued an autarchic policy. It would have been as unrealistic as an aggressive commercial policy would have been suicidal, because of expected retaliations.²⁶

Under these conditions, *laissez-faire*, a symbol, as it were, of weakness, was the only alternative open to those who governed these exiguous lands. This policy proved to be a blessing in disguise because most of the grandiose schemes were utter failures. They had led to the misallocation of resources and, finally, to the hampering of economic development. By contrast, all that these Rhenish rulers could do to promote growth was to create an environment of economic freedom and religious tolerance. Specifically, they hoped to rouse indigenous initiative and, more importantly, to attract experienced entrepreneurs and competent workmen from outside. Beyond that, these princelings treated the early capitalists with indifference—an attitude which, quite accidentally, helped to create a setting of commercial liberty and independence that was indispensable for prosperity.²⁷

Benefiting from all these propitious circumstances, the Rhineland escaped the depression that had plagued many parts of Germany before the Thirty Years' War. The local textile trades were conspicuously immune to these difficulties.²⁸ Resilient and flexible, the various branches of this industry even emerged from the depredations and dislocations of prolonged hostilities ready to continue their advance after the outset of peace. By the 1680s, Wupper Valley bleaching, Krefeld linen production, and the cloth manufacture of the Aachen countryside registered sizable gains. At the time, the incipient boom was powerfully supported by immigration, as many newcomers were attracted to these localities by the prospect of religious freedom and economic improvement. Given this favorable conjuncture, it is not surprising that the Lower Rhine region was essentially spared the stresses and strains associated in so many areas of Europe with the "Seventeenth-Century Crisis."²⁹

Throughout the eighteenth century, pestilence, famine, war, and commercial crises periodically interfered with the otherwise solid advances of world development, and particularly world trade. Integrated into the international economy, the Rhenish textile manufacture had its share of troubles. However, no setbacks were sufficient to undermine the basic forces responsible, on a regional level, for economic progress. In fact, all three districts steadily gained in stature as the reputation of their products, both for quality and price, rose among a growing international clientele. Population growth, rapid urbanization, and the emergence of a class of wealthy entrepreneurs were some of the key social indicators of this secular dynamism. After 1763, except for a brief spell of difficulties associated with the American war of independence, the thrust forward became even more impressive. Toward the end of the century, perceptive contemporaries were to comment on what seemed to them cataclysmic changes that had been wrought in the area within the span of only a few decades.³⁰

During the next twenty-five years, from the early 1790s to 1815, the French Revolution and its violent aftermath shook Europe to its foundations. The Rhineland was one of the areas most directly affected, its economic

structure jolted, squeezed, and repeatedly required to adjust, at times painfully, to the exigencies of war. Frequently, the shocks that were administered followed in quick succession. It was not long before this region, including the textile districts, suffered the hardships of occupation; widespread sequestrations, heavy taxation, and equally burdensome tributes. At the same time, some vital export outlets, mainly in Italy, were suddenly closed to local endeavor. To make matters even worse, inflated assignats were declared legal tender, thus causing disruption of business and severe social dislocation.³¹

Moreover, the French Republic's aggressive commercial policy, culminating in Napoleon's Continental System, dealt a serious blow to the trade flows that constituted the lifeline of the Rhenish textile manufacturing. For one, the closing of the North Sea ports more or less severed a thriving relationship with the most rapidly expanding overseas markets, particularly the North American continent, and thereby conceded to the British a virtual monopoly in those spheres. No less calamitous, and responsible for depression and unemployment in many localities in and around the Wupper Valley, was the exclusion, after 1806, of the duchy of Berg from the French market.³²

In many ways, the new century brought multiple difficulties. At the peak of the Continental System, it became almost impossible to import from overseas the necessary raw materials on whose supply the most active sectors of the local textile industry depended. This was especially true of cotton supplies. This system of absolute exclusion acted as a general deterrent upon the whole economy. It favored the potent forces of foreign competition and sundered all outside contacts. This led to a state of affairs in which the Rhenish entrepreneurs had neither the knowledge nor, for that matter, the necessity to urge the introduction of the innovations that already were being widely used in English factories. Instead, complete protection, as then practiced, stimulated the growth of precarious hothouse enterprises. Cotton spinning mills were the most notorious of these new endeavors. As businesses, they were of the most inefficient kind and were destined to go under as soon as Napoleon was defeated and the world order had returned to some semblance of peacetime normalcy.³³

But it would be a misinterpretation of this stage of regional history to dwell on these noxious aspects, without at the same time pointing to the positive results of the French occupation. Considering the total impact of the French Revolution upon the Rhineland, on balance, the positive outweighed the negative. I would go even further and suggest that to the extent that the Rhineland, since ancient times, had enjoyed, by virtue of its progressive setting, a uniquely favorable position within the German lands, the French experience only accentuated the advantage.³⁴

In the early days following the fall of the Bastille, the Lower Rhine textile districts faced a sudden boom. The districts were able to provide goods for those markets which the French, because of disorder and dislocation, were unable to supply. This became even more true (at least for a while) after the outbreak of hostilities, when the *levée en masse* denuded French industries of their work force.³⁵ In later years, when the Rhineland became incorporated

into the French Republic, the region's manufacturers thrived once again as part of a vast market. The duchy of Berg, prior to its exclusion, was particularly fortunate. It made the most of its independence while still enjoying full membership in what amounted to a French economic union.³⁶ Moreover, Napoleon proved to be a friend of national industry (including Rhenish industry), distributing subsidies and offering prizes in order to encourage local entrepreneurship.

Apart from the accidental happenings and deliberate initiatives which, on a short-term basis, bolstered local prosperity, there were those measures to be accounted for, which, once enacted by the French authorities, strengthened the region's institutions of capitalist growth for decades to come. The final removal of guild regulations that thus far had acted as a stranglehold on the economic advance of the imperial cities, was one of those progressive edicts. No less salutary for the future of Cologne and Aachen was the elimination of the social and economic disabilities which, throughout most of the eighteenth century, had stymied the activities of non-Catholics—namely, Protestants and Jews.³⁷

Another momentous event of this revolutionary age was the confiscation of church lands and their subsequent method of distribution. At the time, the French authorities were hard pressed for revenue and consequently decided to dispose of the extensive *morte main* quickly and in large units.³⁸ Under the circumstances, only well-to-do peasants and particularly rich merchants and manufacturers with cash on hand were in a position to avail themselves of the favorable terms at which ecclesiastical properties were being marketed.³⁹

In due course, the consequences of these dealings proved to be far-reaching. There came to be a dramatic shift of wealth and income in favor of the property-owning bourgeoisie adept at making the most of this advantage. Looking ahead to the next century, the entire drift of events seemed to have favored these well-to-do capitalists. Once real estate values began to soar, the fortunate landowners turned their holdings into a staple of profitable speculation. Even more significantly, the holdings became collateral for credit with which to finance the expansion and modernization of their plants, which in turn was to herald the local advent of the industrial revolution.⁴⁰

There were other important reforms as well. Among the revolutionary legislation that the occupying powers imposed upon the Rhineland were those edicts pertaining to landholding. Aristocratic privileges with respect to landownership were declared null and void; so were various impediments regarding inheritance and the purchase and sale of estates. Thus, the potential for more rational husbandry and for an increase in agricultural productivity was considerably encouraged with obvious and lasting benefits to the region's economy in general.⁴¹

The culmination of all these reforms was the introduction of the Code Civil. It is generally recognized that Napoleon's brainchild brought to this region and its inhabitants an up-to-date legal system conspicuous for its favoring capitalist property and entrepreneurial initiative. If industrial development under free enterprise required a propitious setting, this was certainly the

proper framework. The Rhinelanders were never in doubt about the benefits that were being conferred upon them and they staunchly defended the Code Civil when their Prussian masters later considered dismantling it.⁴²

Moreover, throughout this period, the Rhenish merchant princes were pressed into political service. As members, or even as chairmen and mayors, they sat on the councils administering departments, cantons, and municipalities into which the French authorities had subdivided this region. These notables apparently enjoyed governing and they did so with zest.⁴³ Clearly, they were not to be inhibited by nationalist or patriotic compunctions about collaborating with an enemy—an enemy who on countless occasions had demonstrated understanding and sympathy for their enterprise and all that it stood for.⁴⁴

How much of this local manufactocracy enjoyed the taste of power is best gauged from hindsight. In later years, this bourgeoisie was to clamor, at times rather stridently, for a return of this political fare, both for themselves and for the rest of Prussia. The Rhinelanders never got it. Indeed, they had to wait for almost a hundred fifty years and another occupation by victorious enemies to provide them with an equally propitious setting in which a Konrad Adenauer was able to emerge and establish a Republic for and by business.⁴⁵

The Textile Trades: An Engine of Protoindustrialization

Furthermore, I must try to explain why throughout this investigation the focus has been exclusively on those communities where textile production was the dominant activity. Admittedly, this is a very conventional approach. For generations, this manufacture has been a favorite among economic historians, whatever their social outlook or methodological stance. Many years ago George Unwin summarized the reasons why this should be so:

From the earliest recorded time down to the period of the Industrial Revolution, the textile crafts and the commerce based upon them had in more than one important sense occupied a central position in economic history. The weaving of homespun fabrics had always furnished the main transitional link between the world of the self-subsisting agriculturist and the world of specialized industry. Moreover, this almost universally diffused domestic manufacture, organized for the supply of distant markets, represents a phase of industrial development historically intermediate between the "handicraft system" of the medieval city and the factory system; and the fabrics thus produced . . . have been in turn during twenty centuries the chief commodities of international and intercontinental trade. . . .

For these reasons the story of the textile crafts affords better illustrations than could be obtained from any other source of three of the main aspects of economic history, i.e., (1) that of social differentiation and the formation of classes, (2) that of the development of industrial and commercial organization, and (3) that of the development of the industrial and commercial policies of modern states.⁴⁶

Additionally, with respect to their origin and expansion, the textile trades epitomize more thoroughly than probably any other sector of nonagricultural activity, the gradualness of West European capitalist development during the era of protoindustrialization.⁴⁷ Our own generation, caught up in constant turmoil and upheaval, is bound to be impressed by the snail's pace that characterized the advance of textile production prior to the industrial revolution. From today's vantage point, a survey of the evolution of the domestic manufacturing stage of textiles appears, as it were, like a film shown in slow motion.

Given this perspective, a scholar embarking upon the analysis of this halting growth pattern is presented with the unique opportunity to identify and assess, over the long haul, some of the key factors responsible for industrial progress in the countryside. Moreover, in the course of tracing the transformation of a rural industry from its rude beginnings to an almost sophisticated level by the end of *l'ancien régime*, the economic historian confronts problems that have to be tackled even if they cannot be resolved. Very early in this type of investigation, one principal issue, above all, will rouse the historian's curiosity: Why were the various textile branches among the first to subvert the basis of the medieval guild order? And why, subsequently, were they once more the pioneers of the factory system?

The formulation of a hypothesis concerning the textile trades' innovative role throughout history calls for a broad, all-encompassing approach. Certain specific junctures during the existence of a regional industry require special attention. For one, the historian must examine in detail the total setting in which a particular domestic manufacture originally emerged as a thriving activity. Second, the investigation will have to scrutinize with equal care the conjuncture of circumstances which endowed a booming textile branch—for example, linen production—with the vitality and flexibility necessary to create the linkages that eventually prompted, within the area, the rise of another textile sector—for example, cotton manufacturing—thus adding a “new graft on an old stock” (Unwin's phrase).

Third, a regional textile study, whose main theme is the whole period of domestic manufacture, must at one point include an anatomy of the forces underlying the dynamics of capitalist progress during the last stages of this particular mode of production. Only by shedding some light on these basic trends—the existing power constellation, the social structure, the various forms of industrial and commercial organization, and the workings of the financial market—can one expect to generate at least a few answers as to why a local domestic industry should have been sufficiently fortunate to muster the requisite human energies and material resources with which to embrace factory production. *Nota bene*, this final transition, whenever it occurred, was the exception rather than the rule. After all, the history of Europe is replete with examples where a once prospering rural manufacture, having lost its erstwhile vigor, gave way to “deindustrialization” long before the innovations of the industrial revolution had appeared on the scene.⁴⁸

Considering topics of this nature, the economic historian usually touches

upon aspects that are of vital concern to all those social scientists currently preoccupied with economic development and social change. Quite obviously, these are issues of practical urgency. To take one example, an economist-adviser to an underdeveloped country will have to evaluate, at one time or another, the particular territory in terms of its potential for industrialization and mechanization. More specifically, the adviser will have to estimate the area's absorptive capacity with respect to new investments and modern technology.

In making such an assessment, the expert, in all probability, will not be able to rely on hard facts, because, for the time being at least, such characteristics defy exact measurement. Though in some instances some social and economic indicators may be available, for the most part the adviser will be asked to give an opinion on these matters based on educated guesswork. Like a general in battle, the expert will have to rely upon judgment and intuition, informed by personal experiences and by scraps of knowledge about the past pattern of European developments under similar circumstances.

In view of these intellectual currents, the economic historian's preoccupations have assumed a relevance they have not enjoyed previously.⁴⁹ The historian's findings have become the stuff that development-economists must not ignore. Henceforth even the methodology should prove useful to other social scientists not directly involved in this kind of work. Indeed, it is no longer considered merely an academic question why a peasant economy was able to escape its self-sufficient state and, via primitive accumulation, evolve, in the course of centuries, into a thriving capitalist society.

With growth issues like this uppermost in the public mind, it is not surprising that the postwar years should have witnessed an efflorescence of those publications whose main focus is on the domestic industries as precursors of factory production. Many of these regional monographs are models of painstaking scholarship that are as notable for the breadth of their approach as they are for their ingenuity in the presentation of supporting evidence. Above all, these studies demonstrate to economic historians and other social scientists the advantages of viewing the advent of the industrial revolution in the various parts of Europe in terms of the respective areas' long-drawn-out past, reaching back to the sixteenth and seventeenth centuries.⁵⁰

Increasingly, modern historiography seems ready to embrace this direction of scholarly inquiry. During the last quinquennium, the appearance of numerous essays, emphasizing the period of domestic manufacture as the key to an understanding of the "take-off," augurs well for the future of this branch of research. Indeed, two keen students of the field have expressed the hope that continuation of determined efforts along those lines might produce a new theory of development during the next decade.⁵¹

Considering the limitations of this introduction, I can only touch the surface of this vast and growing literature. And within this corpus of scholarship, I must further narrow my perspectives by just mentioning with utmost brevity those issues that bear directly upon the account to be given later. Specifically, I allude to those aspects illuminating (1) the agrarian setting that favored the

implantation of the domestic trades in an area, and (2) the underlying conditions that eventually sustained the secular dynamic of these activities right up to the industrial revolution.

On the basis of her outstanding research into English agricultural history, Joan Thirsk has come to argue that, for the most part, rural industries first emerged and thrived in pastoral and forest districts.⁵² The characteristic of such regions was their desolateness. This suggested a "frontier atmosphere" where the landscape (at least to outsiders) seemed as wild and uncivilized as the customs of the local population.⁵³ A more careful look, as Thirsk points out, revealed additional traits. For one, the hamlets in these areas were made up of isolated holdings. Second, manorial control, by absentee owners, was conspicuous for its weakness.⁵⁴ Due to the absence of outside interference by government or landlords, these cowherds, shepherds, and hunters enjoyed a relatively unencumbered existence, subject only to the constraints imposed by family traditions. To all intents and purposes, these were independent men. And partible inheritance was the practice.

Among the consequences of such a way of life were early marriages and, over time, a progressive subdivision of plots.⁵⁵ In turn, such a state of affairs had to be reconciled with the meager returns from an ungenerous soil: local inhabitants were in a position to supplement their revenues by recourse to unstinted commons and the resources from the woods to which they had easy access. All this meant that these persons enjoyed not only a degree of freedom but also a standard of life that was higher than a casual observer might realize.⁵⁶

In this historical context, it is not surprising that this type of frontier society acted as a powerful magnet upon the dispossessed and disinherited peasants in neighboring countries.⁵⁷ The hapless men—many of them victims of recent enclosures—were as much attracted by the ease with which they could settle in these pastoral areas as they were by the opportunities of making a living. Being young (as immigrants usually are), these newcomers contributed to the existing demographic upsurge associated in these regions with equal inheritance.⁵⁸

These developments were to generate their own social configuration. In time, the point was reached where the growing population was pressing upon the land. In view of the extensive character of the pastoral husbandry being practiced in these districts, nature alone was no longer able to assure subsistence. Increasingly, because of shortages of adequate pasture for their cattle, these herdsmen had to seek some sort of additional employment. Where mining was not feasible, industrial work became the obvious source of additional income.⁵⁹

How this manufacturing activity was originally brought to these hamlets has never been properly established.⁶⁰ However, one might surmise that almost from the beginning merchants in adjacent towns or in these villages became aware of the plight of these rural folk and promptly offered those in distress an opportunity to become domestic wage earners within the newly

emerging orbit. In this process of early industrialization one feature stands out—namely, the remarkable ease with which these early ventures, notably those associated with the textile trades, were introduced into pastoral districts. In part, this success might well be attributed to the characteristic openness of those societies and its corollary, the loose social structure which was able to adapt without too much difficulty to the requirements of capitalist production.

The emphasis by Joan Thirsk on pastoral agriculture, with freely available commons, as the hospitable setting in which rural industries might emerge and subsequently thrive, has been corroborated by continental scholars in their respective territories. In his important study of protoindustrialization in the Züricher Oberland (*Industrialisierung und Volksleben: Die Veränderungen der Lebensform in einem ländlichen Industriegebiet vor 1800* [Zurich: Eugene Rentsch Verlag, 1960]), Rudolf Braun notes:

Where natural conditions permit closed village settlements and the three-field system of cultivation, the peasant community is bound by a net of legal and customary servitudes. No man may use and till the land as he pleases. Methods and timing of work and the allocation of fields are fixed for each down to the smallest detail. It is very hard for an exogenous putting-out industry to gain a foothold in so rigidly ordered an economic unit, so long as it retains its vitality. In so firmly articulated a collectivity, industry, with its individualistic character (so far as its bearers are concerned), has little play. The real three-field system with compulsory cropping stands and falls with the comprehensive and obligatory union of the villagers as an economic entity. Industrialization would destroy not only the material but also the human bases of such an economic union. As a result the village must take steps, with all the means at its disposal, to prevent an uncontrolled diffusion of industry. . . . There are strict rules about building. As long as the three-field economy is intact, so-called "out-building" is forbidden. . . .

Entirely different is the situation in the highlands. In this area of dispersed farms there are no collective economic units with their rigid regulations. . . . Rather the peasant has the free disposition of his land. He can use and till it as he wished. . . . He is to a certain extent an entrepreneur, with the economic values and the spirit of the entrepreneur.⁶¹

Similarly, in Normandy an unencumbered and prosperous agriculture specializing in cattle rearing and dairy production marched hand in hand with a thriving rural industry. In due course, the linens, woolen, and cotton fabrics that emanated from these parts became as well known as Normandy butter and cheeses. Although historians of the region do not assign strategic significance to the specific aspects of the agricultural setting, they admit that Norman agriculture early escaped the burdens of serfdom and the deterrents of sharecropping.⁶²

However, a careful student of the Vesdre valley woolen trades (centering on Verviers and the Walloon part of Limbourg), Laurent Dechesne, stressed

the peculiarities of pastoral agriculture as the indispensable basis for the rise of a local cloth manufacture:

A large part of this territory was devoted to pasture and sustained a large population. The raising of milk cows was the predominant activity and thus indicative of the intensity of exploitation considering the high population density. . . .

The population increase appeared to have even gone as far as to have reached the limits beyond which the soil, inevitably restricted, could no longer provide a sufficient revenue. This, in turn, drove the peasants to seek a supplementary subsistence in industry. Besides, cattle raising left these peasants with ample spare time which they could devote to other work. Under the circumstances, the interaction of agricultural labor and domestic manufacture seemed at once both possible and indispensable.⁶³

In trying to probe the setting within which these woolen trades were to emerge, Dechesne offers some perceptive comments as to why on the left side of the Vesdre, in the Ardennes, such a manufacture was not able to gain a foothold:

It is known that the Vesdre woolen industry primarily found its labor force in the Limbourg district where it combined this manufacture with cattle raising. Why was this not so in the Franchimont area? Simply because this industry, due to the poverty of the soil, lacked an adequate agricultural population. However, such an explanation is question-begging; one might want to object that since the natural resources were insufficient, industrial activity might indeed have seemed here, even more so than in Limbourg, the proper means by which the insufficiency of agricultural income could be made up. But it was to be this way: these farmlands remained sparsely populated. And one might deduce from this that the woolen manufacture could not have been able to guarantee these agriculturists an adequate income-supplement and that industrial activity was so poorly remunerated that it could not be carried on except in conjunction with a flourishing agriculture of the kind to be found in Limbourg.⁶⁴

These observations lead to a consideration of all those additional attributes which, in one way or another, must inhere in a rural environment before it is capable of launching a viable domestic manufacture. Clearly, a Malthusian trap (as some fine economic historians have suggested) is not a sufficient prerequisite.⁶⁵ Many other factors must be considered.

With this broader perspective in mind, Dechesne assumed that there is an optimal income (apparently well above the physiological subsistence level) which will spawn a textile industry as the effective add-on employment of an energetic peasantry. Therefore, to be able to assess in detail the auspicious setting for such a take-off, one must know about the particular area's population density, distribution of land ownership, with the appropriate social structure, and finally the extent to which agricultural activities in this district have been integrated into the cash economy. In other words, it should be a search for the "critical minimum level" (to cite Leibenstein's well-known concept)

which will permit a rural manufacture to establish itself within a particular territory or region.

Along those lines, Eric L. Jones has argued that the expansion of rural industries throughout England and Western Europe has been closely associated with marked improvements in agricultural productivity.⁶⁶ This was particularly true during the 1650–1750 period when regions especially blessed with fertile soil became the granaries of their respective countries. Thus new markets emerged and old one were enlarged, thereby facilitating the exchange of agricultural surpluses against various manufactured goods originating in areas not as favorably endowed for wheat growing. “The division of the country,” concludes Jones, “into cereal surplus areas and areas of pastoralism with rural domestic industry was in accordance with the principle of comparative advantage.”⁶⁷

The Japanese economic historian, Hisao Otsuka, is even more emphatic about the evaluation of regional and local markets (and their respective structures) as the prime movers in the development of rural industries. Referring to the fourteenth century, an era of West European (and especially English) history when the medieval order was showing clear signs of disintegration, Otsuka arrives at the following reflections:

I cannot help concluding that small industrial and marketing centers surrounded by agricultural villages, or combinations of the two, more as independent units of social division of labour based upon a market economy. . . .

The formation of “local market areas” at the end of the feudal age made small producers in country districts (peasants and rural artisans) immune from manorial bondage and merchants’ rule. Moreover, the formation of *local market areas* became the starting point for industrial growth through free competition based on a market economy. . . .

In regard to *market structure*, the market areas assumed to have spread and developed in the context of a peasant economy. In other words, the local market areas benefitted also from the “urban exodus” of town craftsmen, which accompanied the decay and breakup of feudal corporate towns based on the guild (and company) system.⁶⁸

To put the matter more bluntly: to identify, as Otsuka reminds us, the whole range of factors that might have contributed to the rise of rural manufactures, inevitably calls for a study of all those forces responsible for the genesis of European capitalism.⁶⁹ These are two sides of the same coin. And insofar as this is my vision of this evolutionary process too, I deplore all those attempts purporting to place the whole burden of explanation of epoch-making changes upon shifts in the relative factor supplies resulting from productivity improvements.⁷⁰

Though less macroscopic in their perception of the whole issue, some distinguished scholars have drawn attention to certain characteristics of the social scene. In their opinion, these characteristics proved crucial in promoting the spread of domestic trades. For example, Jules Sion and Henri Sée have both agreed that Normandy’s role within the network of medieval trade and especially Rouen’s flourishing position as a great center of commerce and

manufacture were the key levers that initiated the early development of this region's rural manufacture.⁷¹ On the whole, I agree with their assessment, except that I would want to consider these aspects in conjunction with some of the other characteristics in the total setting.

Undoubtedly, the leavening effect of ancient commerce and the diffusion of an industrial tradition, emanating from metropolitan centers throughout the adjacent countryside, paved the way for the domestic trades to come into being. I have already alluded to this particular advantage, derived from geography and history, as having powerfully assisted the Lower Rhine textile districts in achieving their eminent position in world markets. In subsequent chapters I repeatedly dwell upon the role that the two great regional centers, Cologne and Aachen, were to play in the protoindustrialization of their rural hinterland.⁷²

There are other economic historians who have emphasized that "the part played by labor supply also helps explain the geographical location of the domestic trades."⁷³ More specifically, trying to account for the rise of the Midland stocking industry and especially in the areas of sparse settlement on the fringes of the Sherwood Forest, the North Derbyshire border, and the populous villages south of Leicester, J. D. Chambers argued that London stocking merchants and their capital in search of hands were attracted to this part of the world because of the availability of cheap labor. "The last years of the seventeenth century," wrote Chambers, "and the early years of the eighteenth century, were marked by an upward movement of population in these countries and there was no alternative industry to which the small farmers or squatters on the waste could turn to occupy their superabundant leisure."⁷⁴

The Alsatian cotton manufacture was said to have been started under similar circumstances. During the eighteenth century, Swiss and especially Basel merchant-producers, keen on enlarging their output, came to extend their activities across the Rhine. With their considerable capital and know-how, they seemed to have had no difficulty in penetrating the nearby Mülhouse region which, apart from the advantages of location, offered to these outside innovators a labor force experienced in the ways of a domestic industry.⁷⁵

For centuries, Alsatian peasants had eked out an existence by spinning and weaving linen. It was to be expected that they should have eagerly turned to working on the new raw material as soon as they were given a chance to do so. It was the well-known economist and civil servant, François Verron de Forbonnais, who commented in 1755 that "it appeared profitable to establish especially this industry [that is, the manufacture of printed cottons] in Alsace, for this province lacks both industry and commerce."⁷⁶

The availability of willing hands must be considered a crucial factor in shaping a setting in which protoindustrialization could "take-off." For all its significance, however, I have serious reservations whether the "labor supply" thesis, as I understand it, can fully explain the cataclysmic changes involved in the transformation of a peasant society into a capitalist economy. As on other occasions, I would again argue that a broader, more all-encompassing analysis

is called for. And at least in this instance, I can claim to rest my case on the authority of a distinguished development expert who, in the recent past, under somewhat different circumstances, expatiated in no uncertain terms on the limitations of the particular hypothesis:

Abundant labor [writes Charles P. Kindleberger] can sustain a growth process; it cannot initiate it. . . . Moreover, the availability of excess labor does not determine the levels at which growth will be maintained, such levels being a function of the availability of better technology and better methods of organizing production and distribution. An elastic labor supply supports high rates of investment . . . and ensures that these can be sustained rather than reversed. But the labor supply, so long as it lasts, is a permissive rather than an initiating or even determining factor.⁷⁷

In fairness to those who have propounded the labor supply hypothesis as the decisive factor in the creation of a domestic industry, some of their qualifications and amplifications should be noted. Occasionally, a few of these authors have pointed not to a particular region's total population nor to its mere increase, but instead have singled out the new social cohort of uprooted peasants and underemployed artisans as the pool from which a fledging rural manufacture recruited its hands. This, I believe, is an important addendum and constitutes a subtle shift in the entire discussion. If only by implication, reference to the creation of a wage-earning class within historical analysis highlights the epic process which Marx defined as primitive accumulation.⁷⁸

For example, J. D. Chambers, writing about the East Lancashire textile trades, quoted A. P. Wadsworth and J. de L. Mann to the effect that "from the ranks of the small holders were drawn all grades of workers in the country industries."⁷⁹ The historian of the early Saxon textile trades is even more emphatic. He documents with great care that the emerging linen trades (based on domestic manufacture) of the Ore Mountains drew their labor force from the ranks of cotters, servants, and the remainder of the rural poor. Many of these belonged to families that had originally migrated to this mountainous territory to work the mines. By the sixteenth century, they had been plunged into destitution when these mines had become exhausted.⁸⁰

The same theme has been elaborated by Jean Loutchisky. He showed that only in the localities of Normandy and Lannois, where miniculture prevailed, small holders and the propertyless turned to industrial work. By contrast, in such areas as the Limousin, where the subdivision of peasant holdings had not occurred, agriculture continued to predominate.⁸¹

In this connection, the special manner in which the domestic trades were introduced into territories east of the Elbe—into Silesia, Bohemia, and various parts of Poland—deserves special mention. These were the areas of vast estates owned and dominated by feudal lords. These magnates were also the ones who did everything possible to encourage a rural linen manufacture on their domains.⁸² Cupidity was their principal motivation; they wanted to raise their cash incomes by increasing the economic worth of their serf population as spinners and weavers of home-grown flax for a market.⁸³ To achieve this

end, the Junkers promoted the penetration into their districts of South German and later of English and Dutch merchants in search of additional supplies.⁸⁴ Some of these foreign capitalists dealt directly with the peasantry through factors. Others bought linen yarn from the lords who had collected this semifinished material from the serfs as past payment of their feudal dues.⁸⁵ In time, this widely scattered spinning industry generated the development of a weaving sector. By the late seventeenth and throughout most of the eighteenth century, these East European linen fabrics had become renowned on world markets.⁸⁶

Though the literature on the origins of rural manufacture is quite extensive, relatively little has been said thus far about the dynamics which sustained a particular domestic industry once it had been launched. Here, the comparative history still to be written should be able to tell us more than we know now, why certain regional domestic trades managed to transform themselves into a factory-dominated industry, whereas in other areas textile production disappeared into the limbo of history.⁸⁷

Some fifty years ago Henri Sée published a note elaborating on the different regional settings which in eighteenth-century France were to promote, in their various ways, the diffusion of a rural manufacture.⁸⁸ He made it pellucidly clear that insufficiency of land and the resulting lack of agricultural income—Tarlé's main hypothesis—were not the only causes responsible for the origins of the domestic trades. The distribution of land, the existence, within a particular district, of a numerous class of propertyless laborers, appears to have been an equally important factor.

As mentioned earlier, Sée observed that, from the very start, in Normandy's textile industry, the capitalists of Rouen, Elbeuf, and Louviers played a key role in the extension of the linen, woolen, and eventually of the cotton manufacture throughout the region. Moreover, these merchants saw to it that these activities, which they superintended, achieved the effectiveness of capitalist organization at a very early stage. This meant that in Normandy, a rural manufacture came into this world a lusty infant. Its vigorous capitalist constitution carried it through adolescence well prepared to meet head-on the competitive rigors of mechanized adulthood.⁸⁹

In an essay about prevailing modes of production in the Westphalian linen trades during the period 1450–1750, the East German historian Percy Stulz addresses himself to a fundamental issue which throughout this investigation remains uppermost in my mind.⁹⁰ Stulz tries to account for some of the reasons why, in this particular domestic industry, simple commodity production continued to predominate. Why did capitalist methods (e.g., the putting-out system), he asks, not emerge as they did in so many other parts of Western Europe?

For one, as Stulz points out, the foreign traders (most of them from other German territories), who bought the local yarn from the peasants, were never supplanted by an indigenous capitalist class. Besides, the so-called *Holländgänger* (propertyless laborers who annually treked to work in the harvesting of Netherland's agriculture), carried some of that yarn with

them for sale in Dutch markets. Second, the yarn trade was labor-intensive, had a short turnover period, and thus required little capital. Third, the spinners either grew the yarn they needed or bought it in the immediate vicinity, therefore, never requiring the intermediation of a jobber. And, finally, the cash these seasonal laborers earned allowed them to maintain a kind of independence enjoyed by the cotters.

I might have included the feudal structure of Westphalian agriculture as another significant factor limiting the scope of capital accumulation, either in the hands of local merchants or of peasants with large holdings who, under different forms of land tenure, might have been able to become a distinct Kulak class of native entrepreneurs. In any event, once we are aware of some of the reasons why the pace of capital accumulation was sluggish and why, within this area's principal nonagricultural activity, capitalist production did not take hold, we might be able to understand more adequately the subsequent pattern of Westphalian economic development. Specifically, it would help us to grasp why the Westphalian linen trades were unable to meet the challenge of Irish competition and why, in time, they were to be condemned to stagnation.⁹¹

Methodological Excuses

However, many scholars will, when confronted with my efforts, express skepticism, if not outright hostility, and are likely to take issue with this kind of all-encompassing approach on three counts, above all. One, scholars will argue that the interplay over time between politics and economics cannot be quantitatively grasped and that as a result any discussion of this topic must perforce degenerate into a series of qualitative hunches of dubious merit.⁹² Whether this is a justified stricture of the particular methodology being pursued here, the reader will have to decide.

The second objection that will undoubtedly be raised against this genre of historical writing is of a more fundamental nature. It will be said that from an economic historian's perspective, so ambitious a project, purporting nothing less than to describe and comprehend *l'ambiance social totale*, must inexorably lead to some kind of materialist interpretation of history. In many ways, this of course is true, and I admit to having consciously woven a Marxist thread into the pattern of my historical fabric. As I perceive it, Marx's analysis of the social process is, *mutatis mutandis*, but the logical extension, an updated elaboration, at a later stage of development, of the vision originally propounded by the Scottish philosophers.⁹³ It was William Robertson, distinguished friend and colleague of Adam Smith and David Hume, who made the point that "in every inquiry concerning the operations of men when united together in society, the first object of attention should be to their mode of subsistence."⁹⁴

To my mind an economic historian concerned with the "long run" cannot help but be something of a Marxist. More specifically, to the extent that the

historian is ready to accept R. H. Tawney's definition regarding the scope of our discipline ("an indispensable part of the entire flux of historical experience"⁹⁵) or J. R. Hicks's view ("in the way the great eighteenth-century writers did, as part of a social evolution much more widely considered"⁹⁶), the modern economic historians must take a broader approach to their material. They will therefore have to confront the past not only by availing themselves of the class analysis originally propounded by the authors of the Communist Manifesto.⁹⁷

Commenting, more than thirty years ago, on how to go about writing good economic history, Eileen Power had this to say:

The method I am suggesting is not very different from that by which Marx approached the study of history. The Marxian treatment of history is valuable not as an interpretation of facts but as a method of dealing with them . . . it does no more than state that all important institutions and activities can be explained in terms of other social activities . . . and that all phenomena are social phenomena.⁹⁸

In other words, the economic historian may adopt the Marxist method without having to accept Marx's values and teleology.⁹⁹ Even more than that, it is conceivable that an economic historian might very well work through to a quasi-Marxian analysis by following up some of the suggestions put forth by Adam Smith, Ferguson, and Millar.¹⁰⁰ And insofar as this is feasible, it appears to me as utter nonsense for an economic historian (a Scotsman no less) to argue that "in the struggle between communism and the free nations the economic interpretation of history is an important weapon."¹⁰¹

Finally, the feasibility of the above-mentioned method might be questioned. There will be expressions of healthy skepticism as to whether such an ambitious framework as outlined in the previous paragraphs can be translated into practice. Some are sure to remind us that a historian trying to accomplish too much is in danger of lapsing into superficialities. Others again might argue that an all-encompassing approach of this sort invariably leads to crude attempts at stringing together facts and then squeezing them into the procrustean bed of *simpliste* ideology.¹⁰²

These pitfalls are forever lurking in the background. Consequently, I have tried to guard myself against these possible shortcomings by limiting the scope of this inquiry, at least territorially. Given this restricted frame of reference, historical analysis becomes more manageable and as a study in depth and, above all, in terms of a long-term perspective, is no longer beyond reach.¹⁰³ If one succeeds along those lines, there is hope that within the context of a district or city, including its immediate environs, the investigation might lead to insights and achieve objectives which, in contrast to "cliometrics," Habakkuk has recently claimed as the forte of traditional economic history:

One may have to make a choice, and a good judgment informed by wide reading of history, by long practical experience of how men behave in a wide variety of circumstances, and by detailed inside knowledge of particular insti-

tutions and situations *may* for many historical problems produce a more accurate interpretation of events than analysis of a rigorously specified system. Such analysis [i.e., an econometric one] may throw a powerful beam on certain places but one which distorts or leaves in darkness the surrounding landscape; informed judgment, though less powerful, may shed a more equitable and dependable light on the full range of human activities.¹⁰⁴

The econometric historian may indeed strike down shibboleths and dispatch into limbo questionable assumptions that have gone too long unchallenged and unproven. But there is always the danger that in iconoclastic zeal, the proponent of the counterfactual method may throw out the baby with the bath water; that is, in their enthusiasm to show up the old fogies, econometric historians may only too easily forget that many a well-worn cliché about the past contains more than a grain of truth.¹⁰⁵

Though it appears less obvious and less strident, local (regional) historiography generates its own brand of hubris and revisionism. Proceeding to investigate a territory of relatively limited size, the local historian considers it feasible to communicate nothing less than a “feel” for the history of the area under review. A large assignment to be sure, and in pursuing this end, the historian usually ranges over centuries, tracing the evolution of institutions, exploring the interplay of economic process and political power, and eventually identifying within the district or region at least some of the forces responsible for the specific contours of historical change. Having thus established the structural relationship that went into shaping the region’s course of history, the local historian is in a position to make a final assessment. This means that the historian will want to evaluate whether the sequence of secular evolution in a particular region conforms to some recognized pattern, or whether it deviates from the general trend.¹⁰⁶

During the last two decades, regional historiography has witnessed a boom. It has, in fact, become increasingly fashionable for younger historians to celebrate their rites of passage into the academic world by way of illuminating segments of the past within a regional context. By probing below the surface of their chosen landscape, they have frequently attempted to lay bare the anatomy of the respective territory’s social dynamics in terms of its geographic location, resource base, economic and social structure and long-run population swings. This is indeed history of *l’ambiance sociale totale* with a vengeance.¹⁰⁷

Some of these monographs, notably those written by members of the *Annales* and Leicester schools, have been models of scholarship. Many are distinguished for their meticulous research and for their innovative approach, and have made a profound impact upon the historical profession. Specifically, this genre of historiography has driven home to historians truisms that are only too easily forgotten: that historians must remain masters in their own house and cannot slavishly follow one social science exclusively in their interpretations, but they must, to some extent, rely for their methodology and insights on several of these disciplines in order to explain past events in their

respective provinces.¹⁰⁸ Additionally, local historiography reminds macrohistorians (and particularly economic historians) that prior to the industrial revolution and especially prior to the advent of the railways, differences in the economic and social development between regions were often greater than their similarities.¹⁰⁹

Increasingly, historians concerned with national entities have absorbed the lessons of regional historiography. As a result, they are less ready than before to apply their broad hypotheses without at first qualifying them in the light of the findings made by local scholars. Moreover, macrohistorians have become ever more aware that some key national developments, be they cataclysmic changes in the body politic or breakthroughs on the economic front, have had their origins in a particular region from which they subsequently spread to the rest of the country. This implies that if historians wish to grasp a proper understanding of such a momentous episode, they will have to concentrate on the locality where it originated and in so doing, rely on the insights of those whose familiarity—ranging over centuries—with the unique history of that particular area, is beyond question.

In recent times, two distinguished economic historians put the importance of several aspects of the regional perspective in a nutshell: "The danger of this type of study," writes Eric Hobsbawm with respect to an assessment of revolution, "lies in the temptation to isolate the phenomenon of overt crisis from the wider context of a society undergoing transformation . . . if it [i.e., our interest in revolution] lies in the major transformations of society, we may find, paradoxically, that the value of our study of the revolution itself is in inverse proportion to our concentration of the brief moment of conflict."¹¹⁰ And François Crouzet, in search of the origins of the industrial revolution, makes the comment: "What is most needed is a close analysis of the local or regional level, since to speak of English society and French society as a whole only leaves one with dubious generalities. After all, the industrial revolution was not made in England but in a few small districts of England."¹¹¹

My own experiences have prompted me to adopt an approach, which, in many ways, corroborates the relevance of the latter two observations. When I first came to economic history, development issues were uppermost in my mind. Accordingly, I turned to the German scene hoping that any investigation of its successful industrialization might suggest insights into the origins of the growth process. But I quickly discovered that an account of the whole of Germany was not a feasible task. The monographic literature necessary to sustain such a macrostudy is simply not available. To the experts, this came as no surprise. For all their interest in the past, the German economists of the so-called historical school never viewed the world in terms of evolution and progress. Even more conspicuously, Schmoller and his disciples generally avoided topics that dealt with Germany in the eighteenth and nineteenth centuries.¹¹²

Having thus opted to do a regional study, I decided to focus on the Rhineland or, to be more precise, on the growth of the Lower Rhine textile districts up to the beginning of its industrial revolution. There are several reasons why

I chose this particular area. For one, I sought a territory within the German lands in which the circumstances leading up to the point of its "take-off" could be studied in detail. Besides, once I realized the significance of examining a society's period of incipient industrialization in the context of its long-drawn-out past, it seemed to me crucial to select a cluster of localities where nonagricultural activity had been of considerable importance from earliest days.

Finally, I must say something about the long-run perspective of this investigation. That the essays below are definitely oriented toward "*la longue durée*" reflects, in large part, the current interest shown by economists and other social scientists in the dynamic aspects of economics and, more importantly, in the growth issues of so-called backwardness areas. These pressing concerns have made a deep impression upon economic historians of my generation and in turn have endowed at least the best of these studies with a vitality and vigor that so far had been absent from this kind of work. These tendencies are most evident in recent preoccupations with West European industrialization whose hallmark has been their contemporary relevance and their sense of urgency.

The same intellectual climate that sparked this scholarly activity also prompted a reinterpretation of the entire process. It is not that older views have been found wanting. Rather, new relationships are being emphasized. Most important, Western Europe's industrial revolution is increasingly being viewed in a broader perspective—as a phase, a unique phase, of world industrialization. Besides, from the standpoint of each individual country—that is, England, France, West Germany—historians have come to view the incipient stage of industrialization within the context of a more expanded time period.¹¹³ Specifically, they have been trying to push their research beyond the conventional dates usually assigned to the "preparatory period" into earlier decades and even centuries. In this way, scholars hope to identify the origins and grasp more fully the import of those factors that, in their opinion, were subsequently to prove strategic in creating the right kind of conjuncture within which West European industrialization could thrive.¹¹⁴

The link between a country's past and the state of affairs that conditioned "the interval when the forces of modernization made their decisive breakthrough" is by no means a novel idea. "It is now beginning to be fully realized," wrote George Unwin some fifty years ago,¹¹⁵ "that the main clues to the great social changes generally known as the 'industrial revolution' must be sought in the social history of the century preceding those changes." And in 1934, J. U. Nef was even more emphatic on that point: "The rise of industrialization in Great Britain can be more properly regarded as a long process stretching back to the middle of the sixteenth century and coming down to the final triumph of the industrial state toward the end of the nineteenth, than as a sudden phenomenon associated with the late eighteenth and early nineteenth centuries."¹¹⁶

The implications of this insight were only recently fully appreciated. Only since economists and economic historians came to ponder how far the institutional setting responsible for bringing Western Europe to the threshold of

industrialization could be re-created in underdeveloped countries, have they also come to realize the contribution made by the unique features that characterize Western Europe's evolution since the Middle Ages. The extent to which economists and economic historians alike have become alive to some of these issues has been reflected in the animated discussions following W. W. Rostow's presentation of the "take off into sustained growth" stage.¹¹⁷

On the surface, the Rostow notion seems plausible enough. It evokes a mental picture of the industrialization process that appears to fit the facts.¹¹⁸ But on second thought, the serious scholar discovers that the analogy begs more questions than it answers. Hia Myint has expressed in most trenchant terms some of the conceptual difficulties that arise with Rostow's celebrated hypothesis:

The truth of the matter is that although economic writings on the underdeveloped countries are full of proposals to launch them into self-sustained growth, only a few of these countries are ready for it. Many of these are handicapped by the lack of an effective institutional framework required for the process. To expand Professor Rostow's metaphor: a few of the underdeveloped countries, ready for the take-off, are already taxiing along the runway. For them the final spurt of speed in investment and general economic activity, if properly carried out and sustained, might conceivably enable them to become airborne. But many underdeveloped countries have not yet got to this stage; they are still in the process of building their runways. Now whether we are talking about aeroplanes or developing economics, we should expect the problems of getting airborne to be very different from the problems of building the runway. But unfortunately Professor Rostow does not give us very much help about the second type of problem. He has merely stated that before the underdeveloped countries are ready for the final take-off they have to pass through a long "pre-take-off" period, which in the case of the Western countries, for instance, took a century or more. Beyond this, we are left to our own devices to try to identify the various sub-stages of the pre-take-off period at which many of the underdeveloped countries seem to be situated at the present moment, and to try to assess how far economic policies designed to assist the take-off at a later stage of development are relevant for the problems of building a runway at the earlier stages of development.¹¹⁹

I have quoted at length Myint's perceptive comments because his critique of Rostow's stage—important in itself—also bears upon the development of my thoughts on similar issues. Originally, I had planned to prepare a study of the industrial revolution in the lower Rhine textile districts. Within a tentative framework, which I considered properly adapted to the topic, I envisioned the opening chapter to be devoted to a careful account of the "take-off." After that, I intended to trace the gradual spread of industrialization throughout this area with a terminus ad quem sometime in the 1870s, when, as far as this region's textile manufacture was concerned, the process of mechanization was essentially completed.

But the more I became immersed in the material of Rhineland's take-off

period—1770s to the 1790s—the more I became aware that something was amiss, that somehow I was trying to present Hamlet without the Prince. Only gradually did it occur to me where I had gone wrong. Given a proper perspective, the error is easily detected. One cannot really grasp the dynamic features characteristic of Rhenish society (or for that matter, of any society) on the eve of its breakthrough to sustained growth, unless one also comprehends the evolution of those forces that had brought this region to the point of its “take-off.”¹²⁰

Having discovered this missing link, I promptly turned my attention to an examination of the Rhineland in the sixteenth, seventeenth, and early part of the eighteenth century. Though books, articles, and monographs regarding nineteenth-century Rhineland and other parts of Germany are notoriously scarce,¹²¹ the fruits of historical research covering earlier periods of German development are more readily available. Consequently, it was not impossible to gather the necessary evidence in order to provide a systematic account of the evolution in the Rhineland of that long-drawn-out “preparatory stage.” Indeed, a careful scrutiny of the existing literature brings to light an amazing amount of information. Thus, as I became increasingly involved in this early period, the investigation grew in size as well. What was originally meant to be only a prologue, introductory essay, has become an independent monograph of the “pre-take-off” stage.

The way I backed, as it were, into this study is reflected in its presentation. That I should view the evolution of the economic process as preparatory to and culminating in the industrial revolution may seem to some an unwarranted procedure. But for better or worse, this is the methodological stance I have adopted and my selection of historical facts to recreate the past has been shaped by this perspective.¹²² Thus, the activity of the economy in toto and by sector, at a particular juncture in time, is perceived in terms of its contribution to the secular dynamic of the area and region.

In an effort to put some flesh on this skeletal framework, those social and economic aspects are emphasized which are thought to have played a strategic role in promoting a progressive society. Therefore, in their various local settings, the sources of entrepreneurship, the patterns of capital accumulation, the nature of the labor supply, and the market structure concerning relevant raw materials and finished products are carefully elaborated. Additionally, in each era, the discussion regarding a particular economic sector is oriented toward the emergence of “external economics” and “linkages,” which, in turn, were to provide the basis for further expansion.

Throughout this study, agriculture is assigned a key position (especially in chapters 1, 2, and 3). The emphasis is not so much on techniques of husbandry or how the inhabitants of the various Rhenish districts managed to supply themselves with staple foods. Rather, this account dwells on the overall rural settings that spawned the domestic industry in which freeholders, tenants, and cotters became increasingly involved as capitalists, craftsmen, and ancillary workers.¹²³ At each subsequent stage, the same standards apply as each

branch of the textile manufacture is rated in terms of how effectively it endowed the local economy with the vitality necessary for the continued absorption of new lines of endeavor.

Adherence to this kind of schema is, of course, conventional procedure. Anyone trying to come to grips with the mainsprings of economic progress must to some extent follow this route even though reiteration of the same factors, at various stages of the account, is bound to make for monotony. To have sacrificed, in this way, the variety of historical experience for consistency may be unavoidable. At least on this occasion, the scholar's tedium claims one redeeming feather: the development-economist who is prepared to wade through the following chapters may encounter many a familiar signpost on this odyssey.

2

Variations upon an Eighteenth-Century Theme: Prussian Mercantilism and the Rise of the Krefeld Silk Industry

On a local level, the rise of the Krefeld silk industry corroborates the historian's contention regarding the Rhineland's good fortune of having been able to share in the postmedieval progress of Western Europe.¹ Indeed, the whole plain, which included the areas of Krefeld, Mönchengladbach, Rheydt, and Viersen, offers ample evidence of those propitious circumstances considered strategic in an explanation of the secular advance experienced by the regional economy: the demise of the feudal order and the leavening influence of the neighboring Dutch buoyancy.² Moreover, the importance of a favorable social environment to the course of economic activity is particularly striking in this instance, for the rise of the Krefeld silk industry coincides, both with the decline of the same trade in guild-dominated Cologne³ and with the lack of success of Frederick the Great to establish silk manufacture in Berlin.⁴

Enlightenment Limited: The Plan That Failed

At the end of the Thirty Years' War, the hereditary Hohenzollern lands (Brandenburg, Kurmark, etc.) had lapsed into a state of social and economic prostration. The signs of decay were all-pervasive: the towns were dilapidated, villages deserted, and areas of former cultivation overgrown with weeds. However, the havoc caused by these prolonged hostilities had only

This study is reproduced with the permission of the American Philosophical Society. The monograph was originally published as "Prussian Mercantilism and the Rise of the Krefeld Silk Industry: Variations upon an Eighteenth-Century Theme" (*Transactions of the American Philosophical Society in Philadelphia* [new series, vol. 58, part 7], Nov. 1968). With approval from the American Philosophical Society, the Krefeld City Archives translated the original English manuscript into German as "Preussischer Merkantilismus und der Aufstieg der Krefelder Seidenindustrie: Variationen über ein Thema des 18. Jahrhunderts." It was published in *Krefelder Studien*, 1 (1973), 39–125.

aggravated preexisting tendencies. According to some interpretations, the more fundamental reasons for this stagnation must be sought in an earlier age. Already in the fifteenth and sixteenth centuries, vast areas east of the Elbe, including the Prussian territories, suffered from the strengthening of feudal bonds and from a deteriorating inability to adjust to the momentous changes transpiring in the world economy.⁵

Against this background of misery, the Hohenzollern princes were hard put to devise policies that might promote the reconstruction of their realm. Such plans for development as were pressed seemed puny relative to the enormous problems that had to be surmounted.⁶ Despite this backwardness, within two decades following the signing of the Treaty of Westphalia, parts of Europe experienced unmistakable signs of economic progress. A boom was in the making that appeared more durable than a mere cyclical upswing in the aftermath of a war. Even the Prussian lands shared in this advance. Population grew, and once more the few urban centers and the sprawling countryside reflected a bustle, signaling as it were, deliverance from an age of economic torpor and social demoralization.⁷

Inasmuch as the revocation of the Edict of Nantes coincided with an enlargement of the country's economic potential, the Hohenzollerns were able to bid for the Protestant refugees seeking a haven outside France. Eventually the grand elector managed to attract quite a number of this supposedly elite minority into his realm.⁸ Because the Colbertian maxims were then *en vogue* at most European courts, the planned influx of desirable traders and manufacturers was considered not only an unmitigated blessing, but also an impressive feat of economic statesmanship.⁹ The wave of optimism that was to engulf the immigrants, and was in turn to predict great things for them in their new environment, became promptly enshrined in the specifics of mercantilist policy.¹⁰

The state granted the refugees generous aid. They were accorded subsidies to help in the recruitment of skilled labor. They were similarly aided in locating proper housing. Most important of all, they were offered a combination of liberal credits and outright gifts that enabled them to install the requisite tools and purchase the initial supplies of expensive raw materials. By promoting these measures, the Prussian authorities expected to accomplish at least two objectives. First, they hoped the Huguenots would revive and expand Brandenburg's languishing woolen trades. Second, they believed that because of their background and experience, these Frenchmen would be able to initiate the local development of what then appeared throughout Western Europe the "growth industry" par excellence—a thriving manufacture of silken wares.¹¹

Despite the solid support and extensive privileges they were to receive, the emigrés did not prosper. This was as true of the smaller producers as it was of the larger entrepreneurs upon whom the court lavished special attention. In many ways Jean Biet represents the ill-fated nature of all these efforts. A former Paris silk manufacturer, Biet tried to introduce the making of silken goods into Berlin. For that purpose the great elector gave him a loan of 5,000

talers, in addition to rent-free housing and a large workshop.¹² Biet started production in 1687; he even enjoyed a short spurt of success. By 1690, however, he had gone bankrupt, a misfortune that was to befall most of his co-religionists.¹³ How far the reasons for these failures were due to the Huguenot's shortcomings—that is, their incompetence, sloth, and inability to adjust to the new environment—and how far they were rooted in the objective circumstances of the local scene is difficult to assess.¹⁴ In any event, the initial plan for industrial development had gone sour.¹⁵

Nevertheless, the grand elector's governing descendants remained undaunted by these reverses. They pursued the same economic strategy and sought identical ends. This was particularly true of Frederick William I, whose energy and zeal were harnessed in an effort to establish, within his monarchy, a viable textile industry; first of all the woolen trades¹⁶ and then a silk manufacture. To achieve these ends he was as ready to mobilize the reserves in his treasury as he was willing to bend the framework of his state to help a group of fledgling producers get started.¹⁷

Specifically, the king exempted potential entrepreneurs, most of whom were recent immigrants, from the vexations of the press gang and the burdens of taxation. Besides, he provided them with various subsidies. Most important of all, in his concern for the woolen trades, he prohibited the export of raw wool and raised the import duties on all woolen goods. The growth of the Brandenburg woolen industry showed signs of promise, especially in the 1720s, but it fell far short of royal expectations. The disillusionment prompted the ruler to set up the Berlin Lagerhaus, a kind of state manufacturing establishment which was to serve as a pace-setter in the trade.¹⁸ Rather revealingly, the management kept wages above the going rate in order to provide the king's soldiers on permanent leave with an adequate subsistence.¹⁹ That it might have been wiser to let the market set prices, including factor prices, was as yet not part of the Cammeralist vision, at least not in early eighteenth-century Berlin.

Frederick William I's mercantilist credo was equally well-reflected in his promotional activities on behalf of an indigenous silk industry. To boost that trade, he at first pressed for an extension in the cultivation of the mulberry tree. He then tried to strengthen the infant silk manufacture proper by surrounding it with a protective tariff and by putting various subsidies at its disposal. Finally, in his hope to assure the progress of a basically risky venture in a rather precarious environment, he resorted to what was then the customary strategy of granting monopoly privileges.²⁰

Thus in 1730 the king endowed the Potsdam Jew, David Hirsch, with the exclusive rights to manufacture velvet within the hereditary Hohenzollern territories. Assured of his investments, Hirsch promptly recruited the required skilled personnel from abroad. At the same time, he relied on the inmates of the local poorhouse and orphanage to supply him with the necessary unskilled labor.²¹ His business grew and by the late 1730s he could boast of some hundred looms working for him. Subsequently, Hirsch consented to assume entrepreneurial responsibility for a failing Berlin silk manufacture and

his privilege was accordingly extended to embrace the production of silken goods as well.²²

Though in due course Hirsch prospered and thrived, it is not unfair to suggest that by the end of Frederick William I's reign, the Brandenburg silk and velvet trades remained generally quite insignificant. And as he pressed his measures of industrial development, Frederick William I has left the impression of having lived up to his name, the "Sergeant King."²³ He believed that industry, at least in its initial stages, could be nurtured like an army. Specifically, he believed that a policy of incentives and deterrents would insure industrial success in the same way the enforcement of strict discipline and regular drill turned raw recruits into perfect martinets on the barrack square and effective cannon fodder of unquestioning obedience on the battlefield.

The relationship between Frederick William I and his son, the subsequent Frederick the Great, had been an uneasy one.²⁴ It was marred not only by the normal tensions arising between parent and child, but even more fundamentally by a divergence in their respective philosophies. However, on so crucial an issue as the role to be assumed by the state in relation to the national economy, they shared a common viewpoint.²⁵

On ascending the throne, Frederick the Great followed most dutifully the industrial policies initiated by his father. Indeed, the tenacity with which, in the conduct of economic affairs, the new king adhered to ancestral maxims, by then largely passé, suggests the doctrinaire inflexibility of a Bourbon potentate who supposedly had neither learned nor forgotten anything.²⁶ In any event, within the Frederician scheme, the silk industry was accorded a key position. The progress of this luxury trade became both a symbol of royal aspirations and a kind of achievement index against which the whole gamut of mercantilist measures was to be gauged.²⁷

Given this etatist approach to economic development, the effectiveness of the state's administrative machinery assumed paramount importance. Most aware, under the circumstances, of the need for a smoothly operating bureaucracy, Frederick the Great turned to the task of enhancing its efficiency with dispatch and energy. Within the first year of his reign, he established the so-called V. Department, which was to disperse the funds he had earmarked in aid of the various industrial programs. Above all, this new government agency (a forerunner of what was later to be the Ministry of Industry and Trade) was to support, supervise, and coordinate the various branches of the nonagricultural sector within the Prussian economy.²⁸

The cultivation of the mulberry tree was to be among the first tasks entrusted to the newly founded board. At royal behest, the V. Department encouraged state employees and public institutions to grow this particular plant. For the monarch was convinced (notwithstanding previous evidence to the contrary) that the mulberry tree, if properly tended, could thrive on Kurmark soil. He was equally certain that once an adequate supply of homegrown raw silk would be available, the local manufacture of silken wares would have overcome its main handicap in the competitive struggle against Lyons and the other important silk centers.²⁹ Within a few years, of course, all

these efforts had proven in vain and the Berlin industry continued to import its raw silk from traditional suppliers, primarily France and Italy.³⁰

Attracting the foreign experts required by the incipient silk industry was another of the V. Department's early responsibilities. A few of these craftsmen came from Saxony and Austria. However, most of them were imported from France, and the majority of these from the Lyons area. The actual recruitment of these workmen was carried out by agents who entered the various foreign lands in diplomatic guise, for in this mercantilist age, virtually all states forbade the emigration of their labor force. Consequently, discovery by the host authorities of such illegal activities touched off international incidents.³¹

In addition to the political risks, the expenses incurred in trying to entice these specialists to come to the Berlin area were considerable. These men had to be lured. They were promised privileges, special pensions, and all kinds of other emoluments. Although it would not be possible to gauge whether the costs were eventually matched by commensurate benefits, some of the evidence suggests that in their performance, these silk weavers, designers, and masters did not live up to the official expectations.³²

Frederick the Great's initial efforts on behalf of the silk trades were in the nature of a holding operation, meant at least to preserve the few firms that had managed to survive Frederick William I's era. By the late 1740s, the Berlin-Potsdam silk and velvet industries (including the manufacture of half-silken and silk stockings) claimed no more than fifteen hundred looms. While the fifty to sixty immigrant families provided the core of experts and weavers, the ancillary operatives were largely of local origin. The total labor force, at the time, employed in this branch was calculated to be about four thousand.³³

Even in this early period, Frederick the Great was intent on laying the groundwork for the silk industry's further expansion. As part of such a plan he had to identify those elements in society who might, if properly coaxed, provide the leadership of the dynamic silk industry he envisioned. In mid-eighteenth-century Prussia, three distinct groups stood out as possibly possessing the potential resources and the mercantile talents required for such a pioneering role. These were the Huguenot refugees, the royal traders and financiers catering to king and government, and the court Jews.³⁴

Until then, the French emigrés had not proved themselves the merchants and manufacturers they were supposed to be. Nevertheless, Frederick the Great sought them out. He tried to settle more of them in his capital as he persevered in the hope that eventually they would live up to their reputation.³⁵ A few of them, like Girard and Michelet, actually became solidly endowed businesses which, within limits, prospered and grew.³⁶ But the majority of French establishments were headed by men who had been previously master craftsmen, traditionally accustomed to leave the mercantile functions of the trade to the flourishing *maître-marchands* and *marchands-fabricants*, who in Paris or Lyons stood at the apex of these industries.³⁷ With their meager resources and with their narrow craft outlook, they were neither able to meet the vagaries of taste nor the violent price fluctuations in the markets for raw materials and finished products. Thus, their petty operations fre-

quently set up at the beginning of a boom usually dwindled once the buoyancy of the cyclical upswing and the impetus of supporting legislation had lost the initial momentum.³⁸ According to Horst Krüger, of all the manufactories launched within the Berlin-Potsdam area after 1740, 25 percent had disappeared before 1786, and a third of these were silk works.³⁹

The second group, the Berlin merchants, seemed more suitable candidates for the entrepreneurial role in which the king hoped to cast them. They were men of substance and local origin, intimately acquainted with the environment and its problems. Many of these merchants princes, like Splitgerber and Daum, for instance, had become rich in dealing with court and government, in proportion to the growing affluence of the Hohenzollern dynasty and the Prussian state.⁴⁰ In turn, such close contact with and dependence upon authorities exposed them to the pressures of the king who demanded that these capitalists commit at least some of their resources to a venture which supposedly promised profits to them and, above all, general benefits to the monarchy-at-large.⁴¹

As W. O. Henderson points out, J. E. Gotzowsky was the prototype of the Berlin merchant who was eventually involved in the manufacture of silk and velvet wares.⁴² His life story sounds like a melodrama that highlights the entanglements, political and economic, in which many a businessman of the Frederician era could get hopelessly caught.⁴³

Having achieved some prosperity as a haberdasher and jeweler, he married the daughter of C. E. Blume, a leading Berlin businessman. Gotzowsky succeeded in persuading his father-in-law to become a silk and velvet producer. However, before the latter could start production, he died. On behalf of the heirs, Gotzowsky promptly assumed the management of this establishment.⁴⁴

But the two businesses under his aegis were only part of his many interests. Gotzowsky was the antithesis of the Schumpeterian innovator who pursues with single-minded zeal, one and only one objective. An inveterate projector and promoter, he was forever seeking new schemes meant to enhance both his wealth and his standing at court and in the community-at-large. Given the context of his activities, he quickly learned the key strategy: to be of use to those in power. Amicable relations with the mighty, he realized, were a virtually priceless asset, especially in Frederician Berlin.⁴⁵

Gotzowsky therefore busied himself in all the efforts promoting the recruitment of foreign silk experts into the Mark. Similarly, he was always prepared to take over defunct silk shops even though his own operations within this branch remained precarious.⁴⁶ Eventually, largely as a reward for his unctuous loyalty, he was given the profitable commission of purchasing objets d'art for the king.⁴⁷

During the Seven Years' War, Gotzowsky achieved local prominence in heading up a committee of Berlin burghers responsible for raising the sum the Russian occupation troops demanded as indemnity for leaving the city. In somewhat similar circumstances, he soon afterward arranged a loan for the city of Leipzig to pay off the invading Prussians; the transaction proved most lucrative. Nevertheless, during the currency devaluation of the war, Gotzow-

sky lost on balance considerable sums and he was never really able to achieve a solid economic base. He suffered financial difficulties in 1750 and again in 1755. On both occasions he had to be rescued (after being admonished to practice greater prudence) by royal generosity.⁴⁸

Toward the end of hostilities, when Gotzowsky ventured into grain speculation, he was caught short in the postwar crisis of 1763. At this stage, the king refused to bail him out. The Prussian officials investigating Gotzowsky's accounts reached the same conclusion as had those Jewish financiers who were also approached for assistance: Gotzowsky's affairs were beyond rescue. He was thus forced into bankruptcy twice, in 1765 and again in 1767.⁴⁹

Until his downfall, Gotzowsky had been a prominent figure on the Berlin scene. Having absorbed smaller silk and velvet shops, by 1758 he disposed of more than two hundred looms and employed about a thousand hands. This was a sizable operation, considering that at the time the total number of silk and velvet looms being operated in Berlin stood at no more than fifteen hundred.⁵⁰ Moreover, the consummate social skills with which Gotzowsky ingratiated himself to the establishment gave him the virtual status of an *éminence grise* on matters of Frederician economic policy. Otto Hintze writes:

On all issues affecting the entrepreneurs as a group, Gotzowsky took the lead, both in his role as confidante of the king and as spokesman for his colleagues. We can observe him in continuous correspondence with the royal cabinet. Almost all edicts that at the time were promulgated to promote and support the silk industry were due to his initiative. Tariffs were raised on imported silk fabrics, the prohibition on the importation of velvets more strictly enforced. A silk store to provide, on the basis of credit, the manufactories with raw materials was established. Above all, the local merchants dealing in silken wares were compelled to supply themselves with a certain amount of goods produced by the newly founded indigenous factories.⁵¹

This profile in miniature constitutes as it were a summary of the scholarly collection reproduced in the volumes of the *Acta Borussica* devoted to the silk industry. More specifically, in this capsule form, Gotzowsky's rise and fall dramatizes the somewhat odd though by no means unusual sequence unfolding within a mercantilist environment.⁵² Indeed, the chronological arrangement of the *Acta* documents spells out the logic of events: how originally a few official measures meant to support a new trade evolve in ad hoc fashion into a complex package of governmental policies whose success or failure become major issues of state.⁵³

As sketched earlier, the initial proposal to start within the Berlin-Potsdam area a silk industry and thereby reduce expenditure on imports might not have seemed unreasonable. In the same spirit one might have also expected the authorities to try to create the "external economies" still regionally unavailable yet indispensable for the success of that particular activity—by making provisions for a supply of skilled labor and by locating, at low rents, adequate buildings in which to house the larger tools. The subsequent effort to attract from abroad entrepreneurs experienced in this sphere, by offering subsidies

and privileges, seemed equally feasible, at least in the context of contemporaneous practices.⁵⁴ And finally, once the first fabrics and ribbons came off the local looms, it was only natural that the officialdom responsible for the project should have pressed the indigenous traders retailing these wares to overcome their prejudices and at least try to make an effort to sell goods manufactured at home.⁵⁵

But sometime during the late 1740s, a major change occurs in Prussian economic policy. An apparently rational or at least modest pattern of governmental activity gave way to seemingly blind forces propelled by caprices of history. The shift coincides with a specific development. It was at the time that the operations of the various silk works revealed ominous weaknesses to which the omnipotent autocrat responded with characteristic insouciance. Frederick the Great ignored the danger signals. He would not entertain the idea of altering the once appointed course of action.⁵⁶

Given the prevailing atmosphere of political repression, his cowed bureaucrats dared not suggest a change in the program, let alone a probe into the basic nature of the difficulties. To have raised the issue of whether congenital defects were at the source of the problem was out of the question.⁵⁷ Thus shielded from uncomfortable truths, the monarch pressed on. Like a gambler, he played for ever larger stakes, quite sure that eventually he would strike it lucky and retrieve the losses he believed had been due to a series of exceptional misfortunes.⁵⁸

During the 1740s, subsidies to importers of raw silk were not very effective. Similarly, the state-sponsored silk store, meant to assure the producers, especially the smaller ones, of an orderly supply of raw materials, failed in its purpose.⁵⁹ Soon the voluntary exhortations to wholesalers and retailers to buy homemade goods proved equally impracticable. These merchants did not care to deal in fabrics that were higher in price and lower in quality than their equivalent imports.⁶⁰

In line with these developments, tariffs on silks and velvets had to be raised and voluntary exhortations transmuted into coercive edicts. From now on—the early 1750s—local merchants were compelled to accept, however reluctantly, quotas of these indigenously produced wares.⁶¹ In turn, elemental market forces erupted in opposition to the pressure of these regulations. In no time, a smuggling trade of sizable proportions flourished throughout the area.⁶²

Rather significantly, the Jews were promptly accused (especially by Gotzowsky) of being responsible for these illegal practices. Increased government vigilance did little to limit the contraband activity.⁶³ Consequently, even more drastic steps had to be taken: all imports of velvets and silks were forbidden. Eventually, the ban also included goods in transit destined for reexport to Russia and Poland.⁶⁴

In successive stages, the total prohibition of these wares into the hereditary Hohenzollern territories was extended to encompass goods hailing from the region west of the Weser River, even from those lands which were part of the Prussian kingdom. The county of Moers was the most directly affected.

Though since 1714 a Hohenzollern possession, from the standpoint of commercial policy, Frederick the Great continued to consider this particular principality a foreign state. Thus by 1756 a very heavy blow had been dealt the Krefeld velvet trades, which at the time were enjoying the zenith of their progress.⁶⁵

But if each of these measures provided temporary respite and prompted short-run spurts of advance, they never quite gave the Berlin silk manufacture the solid footing it needed. Export premiums, for instance, had done little to improve the long-run outlook, and in due course Frederick the Great became disillusioned with their meager results.⁶⁶ He therefore stopped their disbursement. Instead he decided to aid the industry by subsidizing firms according to the number of looms they kept in operation.⁶⁷

The Seven Years' War accentuated many of the problems facing this particular trade. Supply conditions were in disarray, and the rapid inflation affected most adversely the demand for luxury wares, especially sales at the Leipzig fair.⁶⁸ Most important of all, the king drastically reduced his support of the industry. He was forced to divert his attention and resources to matters of war, now that he had decided to gain by the sword what the plow, the loom, the spindle and the mines, had not been able to give him.⁶⁹ Throughout the war, on average one-sixth of all silk and velvet looms were idle. This was surely not a happy state of affairs, but at the same time not quite as serious a decline as one might have expected considering the length and intensity of hostilities.⁷⁰

It was therefore in an already weakened condition that the Berlin-Potsdam silk industry was dragged into the vortex of the postwar crisis. As mentioned earlier, Gotzowsky and a host of other firms failed.⁷¹ However, the king came readily to the rescue of those entrepreneurs who at least had a chance of surviving the depression. In fact, as soon as peace had been declared, Frederick the Great continued, as before, to lavish attention upon the silk trade as one of the pillars of his economic policy. He even believed that the most effective remedy against the cyclical superfluity of goods was an expansion in production. Being a rather crude mercantilist, he obviously refused to accept as given the inexorable workings of the "economic machine."⁷² He accordingly welcomed such developments as the enlargements of the Baudoin Brothers' manufacture through acquisition of some of the smaller shops.

Ironically, Gotzowsky's enterprises were taken over by Jewish merchants⁷³ who, during the eighteenth century, were the third group to be singled out by the Prussian authorities as likely to succeed as manufacturers. Frederick William I had already pressed the Jews into becoming industrial producers, in part encouraging them by providing assistance, in part by using his power over them in relation to their rather unenviable position.⁷⁴ Throughout the eighteenth century, the Jews remained most susceptible to government pressure because their residence in Berlin and the majority of other Prussian cities depended for each individual on the issuance of a special privilege.⁷⁵

Frederick the Great continued in the tradition of coaxing the Jews to

assume a leading role in advancing the cause of his pet industry.⁷⁶ He did so especially after 1763, well aware how rich some of the Israelite financiers had become during the war as operators of the royal mint and as suppliers of the armies in the field.⁷⁷ But despite their wealth, the king had to entice these capitalists into this trade by granting them generous subsidies and privileges.⁷⁸ Indeed, one gains the distinct impression that in some quarters of Prussian commerce, royal favors of one kind or another had almost become an end in themselves. As Alfred Marshall so aptly put it “the danger that in the trade which had got a bounty or in other trades which hoped to get one, people would divert their energies from managing their own business to managing those persons who control the bounties.”⁷⁹ The Frederician era was a classic case in point.⁸⁰ Nevertheless, within the triennium following the Treaty of Hubertusburg, the Berlin silk trades not only reached but actually exceeded the prewar levels of output. The king was pressing hard for an expansion in the making of silk stockings and for the introduction of taffeta production.⁸¹

By 1766 overproduction had become a problem. The proximate reason for these difficulties must be sought outside the industrial sector. At the time, a financial depression plagued this city and the country at-large, the result of reckless speculations with their land indulged in by the Junker lords.⁸² Frederick the Great tried to stem the tide of crisis by proposing various new credit schemes. However, the mere suggestion of foreign exchange control implied in some of the reform plans aggravated the situation by undermining still further business confidence. Fears thus aroused led to capital flight.⁸³

In the midst of this turmoil, a perplexed monarch ordered the relevant organs of state to subject the whole range of economic policies to a searching scrutiny. The way matters turned out, the officials exceeded the royal mandate: their deliberations and investigations opened up a Pandora’s box. When the study (known to historians as the “Ursinus Report,” in honor of the principal author) was eventually completed and submitted to the king, it had one dominant theme: that Frederician mercantilism in theory and above all in practice was wrong, harmful, and impracticable. The worst abuses of the system were specifically and mercilessly exposed. In a language unknown to an absolutist monarchy, and least of all to court circles, the silk trade was singled out for special criticism. The entrepreneurs were shown to have been incompetent and the whole structure of the industry, as set up by royal edict, was deemed inappropriate from the standpoint of efficiency and long-run viability. According to available evidence, the silk wares were of poor quality and in addition were from 40 to 70 percent more expensive than equivalent foreign goods. This is why, according to Ursinus, the population either refrained from purchasing these types of goods altogether, or bought only those fabrics that were known to have been smuggled into the country.⁸⁴

An irate autocrat did not take easily to views that impuned his judgment and the very core of his outlook. He imputed to this rather courageous public servant the worst motives. Frederick the Great also suspected that sinister elements, malcontents of all sorts, stood in the wings and were responsible for some of these critical comments. The king was annoyed and offended by his

ministers who penned their signatures to this memorandum, but it was the main writer of the report who bore the brunt of the sovereign's wrath; Ursinus was jailed in the Spandau prison. "Travailler pour le roi de Prusse" is no empty phrase.

The affront the king felt he had been administered by these adverse findings somehow prompted him to redouble his efforts on behalf of the mercantilist state. By trying to enhance the bureaucratic powers within the economy, Frederick the Great tried to prove to the world that his approach was the correct one and that his critics were on the wrong track.⁸⁶ He accordingly promulgated the *règlement* of 1766. The edict essentially reiterated regulations already enacted during the 1740s when the young monarch had initially set up the corporate structure within which the silk industry was meant to develop.⁸⁷ However, many of the original rules, especially those pertaining to the supervision of the finished fabric, had remained a dead letter. And it was only twenty years later that an impatient sovereign insisted that his orders be followed.⁸⁸

Frederick the Great had looked to Lyons and its flourishing state as the model to be followed when introducing the guild into the Berlin silk and velvet trades. Through this type of industrial organization, the king planned to assure the success of Berlin's endeavors. He thought that he had found in this system the formula that would nurture excellence of workmanship by instilling high morale and strict discipline, at least into the key craftsmen of this manufacture.⁸⁹

But the deliberate transfer of economic and social institutions, though often vitally necessary, is a most precarious undertaking. Under the best of circumstances such an operation requires patience. Above all, it demands the imagination that anticipates the modifications that have to be performed upon the imported framework before it can be rendered completely effective within the new environment. Otherwise the hollow form and the mere trappings of the particular institution are transmitted rather than its essentials—that is, the elemental forces propelling its *modus operandi*.⁹⁰

The king's narrow and doctrinaire perspective precluded a flexibility of mind that might have given him insight into the basic differences governing conditions in Lyons and in Berlin. In Lyons, for example, the *grands marchands* were members of the corporation and, because of their dominance within it, shaped the whole industry to their needs. Indeed, these rich merchants were the outward symbol of the greatness of Lyons.⁹¹ By contrast, in Berlin, wealthy entrepreneurs were conspicuous by their virtual absence. And the few who were active remained outside the guild. Thus, in turn, the Berlin silk masters, who, after all, were *de facto* wage earners, enjoyed none of the advantages (by comparison to their French counterparts) that derived from being able to depend upon the close and continuous support of a well-heeled *Verleger*.⁹²

Furthermore, in Lyons the evolutionary pattern of industrial development led to a luxuriant growth of "external economies." These particular benefits were to be reflected in the innumerable trades supporting the main manufac-

ture. Such specialization was and remains to this day the hallmark of an economic setting that has reached a considerable degree of maturity. However, the Berlin silk industry, which by the 1760s had eked out fifty years of existence in a totally different environment, came nowhere near the Lyonese stage of development.⁹³ And thus the Berlin trades knew none of the luxuries that derived from having become successful and sophisticated.⁹⁴ To have therefore imposed along the Spree an industrial structure merely because it had proved workable on the banks of the Rhone, does not say much for Frederick the Great's economic statesmanship.⁹⁵

Not surprisingly, the guild system of Berlin's silk manufacture achieved the worst of all possible worlds. The masters were able, by virtue of their bargaining position, to gain a wage level somewhat higher than unfettered market forces might have allowed them. The masters were also in a position to delay, if not altogether thwart, the technical innovations that threatened their employment. Moreover, the guild was chiefly responsible for the proportion of women and children working in the manufacture proper (as contrasted with ancillary trades) to be much smaller than in Lyons.⁹⁶

Though this constellation of circumstances made for higher labor costs, this particular tendency was not offset by increases in productivity, or through inordinate improvements in the quality of output. In fact, on both scores (performance per worker and fineness of the fabric), Berlin compared unfavorably with other silk centers despite vigilance over these matters by the authorities.⁹⁷ Besides, industrial strife was the trade's chronic malaise.⁹⁸ Eventually, both merchants and even masters came to dislike and oppose these corporate arrangements.⁹⁹

However, the cyclical upswing of the 1770s, together with the protection and general support the government continued to extend, prompted a sizable expansion in the Berlin-area silk manufacture. This region boasted some 470 silk and velvet looms in operation during the year 1776, and the number increased to 835 in 1771 and to no less than 1,750 in the peak year, 1777–78. Within these fifteen years (1766–81), total output doubled in value, reaching a million talers. During the same period, the value of Berlin-area silk wares sold annually at the Frankfurt am Main fair rose from between 200,000 and 300,000 talers to between 700,000 and 800,000 talers.¹⁰⁰

Though interrupted in 1775 and again in 1781 by a downturn, this cyclical advance continued into the early 1780s and was accompanied by a definite trend toward industrial concentration. The old established firms enhanced their hold over the trade¹⁰¹ as enterprises like David Hirsch's children and Bernard Isaac's sons (together with their able partner Moses Mendelssohn) became most important. But Girard and Michelet and the heirs of the Brothers Baudoin were the largest establishments of that era, operating at the height of the boom 200 and 200–250 looms, respectively. Such was the current optimism that during this decade a few merchants entered this manufacturing sector without governmental assistance and without royal prodding.

But the downturn of 1781 and the ensuing depression focused once more upon the congenital defects from which the silk and velvet trades in Berlin and

its environs were suffering. Some entrepreneurs closed shop altogether. Others tried to survive by reducing their operations.¹⁰² When a number of *Verleger* tried to reduce wages by about 25 percent, they were to face the violence of striking journeymen.¹⁰³

The crisis of 1785 proved to be even more serious. Such old firms as Moses Riess went bankrupt. Soon a host of smaller firms followed along this dismal path.¹⁰⁴ Unemployment soared.¹⁰⁵ That the czarist authorities raised their import duties and that tastes shifted from heavy fabrics (Berlin's specialty) to lighter ones did not help matters. But most revealingly, throughout the depression smuggling into the Mark increased. The illicit trade highlighted the artificial and ineffectual nature of government controls and thus prompted the Prussian state to take another sharp look at conditions prevailing within the Berlin trades.¹⁰⁶

The king tried to solve difficulties by attempting to mediate the industrial dispute and, above all, by reducing contraband activities. From a long-range standpoint, Frederick the Great was compelled to take under advisement a rash of official reports probing the nature of the industry's ills and suggesting appropriate reforms. The theme of these *pronunciamentos* ranged from a proposal for a state-run, nationalized silk industry to suggestions that would have liberalized the corporate structure in order to grant greater freedom to private initiative.¹⁰⁷ In the end, the industry was essentially left unchanged. Until Frederick the Great's death, the Berlin-area silk trades functioned within the mercantilist limits imposed upon them almost half a century before.

However dissonant these reports and recommendations were, they nevertheless brought to light some of the hard facts responsible for Berlin's weakness as a silk center. According to one account, fraud had crept into the administrative machinery responsible for the disbursement of subsidies and rebates.¹⁰⁸ Another memorandum elaborated upon the implications that many a smaller silk master was being financed by and therefore beholden to Jewish traders who manipulated the various manufacturing operations illicitly from behind the scenes. Thus the petty masters worked almost exclusively for these Jewish merchants who supposedly did not shrink from all kinds of nefarious marketing practices. To unsuspecting customers they sold fabrics even when badly produced or of short measure.¹⁰⁹

But the most damaging revelation was the fact that Berlin wares were no match for those of Lyons either at the Leipzig fair or at the one held in Frankfurt an der Oder. The significance of this devastating comment must be understood within the proper context; the French goods sold in either place had to absorb transport costs and transit duties, whereas Berlin fabrics were not only free from those burdens, or almost so, but additionally were bolstered by subsidies and export premiums.¹¹⁰ All in all, the consensus of these memoranda was that, in one way or another, an erratic raw material supply, the absence of "external economies," the inflexibility of the industrial structure and, last but not least, excessively high labor costs were the bane of the Berlin silk industry.¹¹¹ /

Ever since the 1760s, Frederick the Great had been trying to face up to the

issue of Berlin's high labor costs. He accordingly developed a program of transferring an ever larger share of silk production into Berlin suburbs, notably into Spandau and Koenigsnick, and into small Prussian towns where the costs of subsistence and rents were considerably lower. In some respects the king's plan proved quite a success.¹¹² Nevertheless, Berlin was to continue as the center of gravity for the silk and velvet trades. Usually provincial entrepreneurs aspired to stand, as it were, "with at least one foot" in the city. Some have attributed the spell this metropolis cast over traders to the existence there of a large market and to the availability of supporting industrial facilities which tended to offset Berlin's notoriously high prices for food and lodging.¹¹³

But there may be another reason why the Prussian capital exercised a magnetic attraction upon these capitalist producers. Is it unreasonable to assume that as long as the state's fund for the support of a particular industry was large, the logic of events propelled every operator in this branch to reside as close as possible to the cash box, in the hope of dipping his fingers into it? In this connection, it is well worth noting that throughout Frederick's reign, total expenditure devoted to industrial expansion amounted to about 2,775,000 talers. Of this sum, the silk trades were allotted as much as 1,840,000 talers.¹¹⁴

However, royal efforts to counter high costs of production by transferring the silk industry to rural areas failed from the start. For one, the various manufacturers and entrepreneurs objected to the proposed move. They denied that production in the countryside would reduce costs, for inadequate transportation facilities would raise difficulties in marketing the finished product. Second, the king soon realized that this transfer, though "really desirable,"¹¹⁵ was incompatible with the controls and the excise system imposed upon the economy in general, and industry in particular. Decentralization, argued the royal officials, would have led to a breakdown of mercantilist policies. Finally, and even more fundamentally, the transfer of the silk industry would have conflicted, according to Hintze, "with the feudal order of the countryside where an as yet sparse population was fully occupied with the agriculture labor services arising out of its serf position. Under these circumstances, even the better judgment of the king was impotent."¹¹⁶

But why should so masterful a sovereign as Frederick the Great have been powerless in the face of this inhospitable environment? Why was he unable to remove or at least attenuate the feudal fetters that militated against industrial progress, specifically against the expansion of a rural manufacture? To know the answer to this question and to account in turn for this aspect of royal resignation, presupposes an understanding of state and society in eighteenth-century Prussia and of the peculiar role assumed by the Hohenzollern king in this particular setting.¹¹⁷

It may be well worth noting that for all his knowledge of contemporary thought and his friendship with many a *philosophe*, Frederick the Great remained in outlook and disposition a Junker.¹¹⁸ And he viewed himself, not unreasonably, as the chief of these feudal lords. He accordingly took for granted that by virtue of tradition and the evolution of its political structure,

the dynamic of the Prussian monarchy depended upon an inordinately large military establishment and upon a most efficient bureaucratic apparatus. He also assumed it as a necessary part of the scheme of things that the senior army officers and high government officials had to be drawn from East Elbian aristocrats, whose incomes and political influence derived from their vast holdings of land and their dominion over the serfs who worked on these estates.¹¹⁹ If at times, therefore, Frederick the Great did quarrel with his nobles, it was only in order to prevent them, as the backbone of this feudal monarchy, from digging their own graves. Like Franklin D. Roosevelt, who was hard pressed to save capitalists, the Prussian king did his utmost to preserve *l'ancien régime* against its own notables.¹²⁰

The imminent danger to the feudal order through erosion of the traditional power and property structure came from a not unexpected source. Even in Prussia, capitalist expansion had brought to the fore rich merchants and entrepreneurs who viewed the purchase of Junker lands as the peak of social and economic achievement. In all preindustrial societies, land remained (and, in many ways, still remains), for large aggregations of wealth, the safest investment outlet. This was particularly so in a feudal society like Frederician Prussia where landownership conferred upon the proprietor special privileges, not the least of which were exemption from virtually all taxes and the right to exert extraeconomic pressures upon serfs. It was therefore only natural that during the second half of the eighteenth century the Berlin capitalists should have lusted after Junker lands, whose possession promised secure profits, considerable power, and the heights of social prominence.¹²¹

To have admitted an individual bourgeois and his family into the charmed circle of the aristocracy was considered not only reasonable but, in some governing circles, politically wise. However, to have allowed the aspiring bourgeoisie en masse, as a class, to purchase aristocratic estates, was perceived by the feudal power as a mortal threat that would have radically altered the character of the Prussian state.¹²² Consequently, this bourgeois thrust was resisted by king and court with all the resources at their disposal. Frederick the Great was, of course, against this investment pattern and on numerous occasions railed against it. He castigated the bourgeois who were intent on forsaking their traditional calling in order to settle in grand style on a manor surrounded by an English park.¹²³

In any event, throughout this era the king and his officials were being confronted by evidence that the rapid accumulation of urban wealth was potentially an acidlike solvent of the status quo. At the time, surplus funds, primarily in Berlin, became increasingly available and sought, often in vain, adequate investment outlets.¹²⁴ It was therefore in large part because he wanted to harness the "new money" and the energies associated with it on behalf of the existing order that Frederick the Great pressed his industrial programs and endowed the silk trades with special privileges.¹²⁵

Through his mercantilist policies, it seems that the Hohenzollern monarch expected to achieve three interdependent aims. For one, he planned to emasculate the threat of capitalist irruption about to engulf the feudal lords, many

of whom were too incompetent to survive the financial manipulations typical of the second half of the eighteenth century. Second, he hoped that industrial progress would enhance the effectiveness of the state by strengthening its economic position through the reduction of expenditure in imports. Finally, the new trades, located in garrison towns, were meant to offer to the large underemployed group of "soldiers on permanent leave," including their families, new employment opportunities. This in turn was to provide their aristocratic and regimental commanders with additional revenue by enlarging the "tax capacity" of the noncommissioned ranks.¹²⁶

All in all, Frederick's overriding concern was to mold the then emerging bourgeoisie into a "caste" complementary to, rather than competitive with, the feudal lords. Thus, incipient class consciousness and naked class interests on the part of financiers were to be banished from the social scene.¹²⁷ More specifically, efforts to coordinate, within this hierarchical setting, agricultural and industrial activities were made in the hope of cementing the economic foundations of a balanced polity.¹²⁸ Here was a glimpse in concrete terms of what Marx so aptly perceived as Malthus's strategic vision: "Malthus wants bourgeois production in so far as it is not revolutionary, in so far as it is not a historical force, but merely creates a broader and more convenient material basis for the 'old' society."¹²⁹

However, the drift of events forced Frederick the Great to take from industry with one hand what he had tried to give it, through subsidies and privileges, with the other. On the face of it this may seem odd. But since the 1760s, the plight of the feudal estates left the king (given his political viewpoint and given the power constellation of his autocracy) no alternative but to come to their rescue. He therefore supported the establishment of well-endowed agriculture mortgage banks, the so-called *Landschaften*, for the exclusive benefit of the lords. To enhance the attractiveness of these financial institutions as investment outlets, all the aristocratic lands partaking in this scheme were collectively pledged as collateral.¹³⁰

It was therefore not surprising that large sums of urban capital which otherwise, for want of better opportunities, might have been risked in novel industrial ventures, including silk and velvet, flowed into these safe investment outlets. This indeed was contrary to the king's express wishes and cherished policies.¹³¹ But contradiction was part of the logic of this social order. And thus urban funds seeking the security and liquidity of these land mortgage bonds helped not only to prop up an inefficient agriculture but a whole economic system inimical to industrial progress.¹³²

From Persecution to Profit

Digression from the principal theme is meant to highlight, by way of contrast, some of the prerequisites of eighteenth-century economic growth. To blame the failure of the Berlin silk industry on mercantilist directives and feudal relationships in the neighboring countryside suggests, once again, that the

"obvious and simple system of liberty" would have been more conducive to material progress. Indeed, this is the theme of the subsequent argument.

The Krefeld silk industry, unlike its Berlin counterpart, was fortunate to escape the lavish yet misconceived prodding of mercantilist ambition.¹³³ In fact, Frederick the Great's decisions on crucial matters of commercial policy betray his total indifference to the fate of economic activity in his westernmost province.¹³⁴ If, therefore, paternity needs to be established, it may well be said that western industry, including Krefeld's silk manufacture, was the lusty child of the simple and vital peasant environment that characterized this region since the sixteenth century.¹³⁵

The development of this favorable setting resulted from the successful adaptation of the Rhineland's medieval agriculture to the pressures of the modern world. In its modest way, the Niers plain (i.e., the wider territory around Krefeld) dramatizes the historical importance of this adjustment process.¹³⁶ As the various dues and labor services arising out of the lord-serf relationship were gradually commuted into money rents, the feudal order gave way to small and medium-sized holdings as the general form of land tenure.¹³⁷ Long leases, some of them *de facto* hereditary, became quite common and set the stage for tenant-farmers to practice the economic rationale, requiring "an exact attention to small savings and small gains" that proved, at least in the preindustrial revolution era, the basis of economic progress.¹³⁸

That the industrial expansion in neighboring Flanders and Brabant was similarly conditioned underscores the hypothesis regarding the agricultural foundations of this particular growth pattern. It is by no means suggested that the Rhineland (despite its undisputed progress), and least of all the Niers valley,¹³⁹ came anywhere close to absorbing the agricultural and horticultural innovations which, at the time, had turned the "Spanish Netherlands" into the "cradle of the new husbandry."¹⁴⁰ Notwithstanding this qualification, the international comparison offers illuminating insights. Specifically, the Rhineland and the "Spanish provinces" shared similar customs and types of farming communities. This agrarian social structure was to make the most of their common role as a hinterland of the thriving Dutch commercial centers.¹⁴¹

The cities comprising the "United Provinces" had emerged as the hub of the world economy and in their new capacity exerted a profound impact upon neighboring regions. The agricultural improvements of sixteenth-century Flanders are inseparably linked to the pressures emanating from the burgeoning capitalism of the Dutch coastline.¹⁴² It is also from this quarter that the large-scale cultivation of flax (an economic event of epoch-making consequences) was to receive its initial impetus. Flax became Flanders' major export crop, and in turn both the material and social foundation of its celebrated linen industry.¹⁴³

During the seventeenth century the output of the Belgian linen industry grew at least threefold.¹⁴⁴ Therefore, given the absolute size of industrial developments in and around Ghent and Bruges, the expansion along the Lower Rhine appeared modest and lagging. Yet not only the rate and the pattern of progress, but even the forces underlying the advance of the Rhen-

ish textile trades were essentially the same. Outside the Wupper valley, the northwestern part of Jülich and the southern end of Geldern became the regional "Flaxland" par excellence; the townships of Viersen, Süchteln, Gladbach, and Rheydt lay at the center of this area.¹⁴⁵

Initially prodded by outside, particularly Dutch linen merchants seeking raw material supplies, local flax was transformed from a product grown for home consumption into a major export crop. As elsewhere, the flourishing state of the export staple soon spurred the growth of a "processing industry." Women and children turned to the spinning of yarn and its ancillary services on a commercial basis, which in turn led to the weaving by men on a full-time basis.¹⁴⁶

Thus a greater proportion of the local population became increasingly dependent upon the vagaries of this trade. As early as 1580 the Viersen district is said to have boasted 800 linen looms. Though this figure may seem exaggerated, it is supposed to have continued to rise to a peak in 1642 when Viersen suffered serious destruction. In any event, it meant that in this particular district between three and four thousand persons, in one way or another, were engaged in some branch of the linen trade.¹⁴⁷

The native dealers, who on a local level had come to supplant the Dutch merchants, fairly quickly assumed a dominant role in this prospering manufacture. As elsewhere, the yarn jobbers progressively enlarged upon their traditional functions. Instead of confining themselves to the purchase of yarn in the countryside and its sale at the weekly fairs, they increasingly turned *Verleger* by putting out, on their own account, to homes of weavers the reels from which the latter produced a fabric on a piece-rate basis. The various types of linen were in turn sold to wholesale merchants who eventually completed their disposal to the bleacheries at Haarlem and its vicinity.¹⁴⁸

Locally, Mönchengladbach and Rheydt were the initial centers of the *Verlag*, for during the seventeenth and eighteenth centuries full-time weavers and export merchants came to settle in these particular communities.¹⁴⁹ From there the intricate web of capitalist relationships spread rather rapidly throughout the countryside where changes in social stratification reflected the newly emerging mode of production. Inasmuch as equal inheritance of land had been one of the regional hallmarks and preconditions of industrial growth, the extension of domestic industry accentuated this trend. Rapid population growth, spurring and spurred by industrial expansion, led both to dwarf holdings, which were owned or rented by weavers and their families, and to several consolidated farms of substantial size, held by Kulak-type entrepreneurs.¹⁵⁰

By 1700 a memorandum claimed that the majority of Viersen inhabitants cultivated between two and six morgen and "therefore must as supplementary employment work in industry or craft without which they could not subsist."¹⁵¹ Ninety years later, a report indicated that in three villages adjacent to Viersen, 134 weavers were without lands, whereas 32 worked between one-half and 30 morgen (most of them probably less than five).¹⁵² The fragmentation of holdings caused agricultural stagnation and explains why the Viersen

area had become a net importer of food. Local production of grains and other foodstuffs was quite incapable of satisfying even the most modest needs of a growing population.¹⁵³

Such a state of affairs is, in some ways, not too surprising. It at least conforms to Arthur Young's strictures, based on his observations in northern France and Ulster, that wretched populations, coupled with low standards of husbandry, are the eventual by-products of flax cultivation and linen manufacturing, however prosperous these latter activities may be.¹⁵⁴ This particular "flax land" was no exception, for the poverty of its inhabitants proved to be one of the foundations of industrial progress.¹⁵⁵

There is one further historical phenomenon that must be mentioned and stressed. During the sixteenth century the Lower Rhine region, along with other parts of western and central Europe, was to share the benefits of immigration by Dutch Protestants fleeing the persecution of their Spanish rulers.¹⁵⁶ The Niers valley was to be at the center of these decidedly favorable developments. Among all the newcomers, Mennonites soon formed the most conspicuous group, not least because of their role in promoting the local linen industry. Supposedly recruited from among the less affluent of the original members, the incoming Mennonites appear to have been attracted to this yet underdeveloped area. They considered it a region of great potential, where resourcefulness might initially prove a possible substitute for lack of accumulated resources.¹⁵⁷

Unlike elsewhere in the German lands, these high hopes did not go unfulfilled. Experienced in the ways of a commercially more advanced economy and preserving their connections with it, the Mennonites were to assume a commanding position within the area's linen trade, particularly as wholesale merchants.¹⁵⁸ By the seventeenth century, local industrial progress had become identified with Mennonite drive and ingenuity. In contrast to most other inhabitants who plied the linen trade as an extension of their agricultural activities, the Mennonites, from the beginning, engaged almost exclusively in the mercantile and manufacturing branches of this industry they had helped to establish here.¹⁵⁹ Settling, in ever larger numbers, in the growing townships of Gladbach and Rheydt, Mennonite specialization points to a singleness of purpose not uncommon among minorities notable for entrepreneurial success.¹⁶⁰

However, domination of an economy's leading sector by a sect set apart from the rest of the population adds special poignancy to class antagonisms. This area was to be no exception. Complaints were soon voiced: Mennonites, by virtue of their capital, were buying up flax still standing in the field, thus establishing a monopoly "that took the bread, as it were, out of Catholic mouths."¹⁶¹

These were the jealousies and envies that were to provide the local background against which religious strife was to rage here as it did elsewhere in seventeenth-century Europe. Mennonites increasingly became the victims of intolerance even though the prosperity of the area's economy depended upon their well-being. When in 1654 the duke of Jülich decided to expel the Menno-

nites from Gladbach, he condemned the township to stagnation. According to one official who witnessed these expulsions, not the Mennonites but “the poor” were ruined by the eviction of their *Verleger*.¹⁶²

In neighboring Rheydt, local rulers were therefore very well aware of the noxious consequences of such intolerance. But outside influences and above all the internal pressures of “bigoted priests, corrupt bureaucrats, and envious Lutherans” made them eventually capitulate to the clamoring populace.¹⁶³ They, too, banished the Mennonites from their realm and thereby made Rheydt follow Gladbach into a secular decline that was to last until the era of the French Revolution.¹⁶⁴

The Mennonites faced the tribulations of banishment with characteristic ingenuity and resourcefulness. Some of them sought refuge in the commercial centers along the route leading to Holland. A few of them ventured even farther afield.¹⁶⁵ The majority, however, followed the earliest emigrés who fled from Jülich-Berg territory into neighboring Moers county and settled in and around the nearby township of Krefeld. At the time, a possession of the House of Orange, the principality of Moers offered to prospective inhabitants the important yet all too rare blessings of that era: religious freedom and, because of neutrality, noninvolvement in the horrors of war.¹⁶⁶ In addition, Krefeld provided the strategic advantage of location. By virtue of its proximity to their former homes, it minimized the newcomers’ problems of social and economic adjustment. Specifically, it gave the Mennonites the opportunity to maintain as merchant-manufacturers their traditional and vital links with the flax growers, spinners, and weavers of the Jülich, Cleve, Geldern, and Kurköln countryside.¹⁶⁷

Until the mid-seventeenth century, Krefeld remained a stagnant township, hardly larger than a village.¹⁶⁸ Its population, estimated to have reached between five hundred and six hundred by 1625, did not grow during the following three decades despite freedom from war, religious intolerance, and guild restrictions.¹⁶⁹ Not even the new Mennonite families who had come here during the 1620s appear to have made an impact upon the scene. Whatever linen or woolen cloth production they had started never amounted to very much.¹⁷⁰

The employment structure of this period reflected Krefeld’s obviously circumscribed nature as a marketplace. Predominantly craftsmen and petty traders, its burghers tried to satisfy the rather modest needs of the rural vicinity. But since specialization is limited by the size of its outlets, it is not surprising that most of these town dwellers were driven to complement their artisanal and commercial employment with agricultural and horticultural activities. They grew grain, tended vegetables, and raised cattle outside the city gates, on leased or owned land.¹⁷¹

By mid-century the government of this semirural polity was vested in a self-perpetuating oligarchy of established families who plied a local craft, trade, or profession. These notables were a close-knit group, members of the Reformed Church, which constituted, in contrast to the Catholic countryside, the majority faith in Krefeld town.¹⁷² The duties of these seventeenth-century

aldermen and councilors were of a customary kind: to collect the excise, supervise the activities of the guilds, assist the ducal authorities in maintaining law and order, and finally to organize and supervise local poor relief. Though these functions were limited, they seem to have given the office holders sufficient power to oppose quite effectively the claims of the incoming Mennonites to full civic rights.¹⁷³ And it took the Mennonites about half a century and the realization of undisputed ascendancy within the economic order before they were able to dislodge the traditional elite from power. It was after 1730 that the Mennonites were to achieve *de facto* political control in Krefeld and decisively shape the course of city events to their specifically industrial and mercantile needs.¹⁷⁴

The first wave of Mennonites from Gladbach and the Berg area consisted of about 140 families. Most of them settled in the rural district because only a few were able to find quarters within Krefeld proper.¹⁷⁵ With one or two exceptions, most of these immigrants came from the "middling ranks" of society. Some of them were poor and at best owned only one or two looms.¹⁷⁶ However, as a group, the Mennonites were considerably better off than the cotter weavers and spinners with whom they had continuous dealings. It was this relative superiority of the Mennonites that gave rise to exaggerated claims regarding their affluence.¹⁷⁷

History knows many instances where characteristics mistakenly attributed to a minority have a strange way of eventually turning into a self-fulfilling prophecy. This phenomenon is not really as bizarre as it may seem at first glance, for the majority frequently determines, on the basis of preconceived notions, the circumstances within which it can mold the minority to a type.¹⁷⁸ In this particular case, the persecution visited upon victims elicited from them an optimal response in their role as traders and linen manufacturers. By the mid-eighteenth century, the Mennonites had emerged as a business elite of considerable importance, a position which popular envy had already accorded them, almost fifty years before the fact.¹⁷⁹

The dispatch with which Krefeld replaced Gladbach as one of the regional linen centers was a measure of Mennonite ability to make the most of their opportunities. At the time (i.e., the 1650s), the recovery, after decades of war, had just begun, especially in Western Europe. In addition, the House of Orange actively encouraged all those endeavoring to bring trade and industry to Moers and particularly to Krefeld. The Dutch rulers hoped that by doing so they would enlarge the township's woefully narrow tax base.¹⁸⁰

Soon Mennonite successes in Krefeld became known beyond the immediate region. As the good news spread, it not only attracted co-religionists from as far as the Palatinate and Switzerland, but also all kinds of hard-pressed minorities seeking a new home.¹⁸¹ However, it was not until the 1690s when the Mennonites, as previously mentioned, were driven from Viersen and Rheydt, that Krefeld experienced its second tide of immigration. In some ways the social composition of this influx was more significant than its mere numbers. Unlike the settlers of preceding decades, who were mostly humble folk, many of the refugees from Rheydt and Viersen were men of substance

and business experience.¹⁸² They therefore fitted in quite readily with those resident members of the Mennonite community who had already reached a modicum of wealth and who were aspiring to even bigger things. This alliance was as symptomatic of the recent past as it was prescient of the future. It reflected the emergence of a breed of "new men" that epitomized the prosperity the region's linen industry had achieved throughout the second half of the seventeenth century under Mennonite leadership; it also portended an era when Krefeld was to evolve from linen capital of the region into the Rhineland's silk manufacturing center.¹⁸³

Similarly, the effective resistance the Mennonites marshaled against the harsher measures of the expulsion order, issued by the Jülich authorities, was a sign of the times. Thus the Mennonites demonstrated the extent of their power to influence at least those trends in the course of events which affected them most. By then, the sources of their strength derived from their ramified and considerable asset structure, from their cohesiveness as a harassed yet elite minority, and from their commercial and political connections extending beyond the immediate vicinity.¹⁸⁴

During the Rheydt exodus, when the duke of Jülich detained the last eighteen Mennonites as hostages, he set the ransom at approximately eight thousand talers. Yet four of the prisoners promptly raised the sum necessary for their own release and simultaneously subscribed to a fund set up to free their fellow victims. Revealingly, the major share of the indemnity was borne by the leading Krefeld Mennonites who extended to their hapless co-religionists most generous assistance.¹⁸⁵

Some of the financial transactions that transpired in the course of these rescue operations shed interesting light on various characteristics of Mennonite wealth and on its political underpinnings.¹⁸⁶ According to evidence connected with the payment of the ransom, several Rheydt Mennonites had already transferred, in anticipation of discriminatory legislation, some of their movable possessions out of the reach of Jülich's jurisdiction. Most probably they had shipped goods and money to Krefeld. However, it is worth noting, particularly from the standpoint of subsequent developments, that eventually the Jülich Mennonites, though driven from their homes, were not deprived of their property.¹⁸⁷ They owed this fortunate turn of events to a powerful protector, the ruling prince of Orange, William III, king of England. His prompt and energetic intervention on their behalf secured the Mennonites the right to carry with them into Krefeld all their transportable valuables.¹⁸⁸ They were also assured ownership of their estates on Jülich soil until duly sold. The disposal of the latter proved to be a protracted undertaking, lasting into the eighteenth century. The slow pace was part of the Mennonites' deliberate policy to stagger the sale of these properties, lest a hurried and wholesale offering of lands cause a slump in their values.¹⁸⁹

This proved a significant triumph, not least because victory was achieved against heavy odds. Yet the continuous pressure of discrimination and the ever-present threat of expulsion and expropriation that had so far hung over them set the Mennonites apart from the rest of the population, both as indi-

viduals and as a group.¹⁹⁰ These differences were to be accentuated by the peculiarities of their haunted but prospering existence that forged, as mentioned earlier, the closest possible ties among them as a minority facing a hostile world.¹⁹¹

Throughout the seventeenth century and most of the eighteenth, "cumulative causation" sustained the trend toward exclusiveness. A life of successive migrations, to which the Mennonites had been subjected, frequently endows those so affected with unique talents and habits. Drawing upon previous experiences, newcomers often manifest a sensitivity and adaptability to a strange locale that is as much part of their survival kit as their suspiciousness toward the new environment of which they are as yet but marginal members.

Characteristics of this kind may not be the ones with which to gain popularity, let alone social acceptance. But these traits usually are and in this instance actually were the ingredients of the shrewdness that assures success in the commercial world.¹⁹²

In turn, the Mennonites' reputation for the Midas touch quite naturally roused the envy of ordinary mortals. This was to be the expected reaction on the part of the bewildered majority. At the time, the commercial exploits of the Krefeld Mennonites were in stark contrast to the modest rural environment which predominated throughout the Lower Rhineland. It may be well to remember that despite the economic progress experienced in their region since the Treaty of Westphalia, industrial developments and capitalist attitudes remained confined, even as late as the first few decades of the nineteenth century, to a few select towns and their immediate vicinity.¹⁹³

That the Mennonites remained consistently in positions of mercantile and industrial leadership was closely related to their peculiar social status. An originally precarious position within this world conditioned their business outlook and more directly the disposition of their wealth. They supposedly held a considerable portion of their assets liquid and movable as insurance against possible sequestration. They were heavily committed in raw materials and inventories, both at home and abroad, of semifinished and finished products, which were their stock in trade.¹⁹⁴ In this respect they differed markedly from most merchants of the preindustrial age who, on achieving success, promptly channeled their accumulated fortunes into what then seemed the safest and by all odds the most profitable investment outlet—land in general and agricultural estates in particular.¹⁹⁵

Similarly, because of their faith, Mennonites could neither aspire to nor seek public office and its pertinent honors.¹⁹⁶ This is why, unlike the scions of other well-to-do merchant families, they were not consumed by ambitions of aristocratic ascent. Nor were their energies and resources, for the time being at least, diverted from their bourgeois calling by costly outlays and corrupting experiences associated with the duchess's embrace.¹⁹⁷

It was above all their cohesiveness as a minority, in good part based on consanguinity,¹⁹⁸ that provided the Mennonites with a decisive advantage within the commercial orbit of the seventeenth and eighteenth centuries. Given the backwardness of that age (if viewed from the vantage point of

industrial society), human control of the destructive elements of nature was as yet strictly limited, commercial law governing exchange circumscribed and frequently opaque, and the physical protection of property hopelessly inadequate. Thus the movement of goods and exchange of services, in time and space, was bound to be precarious and risky. It was precisely in this particular environment that a network of blood relationships became a valuable instrument for the effective conduct of business.¹⁹⁹ Market imperfections were at least partially overcome by informal channels of information which the Mennonites developed among themselves.²⁰⁰ More often than not, these imperfections were further attenuated by the merchant's simple knowledge that in a distant place a representative close to him would guard his interests.²⁰¹

Much of the same rationale actuated the creditor with respect to collateral and security when making loans. Most aware that the recovery of debts in case of intransigency on the part of the borrower was a doubtful proposition, he preferred to deal with a friend or relative, or with strangers through an intermediary over whom he had a hold that extended beyond the cash nexus. Such personal contacts proved reassuring and, quite obviously, allayed the lenders's worst fears.²⁰²

Not surprisingly, according to some Krefeld historians, capital moved much more freely within the Mennonite community than in the economy at large. Money was available to impecunious young men, if known as reputable by acquaintances and next of kin, even though by the standards of the day their projects seemed foolhardy.²⁰³ Clearly, these group loyalties, as an integral part of material life, spurred the development of spontaneous and informal arrangements akin to the workings of a joint stock company where collective security enhanced individual initiative²⁰⁴—except that in this instance of cooperation, the marriage contract was the more important (and probably only) legal document, rather than the unattainable and locally unknown articles of incorporation.²⁰⁵

Moreover, the Mennonites enjoyed and jealously guarded their reputation for commercial honesty. Because of strict group control over all adherents, fraudulent behavior on the part of an individual faithful was almost unthinkable.²⁰⁶ In fact, when a member faced bankruptcy he could tap funds earmarked to meet this particular contingency and thus preserve the good name of the minority. It is no wonder that in time the Mennonites were to be sought out as persons with whom it was wise to do business. It was on just such foundations that from modest beginnings the Krefeld Mennonites were able to build an impressive commercial empire.²⁰⁷

Tight Little Families

By their remarkable efforts, the Mennonites transformed Krefeld, within a few short decades, from a somnolent township into a bustling hive of industrial activity. Already in the late 1680s, Krefeld could claim in its midst virtu-

ally all those Mennonite families who thus far had been instrumental in promoting the town's progress. These same families later proved strategic in Krefeld's rise to prominence as one of the world's leading silk manufacturing centers.²⁰⁸ The names of these particular families bring to mind the emergence of a manufactocracy that was to play a leading role in the urban and regional economy. They were the van Aakens, Flohs, Preyers, Scheutens, op den Graeffs, ter Meers, von Lingens, von Beckeraths, Eltens, Jentgens, and last but not least, the von der Leyens. From the late seventeenth century until well into the nineteenth, Krefeld's material fate was to be inextricably intertwined with the capitalist fortunes of the von der Leyen family.²⁰⁹

Heinrich von der Leyen, founding father of this industrial dynasty, arrived on the Krefeld scene sometime in the late 1650s or early 1660s. He hailed from Radevormwald, a small Berg marketplace where a hundred years earlier his Flemish forebears had supposedly sought asylum from the persecution visited upon non-Catholics by the Spanish rulers of their native land. Originally, these refugees (including the von der Leyens) seem to have been silk ribbon weavers who turned their efforts to the linen trades when, in their new Rhineland residences, the latter activity offered them more lucrative opportunities. However, the von der Leyens never quite gave up their interest in silk. As far back as the early seventeenth century, Frankfurt am Main records refer to them as Radervormwalde dealers in linen and silken wares.²¹⁰

Though for some years after their immigration, both Heinrich and his son and partner Adolph von der Leyen were officially known as Krefeld linen merchants and as such received into citizenship,²¹¹ they were primarily engaged in the commission trade. Hermann Keussen, who was able to inspect their seventeenth-century account books, confirms this preoccupation. During this period, the von der Leyens sold at the Frankfurt am Main fair ever larger quantities of Dutch linens and Dutch silk ribbons, and in turn purchased increasing amounts (at six months credit) of silk yarn and raw silk on behalf of Krefeld, Amsterdam, and other Dutch firms which, for the most part, were owned by fellow Mennonites.²¹²

Moreover, by the late seventeenth century the von der Leyens had achieved sufficient stature in the Rhineland and beyond to assume the role of intermediary, arranging through Elberfeld merchant houses the sale of Krefeld wares at the Leipzig fair. Apart from Frankfurt am Main, Leipzig was at the time Germany's principal international exchange.²¹³ Interestingly enough, the von der Leyens bought and sold little on their own account. Also, to judge from book entries, their own manufacture was negligible. Yet the local *Clio* had usually given Adolph von der Leyen credit for being the founder of the Krefeld silk industry.²¹⁴

Adolph's sons, Wilhelm and Friedrich, did more than carry on a prosperous family business. Endowed with qualities that make for successful entrepreneurs, they enhanced the von der Leyen already considerable position within the urban economy. This was particularly true of Wilhelm who resolutely enlarged the range of transactions beyond the traditional linen and silk

ribbons, to include, not only other textile wares, but also such diverse items as writing materials, religious books, toys, colonial products, and anything else that offered some chance of gain.²¹⁵

Wilhelm also appeared to have been the moving spirit behind the extension of the, as yet rather limited, von der Leyen ribbon manufacture. A family legend, quoted by Keussen, had Wilhelm during the late 1690s, pack on his back, wandering through the Lower Rhine region in an effort to dispose of his wares.²¹⁶ The apocryphal nature of this story suggests that even as shrewd a businessman as Wilhelm von der Leyen might initially have been lured by a mirage of exorbitant profits to be made in manufacturing import substitutes. But if he temporarily overestimated the potentialities of the market (a hypothesis not proven), he was promptly chastened by its stark realities. At a rather early stage it became obvious that in Krefeld (as in Montjoie and its woolen trades), the local market would prove too limited an outlet for ambitious projects of industrial expansion. Only quality production for exports could sustain the foundations necessary for the development of a major industry.

Preoccupation and familiarity with foreign markets was to place the von der Leyens in a most advantageous position in which they could adapt and subordinate their own manufacture to the requirements of these far-flung commercial activities.²¹⁷ Indeed, within this region the era seemed ripe for such expansionary ventures by way of "vertical integration." In the early 1670s the various types of silk were purchased at Frankfurt am Main in insignificant amounts of thirty to forty pounds, but the quantities thus traded increased tenfold and reached values of about a thousand talers by the end of the decade. During the next twenty years these values quadrupled.²¹⁸

Such growth led to a more complicated trading pattern. The Frankfurt am Main fair no longer constituted Krefeld's virtually sole marketing outlet, nor was it any longer its only supply center for raw and dyed silk. Increasingly, the von der Leyens had their products dyed in Cologne (especially by the firm of Johannes Esser).²¹⁹ At the same time, they sought ever larger amounts of raw silk from the Zurich dealers Murat and Orelli. Eventually they bypassed all intermediaries and bought their raw silk from growers in Milan and Turin or from the Dutch East-India Company.²²⁰ Toward the end of the century, when Murat and Orelli pleaded with the von der Leyens, on the basis of a supposedly long-standing friendship, for a larger share of the latter's commission business in ribbons, one could justifiably speculate that Krefeld generally, and the von der Leyens in particular, were prospering. Similarly, in the absence of extant accounts for those years, one might proceed by extrapolation to suggest that during the first two decades of the eighteenth century Krefeld's advance continued as steadily as in the preceding era. At least a few indications lend support to such guesswork. By 1716 there is mention of a merchant employing sixteen ribbon loom weavers making velvet ribbons.²²¹

This manufacturer was probably a von der Leyen, one of Wilhelm's sons, whose spectacular career was to leave an indelible mark upon the Rhineland's economic development. In 1720 the oldest son Peter started the manufacture of sewing silk, complementing the flourishing commission business which he

and his brothers had inherited from their father.²²² To enlarge and improve still further these commercial activities, Peter kept well-stocked warehouses in Cologne and Frankfurt am Main as well as Strassburg, Basel, Zurich, and Geneva.²²³ Moreover, in 1724 the von der Leyens opened Krefeld's first dye shop for silken products, an innovation which emancipated the town from its traditional dependence upon the dye establishments of Cologne and Frankfurt am Main.²²⁴ Besides, the operation of a local dye shop reduced production costs by eliminating interurban shipments, a cumbersome procedure, which was time-consuming and an invitation to widespread pilfering of valuable raw materials and semifinished goods.²²⁵

At about the same time, Peter's brothers, Johann and Friedrich, founded a firm to produce velvet ribbons, at first mostly plain black ones, and braids which they marketed, almost exclusively, at the Frankfurt am Main fair. The brothers' original investment in the business was supposedly a thousand and five hundred talers, respectively. However, within one year (by 1722), each became equally involved in the partnership with 900 talers. In 1727 their mother joined the venture, probably as guardian for the third and as yet a minor brother, Heinrich. Indeed, when Heinrich came of age in 1730, he replaced his mother as a partner,²²⁶ and Johann withdrew from the business to set up a similar one with his brother-in-law.²²⁷ In accordance with these changes in ownership, the firm (henceforth the main family business) was formally reconstituted and named "Friedrich und Heinrich von der Leyen." In years to come, this new name was to enjoy an international reputation.²²⁸

Anyone tracing the rise of the von der Leyens to wealth and renown can observe, particularly during those early years, the function the joint family system assumed in promoting commercial and industrial expansion. As stressed earlier in the broader context of minority status, blood relationships served as funnels through which resources, both material and human, were channeled toward optimal uses. Like a latter-day holding company, the elders of the "extended family" created and acquired "subsidiaries" with a sharp and discerning eye for economic opportunity and with an equally sure touch to match available talents among their kin with the specific exigencies of the particular entrepreneurial challenge.²²⁹ This rather restricted method of doing business, based upon selective nepotism, was not unusual during the eighteenth century. However, the effectiveness and resolution with which the von der Leyens pressed their advantage was surely exceptional.

The unbelievable rate at which the von der Leyens amassed their riches and the changing nature of their commercial and industrial activities, which provided the foundations of this success, are reflected in the balance sheets of those early decades. In 1727 the net worth of the three von der Leyen partners was 30,000 talers. It reached almost 41,000 in 1729 and 48,000 in 1730.²³⁰ During the following years, net worth in relation to the total balance (assets and liabilities) and total indebtedness of the firm "Friedrich und Heinrich von der Leyen" grew as detailed in Table 1.

The loss by fire, of the von der Leyen books, for the period 1756–72, explains the gap in accounting information. However, judging from other

TABLE 1. Von der Leyen Assets and Debits (in talers)²³¹

| | (1) <i>Net Worth</i> | (2) <i>Total Balance</i> | (3) 2 - 1 <i>Total Indebtedness</i> |
|------|-------------------------|-----------------------------|--|
| 1733 | 61,000 | 148,000 | 87,000 |
| 1737 | 86,000 | 185,000 | 99,000 |
| 1745 | 185,000 | 307,000 | 122,000 |
| 1751 | 296,000 | 432,000 | 136,000 |
| 1756 | 317,000 | 520,000 | 203,000 |
| 1794 | 1,311,000 | 1,754,000 | 443,000 |

evidence, this era witnessed an impressive expansion of von der Leyen activities.²³² The growth trend of their net worth is self-evident, as is the relative decline of their debts outstanding.²³³ On the eve of the French occupation, the von der Leyens were the richest merchants and manufacturers in the Rhineland.²³⁴

On the asset side, "accounts receivable" owed to them by commission houses and customers as well as "inventories" of raw materials and finished products were the most significant items, and as such, indicative of the important von der Leyen role as silk and velvet manufacturers since the 1730s.²³⁵ Not surprisingly, "fixed capital and equipment," though absolutely rising in value, remained as yet a relatively small part of total assets.²³⁶ This is typical of that period, as students of the eighteenth-century enterprise, from Alfred Marshall to Sidney Pollard, have pointed out.²³⁷

Of the various contemporary accounts, a memorandum prepared by the V. Department of the Prussian government is the most specific. The figures it presents, demonstrate why, at the time, the activities of the von der Leyen firm were considered of mammoth size.²³⁸

The State of the von der Leyen Factory (February 1768)

155 looms for producing all kinds of silken handkerchiefs; number of employees 465.

257 looms for the manufacture of all kinds of silken fabrics (velvet, damask, gros de Tours, taffeta, atlas, etc); the number of employees, about 771.

97 narrow looms²³⁹ for the making figured and brocaded velvets and figured ribbons; employees in this particular branch, about 194.

197 large ribbon looms²⁴⁰ for the manufacture of all types of ribbons (capacity production, about 8,000 pieces per week); the number of employees in this sphere of the industry, about 1,230.

18 large silk throwing machines preparing raw silk of East Indian and other foreign provenance for use in the above manufacture; the number of operatives engaged in this sector, 326.

2 dye shops with an employment figure of 40.

Thus, in toto the von der Leyens operated, in addition to the two dye establishments, 724 machines of various kinds that provided work for 3,026

employees (not including children) in Krefeld and in the wider region. The annual wage bill amounted to 175,000 talers.²⁴¹ Twenty years later the von der Leyen inventory of fixed equipment had risen to about 815 looms and silk throwing machines with a “corresponding increase in the work force”—about four thousand persons.²⁴² By then the annual output was valued at 746,000 talers, which meant that the von der Leyen firm was responsible for about 90–95 percent of Krefeld’s total production. Of this total, slightly more than four-fifths was exported.²⁴³

Should one be carried away and try to view the von der Leyen industrial triumph in terms of superhuman qualities, it should be recalled that throughout the eighteenth century several other Mennonite families proved similarly successful as manufacturers of silk and velvet products.²⁴⁴ Compared to the scale of the von der Leyen operations, the other Mennonite producers seem like petty traders. However, by Rhineland standards of that era, the Flohs, Heydeweyllers, von Lingens, von Beckeraths, and Preyers were substantial and respected merchants whose business contacts and relationships extended well beyond the immediate vicinity into other parts of Germany, the Netherlands, and France.²⁴⁵ During the late 1760s, the Flohs boasted a hundred velvet looms and a dye establishment.²⁴⁶ By 1763 the von Lingen enterprise (managed by their cousins, the von Beckeraths) employed four hundred persons and disbursed annually some 40,000 talers in wages.²⁴⁷ In 1778 the firm’s net worth stood at 108,000 talers; profits, which were 24,000 talers in the period 1765–68, rose to 33,000 for the years 1769–72. This figure reached 53,000 for the time span 1772–76, which compared favorably with the von der Leyen return of 8 percent on their capital.²⁴⁸ As for the Preyers, by 1775 they had some thirty velvet looms and 309 velvet ribbon looms in operation, suggesting a labor force of about seven hundred.²⁴⁹

To dwell on the commercial successes of Krefeld’s Mennonite elite is to recall those entrepreneurial talents nurtured by the characteristic of their minority status. The Mennonites continued to make the most of an environment favoring economic progress. The loose social structure of the surrounding countryside permitted the mobilization of the rural population for industrial employment in as effective a manner as it had to date with respect to the expansion of the local linen industry. Finally, the bracing atmosphere of *laissez-faire* and religious tolerance introduced and enforced in Krefeld by the ruling House of Orange was maintained without significant change by the Hohenzollern kings who, after 1702, took possession of the county of Moers.²⁵⁰

Moreover, the new eighteenth century carried over, from the previous one, forces, both global and regional, which were to strengthen the preconditions for Krefeld’s industrial headway. These propitious features endowed the “take-off” about to be experienced by the local silk industry with a dynamic of its own. The rococo age with its expensive fashions was one of those important factors. As much the outcome as the symbol of the secular upswing sweeping through the Western world since the late seventeenth century,²⁵¹ the new wave of prosperity promoted a sizable increase in the number and in the wealth of the upper strata of society who were the principal beneficiaries of

this prolonged boom. It was they who became the mainstay of the steady rise in the demand for silken products of all kinds.²⁵²

In turn, such expansionary tendencies within this particular sector hastened quite generally the confrontation between an aggressive, flexible, and unencumbered domestic industry then emerging and the ancient centers of production where the vestiges of the past inhibited progress.²⁵³ In the Rhineland the struggle proved particularly bitter. Because Cologne was a traditional silk center par excellence, every aspect of the city's social and economic life was weighed down by its medieval heritage.

By the eighteenth century, Cologne's corporate framework of production had degenerated into a caricature of its original purpose. It was wracked by abuses ranging from nepotism to all the other pathological symptoms of a social institution in the midst of decay. The guild opposed the employment of "outsiders" and fought the introduction of the "Dutch loom," fearful that such practices would endanger the already precarious employment position of its membership. The silk masters' guild, buttressed by the city fathers, generally reacted to the challenge of outside competition, against which it was virtually powerless, by the imposition of stricter and more irrational restrictions fraught with the potential for further corruption.²⁵⁴

Eventually, the fatal sign of imminent demise was to raise its nasty head: religious intolerance directed against the city's most active entrepreneurial minority, the local Protestants.²⁵⁵ During the first decades of the eighteenth century, when the Protestant minority decided to leave the city, it marked the beginning of Cologne's end as a manufacturing center, particularly as a silk producer.²⁵⁶ By contrast, adjacent Mülheim am Rhein and the more distant towns of the duchy of Berg (notably Elberfeld and Barmen) prospered. They had promptly turned to the manufacture of velvet and silken wares, their activities bolstered by Cologne's stagnation and by the consequent flow of enterprising refugees from the imperial city into Berg territory.²⁵⁷

Above all, it was Krefeld which profited from Cologne's decline. In this historical context, advantageous location was to serve Krefeld well on two important counts. Krefeld was sufficiently close to Cologne to be able to claim the role of regional silk center, which the medieval metropolis was being forced to abdicate.²⁵⁸ At the same time, Krefeld's proximity to the Netherlands enabled the area to take advantage of what the Dutch silk industry, then among the most advanced in the world, could teach it in terms of new techniques and methods of production.²⁵⁹ Thus Krefeld, led by the von der Leyens, imported from Holland the initial tools, the equipment and, most important, those skilled craftsmen who were to instruct the local population in the various tasks of making silk products.²⁶⁰

By the late seventeenth century, the Netherland's economy, especially that of the northern part, began to experience centrifugal tendencies with respect to industrial activity. This was particularly evident in Amsterdam's silk manufacture where a high labor cost economy increasingly imperiled the viability of this trade. Indeed, the high cost of subsistence plagued many of the towns along the Dutch coast and thus spurred the transfer of the center of

industrial activity away from the maritime area to the more central and southern parts (the former "Spanish provinces") and into the Rhineland.²⁶¹ After the mid-eighteenth century, the rapid expansion of Krefeld's silk manufacture was, in large part, achieved at the expense of Dutch output.²⁶²

It may be well to remember that historically, a relatively low wage level, associated with correspondingly reduced labor costs, constituted the Rhineland's most decisive advantage in international competition.²⁶³ This became increasingly more evident during the course of the sixteenth century when an unincorporated, export-oriented, domestic industry emerged as the dominant mode of production. Embedded in a favorable agricultural environment and an appropriately propitious social setting, the linen manufacture pioneered this form of industrial progress. The Niers valley, with Krefeld increasingly becoming the hub of local activity, was one of the most rapidly growing territories within this region.²⁶⁴

The vitality and flexibility of Krefeld's linen trades are clearly perceived from the vantage point of those early decades in the eighteenth century during which the township shifted, most resolutely, toward the manufacture of silk products as its principal source of employment. By then the old established linen industry provided a solid basis from which to launch this dramatic change.²⁶⁵ "Displacing thus the linen trades," writes Gerhard von Beckerath, "they [i.e., the von der Leyens] struck roots with their silk industry on ground prepared [for them] by the Jülich linen merchant-manufacturers."²⁶⁶

The strategic importance of an existing industrial framework in creating "external economies" for the newly developing trade is well established. Here it became most apparent in the sphere of early labor recruitment. Krefeld confirmed, unmistakably, Adam Smith's contention on how minor the differences between working on linen and silken products.²⁶⁷ Consequently, the von der Leyens and other Mennonites, anxious to deploy their efforts toward the production of silken wares, experienced no serious difficulties in gathering an able work force.²⁶⁸ The linen weavers, in and around Krefeld, eagerly turned to silk weaving; the new trade offered them prospects of considerably higher earnings and more regular employment opportunities.²⁶⁹ Matching their enthusiasm with ability, they were adept in learning from foreign experts the novel tasks and manipulations indispensable for those engaged in the silk industry. Above all, the weavers and ancillary workers, transferring from linen to silk, carried over a tradition of industrial discipline and habits of work ingrained in them by generations of service in a well-developed and exacting domestic industry.²⁷⁰

The majority of Krefeld's silk weavers were natives of the town or its immediate vicinity, children of local craftsmen, and peasants with small holdings. Mennonite weavers from Goch or immigrants from more distant areas generally remained an exception within the new trade.²⁷¹ Rather, Krefeld's silk merchant-manufacturers solved the mounting labor shortage, due to the industry's phenomenal growth, by resorting to measures consistent with the logic of putting-out systems: they distributed an increasingly larger share of their work among the underemployed coter weavers of the wider region.²⁷²

Women and children in the rural vicinity of Krefeld had been performing the unskilled tasks of preparing (cleaning, winding, etc.) the raw silk since manufacture began. But as available labor supplies in nearby Moers town and county, and in the adjacent villages of Fischeln, Anrath, St. Tonis, and Hüls (Kurköln territory) were quickly exhausted,²⁷³ Krefeld's *Verleger* extended their search for additional lands farther afield, into the areas of Cleve, Jülich, and Geldern.²⁷⁴ By 1743 the township of Xante (territory of Cleve) was producing at least 20,000 silk ribbons annually for the von der Leyens.²⁷⁵ Twenty years later Krefeld silk had penetrated several Jülich localities, most notably Süchteln, Dülken, Kempen, and even Rheydt.²⁷⁶ By the 1780s the Prussian part of Geldern claimed 200 to 300 silk looms in operation,²⁷⁷ all of them probably working for Krefeld merchants. Most of these looms were concentrated in Grefrath and Viersen where the existence of a Mennonite community facilitated the absorption of the weavers' colony into the Krefeld orbit.²⁷⁸

Thus on the eve of the French Revolution, almost every former linen village within a ten- to fifteen-mile radius from Krefeld had at least partially become absorbed in the velvet and silk economy.²⁷⁹ Given the mercantilist beliefs which at the time were prevailing royal doctrine, the Prussian officials were bound to view, particularly at first, this pattern of industrial expansion with considerable misgivings. Indeed, in 1743 the Prussian authorities in Geldern upraided the von der Leyens for employing such foreign labor as the peasants residing in adjoining Kurköln (Cologne electorate) and advised that these "foreigners" be made to migrate into town or at least into Prussian territory.²⁸⁰

Characteristically, this particular admonition was ignored by those for whom it was intended and the matter was never again pressed.²⁸¹ It appears that in time the bureaucrats must have become aware of or were told what the von der Leyen and the other Krefeld *Verleger* had known all along: rural labor, which effectively complemented its industrial activities with agricultural ones, was cheap and could even be remunerated at below-subsistence levels. Thereby it constituted the very basis of Krefeld's competitive power in world markets.²⁸² In this context it is worth noting that toward the end of the eighteenth century, the challenge to Krefeld arose not from the declining Dutch silk trade nor from Lyons, with its emphasis upon heavy materials, but from Zurich industry. By then Zurich manufacture had become organized along lines almost identical with Krefeld and specialized in the export of the type of lighter fabrics and ribbons for which the von der Leyens and their co-religionists were already enjoying an international reputation.²⁸³

This steady and highly successful extension of domestic industry into the rural hinterlands led as elsewhere under similar circumstances to a clear-cut division of labor between town and country. Because the more highly skilled and better paid craftsmen lived there, Krefeld and its immediate vicinity concentrated efforts on the fancier and more expensive kinds of goods. At the same time peasant weavers, largely because of their lesser qualifications, became the producers of cheaper staples.²⁸⁴

Against the background of West German developments, Krefeld's indus-

trial dynamism stood in marked contrast to the helplessness of many languishing linen centers unable to cope with the prospective loss of their main outlet, the English market.²⁸⁵ In the course of the eighteenth century, this export market virtually dried up, supplanted by the meteoric rise of a resilient North Irish linen trade. Bolstered by governmental subsidies and a protective tariff, the Ulster linen industry not only established its ascendancy within Great Britain but soon became a formidable competitor in the world at-large.²⁸⁶

These particular changes in the international economy were among the main factors prompting Krefeld's *Verleger* to shift from linen to silk.²⁸⁷ Whether elsewhere in the Rhineland or in Westphalia the linen merchants were equally aware of the difficulties this trend portended, is doubtful. They probably lacked the intimate knowledge of and contact with foreign customers which would have enabled them to evaluate what was to come. Be that as it may, the von der Leyens and their co-religionists not only possessed the will, but also as suggested earlier, the means to effect this transformation. As linen merchants and prospering commission dealers of long standing, the von der Leyens and the other Mennonites had accumulated relatively sizable funds. These impressive resources gave them the chance to finance, apart from export sales, the purchase of raw silk and of looms and other pieces of equipment which they had to provide for their domestic workers. That the wealth gained in a preceding era was a prerequisite for entry into Krefeld's eighteenth-century silk business is a commonplace among local historians.²⁸⁸ These capital requirements also help explain why, at the time, the entrepreneurial function within this industry was confined to a handful of Mennonite merchant princes.²⁸⁹

Social and financial cohesiveness among the elite effectively barred all outsiders from entry into Krefeld's silk and velvet trades. As mentioned earlier, these close-knit ties had been evolved by this energetic and ambitious minority in response to persecution. Not surprisingly, therefore, growing Mennonite wealth and influence in turn eroded those bonds. Indeed, on achieving success, the Mennonites forsook the traditions of group loyalty to assume the arrogant stance of ruling potentates. Like royal cousins they proved sufficiently reckless to engage in dynastic warfare against each other.²⁹⁰ Preeminent though they were, the von der Leyens remained concerned about conserving and strengthening their position. Thus efforts by some of the Mennonite entrepreneurs to imitate the innovational activities of the von der Leyens became the proximate cause for this dissension.²⁹¹ In 1759 these intragroup recriminations erupted into the open; at the time the Seven Years' War was at its height and the fortunes of battle had brought the counties of Cleve and Moers, including Krefeld, under Austrian administration. Whether any one of the contestants deliberately set out to exploit the uncertainties due to a change in government is a moot point.²⁹² It is certain, however, that the von der Leyens were incensed by the endeavors of the firm G. von Lingen, owned and managed by the brothers von Beckerath, to intrude into the manufacture of silk ribbons.²⁹³

Consequently, the von der Leyens petitioned the imperial authorities to grant them the exclusive privilege of producing silk fabrics and silk ribbons

within the region. The von der Leyens argued their cause on the basis that they had introduced the manufacture of silk ribbons into Krefeld and in doing so had incurred considerable expenses. They had imported mechanized ribbon looms and silk throwing machines from Holland at great cost to themselves and subsequently trained the local workers to carry on this trade. The von der Leyens warned the authorities that if others were to be permitted to enter this branch of manufacture, stagnation would follow. They argued that newcomers such as the von Beckeraths would reduce the quality of the products to offset higher costs, thereby ruining the reputation of Krefeld manufacture. In view of their previous experience, the von der Leyens were convinced that higher costs were inevitable, for the success of the intruding entrepreneur depended upon securing the von der Leyen trade secrets by hiring away some of their workers.²⁹⁴

The latter complaint is the recurrent theme of all petitions, counterpetitions, and official memoranda pertaining to the struggle over monopoly in the Krefeld silk industry during the mercantilist period. Concern over the preservation of their skilled work force against the allurements of their potential competitors remained an outstanding von der Leyen preoccupation. It goes far to explain the unique characteristics of eighteenth-century industrial relationships, to be discussed later, in the Krefeld silk industry and in turn suggests that the struggle for exclusive rights was not a quest for monopoly in the literal sense but rather for monopoly in the labor market.²⁹⁵

The local competitors naturally opposed the extension of the von der Leyen monopoly rights. Their protests became more insistent after the Prussian government returned to this area. Stressing the advantages of unfettered trade, the von Beckeraths pointed to the achievements of the Dutch silk industry where monopoly had been unknown. In the same way, the von Beckeraths prophesied, competition in the Krefeld silk industry would bring about prosperity even greater than had been known so far.²⁹⁶ In the ensuing disputations the von der Leyens, in turn, reiterated their claims. To back up their demands, they were quite prepared to exaggerate their already impressive achievements and most willing to distribute munificent gifts among the relevant officials.²⁹⁷

Frederick the Great, with his penchant for large firms, sided with the von der Leyens. He accordingly evinced little sympathy for the problems facing the von Beckeraths as he unequivocally dismissed their protests and confirmed the continuance of the privileges enjoyed by the von der Leyens. The king, on having visited the von der Leyens and their establishment in 1763, was most impressed with their accomplishments. He accepted their argument that pioneering work of this kind required guarantees to the innovator to guard against interlopers stealing trade secrets or hiring away a work force that had been trained from scratch. The king was also convinced that the von der Leyens merited this privilege as a reward for having introduced the silk industry into the area.²⁹⁸

In 1763, even before the challenge of the von Beckeraths had been disposed of, the von der Leyen hegemony was being threatened by another rival.

At the time, the brothers Floh, nephews and heirs of the recently deceased manufacturer Johann von der Leyen, started the production of silken handkerchiefs. Almost at once, Frederick the Great made them stop this activity. However, the Flohs appeared undaunted by the ban and they continued to plead their case before the authorities. In the meantime they reconstituted the firm under their own name and under this new guise began to make taffetas.²⁹⁹ Again the government intervened. It was not until about 1769 that the Flohs realized that their cause was hopeless, for their plans ran counter to the basic principles of royal policy. They then redirected their goals and together with the von Beckeraths deployed their efforts to become the two leading firms in Krefeld's thriving velvet industry.³⁰⁰

Ten years later, sometime in the 1770s, the local firm Preyers and Co. sought royal permission for the manufacture of silken fabrics, handkerchiefs, and ribbons. Though they promised that if granted this privilege they would undertake a major local construction project, the king unequivocally rebuffed their pleas. Unlike the Flohs and the von Beckeraths, however, the Preyers were not prepared to accept the Frederician status quo. They moved and eventually prospered in Kaiserswerth, having been granted a thirty-year monopoly by the prince elector of the Pfalz in the manufacture of silken and velvet products.³⁰¹

That the king granted this monopoly privilege in Krefeld while actively fostering competition within the Berlin silk industry reflects the special status he accorded to his western province and to its manufacture.³⁰² This became even more evident after the tariff legislation of 1743 and especially following the decree of 1768, prohibiting the export of manufacturing products from the Rhine province into Berlin and the old Prussia.³⁰³ Legislation in the 1770s and particularly in the 1780s made this prohibition even more stringent.³⁰⁴ In addition, the Krefeld silk industry, along with the other Rhineland manufacturers, had to pay a transit duty on their products sent through the old Prussian provinces to Poland and Russia. This meant that the Rhine province industries were virtually shut out of all Eastern markets. Not only was Frederick the Great intent upon giving all possible protection to the industries east of the Weser River, but he also aimed at making the markets of Eastern Europe their exclusive preserve.

The king resorted to these drastic measures because he believed that the western province, in view of its differing historical development, could not be molded into the framework of his mercantilist state. He was certain that efforts to do so would only jeopardize the attempts at industrialization in the old provinces of his kingdom.³⁰⁵ In this context, it may be well to recall, once more, differences between the two regions.

At the time, the aforementioned Frederician policy, being implemented in the older provinces, was conspicuously unaffected by the views of the Enlightenment. Rather, these ineffective rules and regulations, meant to guide industry, represented a strange conglomerate of cammeralist practice and tradition, and proved as crude as the backward environment they were supposed to improve. By contrast, the Rhineland had advanced as part of the Lowland's economic

region. Krefeld in particular had benefited from this progress and most specifically from the Dutch *laissez-faire* mercantilism, characteristic of what was then the most sophisticated commercial society. It simply could not be incorporated into the Junker state and Krefeld's exclusion eventually proved an unmitigated blessing. Initially, however, Krefeld's entrepreneurs felt distressed because of an official policy which treated them like stepchildren.

The Rhineland manufacturers complained bitterly about these discriminatory measures. The von der Leyens pleaded for an exemption from these restrictions by repeating the same arguments with which they had been able to establish their monopoly: that their forefathers, some hundred years earlier, had founded this thriving manufacture in Krefeld and that the implementation of these restrictions would make it impossible for them to assure "the daily bread of the large number of poor subjects they employ."³⁰⁶ These protests were ineffective. The king remained adamant and he counseled the petitioners to compensate for their losses in the East by an expansion of their Western outlets.³⁰⁷ The implication of this advice was that he relegated the Rhine province to remain, as before, an independent and self-sustaining region.³⁰⁸

Though it suffered a decline in its rate of growth, the Krefeld silk industry was able to adjust to the changes called for by these discriminatory policies.³⁰⁹ As anticipated, the loss of its Eastern markets was more than offset by an expansion in the West. Since the 1740s, the von der Leyens found their most important outlets in Holland, Sweden, Denmark, and the German lands.³¹⁰ Even the newly independent United States joined the ranks of important customers, though previously the von der Leyens had suffered serious losses when trying to participate in smuggling operations off the coast of British America.³¹¹

Generally, the efforts made by the von der Leyens to gain a foothold in growing markets were facilitated by the boom conditions that prevailed in the late 1770s and throughout the 1780s.³¹² At first the von der Leyens achieved their aim by eliminating the competition of the already declining silk industry in Hamburg. Subsequently, they proved more than a match for the Swiss silk trade. Finally, they challenged the Dutch silk industry that had once been their master and whose techniques they had copied in its home market.³¹³

To have gained such a reputation in the most competitive markets of the world suggest that the monopoly privilege enjoyed by the von der Leyens was of minor importance. This was particularly true because silk industries (though on a smaller scale) emerged in the other states of the Lower Rhine region, especially in the duchy of Berg.³¹⁴ These fledgling industries not only tried to compete with the Krefeld manufacture in foreign markets, but they also attempted to hire away its craftsmen, hoping in this way to obtain some of the trade secrets the von der Leyens had accumulated over the years.³¹⁵ Even though the other silk manufacturers partially succeeded in these efforts, their progress in no way impaired the growth and prosperity of the Krefeld industry.³¹⁶

Wilhelm von Humboldt, who passed through Krefeld during this period,³¹⁷ was most favorably impressed by what he saw:

This place gives an impression totally different from all other towns in Westphalia and from most towns in Germany. Throughout, great well-being seems to prevail and one notices at first sight that diligence and craftsmanship constitute the source of this prosperity. In the 24 hours I spent here, I don't recall having seen one instance of real poverty.³¹⁸

His teacher and traveling companion, the well-known educator, J. H. Campe, was equally euphoric:

By writing down "Crefeld" I am referring to the most charming, friendliest, and most flourishing industrial city I have ever seen. The very view inspires the entering foreigner to be happy and merry. The beautiful street pavement, well set along the houses, seems as clean as if it were washed daily. . . . This charming and industrious town contains 700 buildings. In most cases this would mean that the town would hold about 4,000 inhabitants. Here, however, one estimates the number of souls to be 7,000. This would sound unbelievable, if one were not to consider the fact that most houses are inhabited by manufacturers (i.e., craftsmen). Not only one family lives in such a house, but also journeymen and apprentices. . . . We visited the most admirable velvet and silk manufacturing establishments of the Messrs. von der Leyen. . . . When one sees these establishments one may well believe to be in one of the most flourishing industrial towns of England. . . . You may be able to visualize these establishments when I tell you that up to 6,000 people are employed here.³¹⁹

Ambience for Success

At this stage of economic development, it is the social structure of rural society that provides the key to an understanding of the dynamics of Krefeld's industrial growth. As stressed earlier, the previous expansion in trade, plus the concomitant extension of the money economy, had created a sufficiently loose social order in the Rhineland countryside for industry to enter and tap the locally available cheap labor force. The Krefeld silk industry's ability to utilize this pool of cheap labor (a generalization that holds for all the textile trades in the Lower Rhine region) constituted the basic precondition for its initial successes.³²⁰

The availability of women and children in the neighboring districts for various ancillary tasks was a definite boon to Krefeld's trade. Moreover, the peasant weavers of the Rhineland countryside increasingly supplemented the activities of the Krefeld craftsmen as they produced the cheaper fabrics put out to them by the handful of Krefeld's *Verleger*. These merchant-manufacturers dominated the silk and velvet industry because they alone had the capital to organize it.³²¹ They imported and prepared the raw silk for weaving and subsequently finished and dyed the fabric in their own plants before effecting the

final sale. They also provided the weavers with their looms. As a result, the domestic artisans were completely dependent on the *Verleger* who came to regulate and control the production process to a degree yet unknown within the local framework of domestic industry.³²²

The *Verleger* chose among their domestic workers the master craftsman, and assigned to him the position of a foreman and subcontractor. Such a master, who had little in common with a traditional master craftsman, supervised the journeymen and apprentices working in his shop or home. He was responsible for executing the specifications regarding the fabric as stipulated by the *Verleger*. In return, the master was permitted to retain the "wages of supervision" out of the proceeds he received from the *Verleger* upon delivery of the completed fabric. The remainder was to be paid directly to the journeymen, who were not craftsmen in the original sense either, but skilled wage earners working on a piece-rate basis.³²³ These journeymen were usually heads of households and only a few could expect advancement in status when conditions of boom and expansion warranted an increase in the number of masters.³²⁴

Tightly organized and highly successful in the conduct of their affairs, the Mennonite merchants would tolerate no outside interference in their undisputed rule over the industry.³²⁵ If a master attempted to take advantage of the increasing geographic decentralization of the industry and became a trader on his own account, he was immediately and vigorously opposed by the merchants.³²⁶ The merchants were generally intent on maintaining the existing industrial structure.³²⁷ Moreover, in this particular instance they feared that the emergence of a factor system would lead to the adulteration of the fabric and eventually to industrial strife. The journeymen, then bereft of the manufacturer's protection, would become the victims of unsavory commercial practices.³²⁸

An active concern for the well-being of their employees was characteristic of the Krefeld silk and velvet manufacturers during this period.³²⁹ They set up welfare funds for their men and during recessions saw to it that employment was continued. Work was done either to accumulate stock for inventory or, if the depression was of long duration, by spreading the work load³³⁰ Furthermore, in a period of famine prices, the manufacturers and other city notables imported grain from more distant areas in order to provide free food among the needy or to sell it to them at cost.³³¹

Such welfare measures enhanced the existing power of the manufacturers in the monopsonistic labor market. Already dependent upon the employer for his loom and his raw materials, the weaver was rendered even more helpless by these deliberate acts of charity. Thun commented that the weaver had become the manufacturers' virtual "serf."³³² Indeed, this was the undeclared purpose of these social policies and their implementation can only be understood in the context of the labor shortage with which the silk manufacturers had to contend. Because of the silk industry's rapid expansion, skilled and competent workmen were usually wanting.³³³ Consequently, the von der Leyens and other local silk manufacturers were intent upon gaining the complete confidence of their masters and journeymen. Above all, they deter-

mined to establish a working partnership with their employees on the most permanent and closest possible basis.³³⁴

Despite the monopsonistic conditions prevailing in the labor market and the factory rules that were meant to buttress them,³³⁵ this would suggest that the bargaining position of the silk weaver in relation to his employer remained favorable. Strange as it may seem, the weaver's so-called serf position was, in a way, geographically circumscribed. There was always the chance that the weaver could and would leave Krefeld, especially as long as he was single and able to find employment with the Preyers in Kaiserswerth or the Andrea brothers in Mülheim am Rhein. Employers in centers in southern Germany were also eager to avail themselves of the weavers' scarce skills and thereby of von der Leyen trade secrets.³³⁶

To render their labor force less mobile and thus less prone to the blandishments of their competitors in neighboring districts, the von der Leyens were willing to help their master weavers acquire some possessions and property. The same reasons prompted them to maintain full-employment policies for those weavers and skilled workers who constituted the core of their work force, and whose training or recruitment had been achieved at great expense. The employers never intended to embrace all the workers in their welfare schemes. Only those who seemed indispensable to the continued success of the von der Leyen establishments and who, if lured away, would provide invaluable services to their most dangerous competitors, were so favorably treated.³³⁷ Similar considerations of self-interest prompted the von der Leyens in the aforementioned accumulation of inventory: except that in this instance the speculative motive was an added incentive—namely, to produce cheap in periods of seasonal and cyclical slack, at reduced wages, in order to sell dear at the height of a boom.³³⁸ The smaller Krefeld manufacturers pursued identical policies and seemed actuated by the same motives.

To view these paternalistic schemes as a response to economic conditions is to point out the difficulties facing a relatively new industry at this stage of economic development. Moreover, the limited scope of these philanthropic measures provides certain clues regarding the social structure of this early industrial labor force and of social conditions generally. Only those possessing special skills and competence and who worked for the wealthy entrepreneurs enjoyed relatively high wages, stable employment conditions, and a chance to acquire property. These skilled weavers became "the aristocrats of labor," a group set apart from the rest of the workers, the semiskilled and unskilled, whose supply presented no difficulties to the industry and whose favor the manufacturers did not covet.³³⁹ Recruited in Krefeld from other crafts or from the rural vicinity, these workers enjoyed no security of employment. When market conditions sagged, they faced unemployment and were forced to seek public relief or go begging.³⁴⁰

During such periods of recession, the reports of the local lord mayor and the other officials describing the plight of the workers stood in marked contrast to the claims of generosity made by the von der Leyens to the authorities.³⁴¹ It is to the credit of Botzet to have resolved these apparent disparities. Botzet shows

very effectively that the claims of generosity by the von der Leyens and other Krefeld manufacturers were for the most part exaggerated.³⁴² The scope of their welfare measures was narrowly defined and the burden these measures imposed upon their resources was never as great as the manufacturers would have their contemporaries believe. These welfare schemes were not acts of indiscriminate generosity, but part of a deliberate policy to hold together the core of a skilled work force indispensable for high quality production.³⁴³

Emphasis on the economic motives underlying these welfare measures is a departure from traditional historiography. Most historians of the Krefeld silk industry and most biographers of the von der Leyens have failed to mention the influence of market forces. Instead they have elaborated upon the religious motives deriving from the employers' Mennonite faith as crucial in the determination of industrial relations during the second half of the eighteenth century.³⁴⁴ At best it is difficult to evaluate the importance of these religious sentiments. In this instance the assessment is particularly difficult, for at no time does social policy seem to have gone against the postulates of economic maximization.³⁴⁵ Nor is there any evidence that religious motives made the von der Leyens and the other manufacturers take up, in matters of social and economic policy, a particularly long-run view.³⁴⁶ The most that can be said about the Krefeld silk and velvet manufacturers is that by doing good they did well. As for the workmen, with the exception of a substantial minority of skilled craftsmen, their general condition was not as favorable during the eighteenth century as has been sometimes suggested.

Obviously, the secular changes in the demographic and social structure reflected the spectacular growth of the local silk and velvet trades. In 1625 Krefeld had no more than between 800 to 1,000 inhabitants, of whom probably 400 lived in the town proper and the remainder in the surrounding territory (*Herrlichkeit*). For the year 1722, the size of the population remains a moot point. However, knowledge of developments during the late seventeenth century and some crude extrapolation backward, from the mid-eighteenth century, would suggest that the assumption of a total of 2,500 to 3,000 for town and territory would not be unrealistic.³⁴⁷ After that time the local census information is considered as fairly reliable. (See Table 2).

These growth rates are impressive.³⁴⁹ However, in view of the dispersed nature of the domestic industry, the figures in Table 2, especially after 1750, understate Krefeld's importance as an industrial center for a wider area. At the same time, it is worth noting that the demographic increase of Krefeld town was possible only because of several incorporations.³⁵⁰

Immigration was the factor that contributed most powerfully to Krefeld's population dynamic. In relative terms, the seventeenth century Mennonite influx was the most significant. There were 140 families in 1654 and about the same number forty years later.³⁵¹ During the eighteenth century, the influx remained, both relatively as well as absolutely, significant. In this connection it is important to observe that, irrespective of social rank or religion, these newcomers were unable to enter the silk and velvet industries, unless they had been specifically hired by the von der Leyens to work in this particular trade,

TABLE 2 Krefeld Population, 1624–1798³⁴⁸

| Year | Krefeld Town | Krefeld Territory | Total |
|---------|--------------|-------------------|-----------|
| 1624–25 | ca. 400 | ca. 400 | ca. 800 |
| 1722 | ca. 2,300 | 633 | ca. 2,900 |
| 1740 | 3,522 | 1,054 | 4,574 |
| 1756 | 4,339 | 1,328 | 5,667 |
| 1763 | 4,756 | 1,326 | 6,082 |
| 1777 | 5,265 | 1,393 | 6,658 |
| 1787 | 5,928 | 1,968 | 7,896 |
| 1798 | 7,896 | — | — |

or came to Krefeld already engaged to be married (as did F. H. Heydweiller) into one of the leading mercantile houses of the community. Not even middle- or upper-middle class Mennonite or Lutheran families settling in Krefeld with substantial capital assets could hope to break into the “leading sector.” They were unable to scale the formidable barriers with which the local silk manufacturing elite was to isolate itself and its activities from outside competition. In other words, capital was a necessary but not a sufficient condition for entry into the silk trade. Hence these newly arrived capitalists turned their attention to the more “open” business spheres of this rapidly expanding locality. That is, they became producers of vinegar, tobacco manufacturers, wine merchants, and dealers in colonial wares.³⁵²

Similarly, the textile operatives, who were largely recruited from among the local population, succeeded in staving off the influx of outsiders into this realm, which they considered their exclusive preserve. Consequently, young men attracted to Krefeld by the higher earnings and ample employment opportunities resulting from industrial growth were pressed into the “residential” and tertiary sectors whose expansion symbolizes increasing prosperity.³⁵³ According to Föhl, 156 craftsmen were admitted into the various Krefeld guilds between 1770 and 1792. Among these, 60 were tailors, 18 bakers, 18 shoemakers, 10 masons, 5 carpenters, 5 cabinet makers, 4 locksmiths, 7 blacksmiths, plus the occasional wigmaker, candlemaker, glassblower, and coppersmith.³⁵⁴

Judging by the origins of these artisans, their immigration followed the usual pattern. The majority came from the Rhineland, especially from the more adjacent areas.³⁵⁵ No more than ten came from the more distant Pfalz and even fewer from Nassau. Only 17 and 11, respectively, were natives of Krefeld and the Herrlichkeit, almost the same number (26) of those who came from the duchies of Jülich and Berg, or the 25 who moved to Krefeld from the Prussian territories of Moers, Cleve, and Mark. However, fully one-third of the artisans—that is, 55 out of the total of 156—were from Kurköln, including the cities of Cologne, Neuss, and Bonn. Of these 156, as many as 116 had come to Krefeld to complete their apprenticeship or at least to get their journeyman’s license. This points to the large vacancy rate which, throughout

this period, must have prevailed within the local trades.³⁵⁶ In turn, this suggests the strength of the “pull” this booming silk center since the 1730s exerted upon the more venturesome and more ambitious of the wider region.

Krefeld’s industrial growth can be traced both in terms of its evolving employment pattern and of its changing social structure. The so-called “Münkerhofverzeichnis” of 1716, the earliest Krefeld census available, confirms the local preponderance of the linen industry at that time.³⁵⁷ Of the 377 gainfully employed in Krefeld, 42 percent were engaged in the textile trades, most of them in linen making.³⁵⁸ Consequently, the 84 linen weavers constituted the township’s dominant social group.³⁵⁹ These masters, assisted by their families, produced the various kinds of linens fabrics that were sold to the five Mennonite linen dealers who, because of their crucial position as exporters, had already achieved a commanding position within the area’s economy.³⁶⁰

In 1725 the Prussian officials administering the county of Moers complied with a request from Berlin to provide an account of conditions in the lands under their care. They reported:

The town of Krefeld enjoys a very sizable trade in bills as well as in other wares and manufactured goods. Important bankers and merchants conducting a varied and extensive export business reside here. If therefore this town of Krefeld should continue to boom and flourish in like manner for another twenty years, then this small township will acquire a reputation for its commerce and for its business community as one of the well nigh most famous trading and manufacturing cities in the whole of Germany.³⁶¹

Whether the prevision of Krefeld’s grandeur was based on analytic acumen or on Panglossian hypocrisy widespread among mercantilist bureaucrats is difficult to say. However, within a decade this prophecy was well on the way to being fulfilled. By 1735–36, the number of gainfully employed had risen to 516, out of an urban population of probably three thousand.³⁶² Already by then, the silk and velvet trades had emerged as the community’s most important economic activity. Consequently, the five wealthy linen dealers of the previous era were now important silk and ribbon manufacturers. They employed, within the city walls, 87 ribbon weavers, 23 silk winders, 5 silk dye masters, and 2 loom makers. At the same time, the number of linen weavers had declined to 35.³⁶³

On the occasion of Frederick the Great’s visit to Krefeld five years later, a census was taken of all those paying homage to the new ruler.³⁶⁴ The list indicates that at this time Krefeld counted between 100 and 105 Mennonite heads of household, suggesting that the whole Mennonite community of 1740 claimed about 500 members. Of the 100 householders, about 50 were engaged in the various branches of the textile trade: 24 in silk,³⁶⁵ 6 in velvet, 17 in linen, and 3 in miscellaneous ancillary activities. In addition, of the six so-called merchants and two petty traders, several were probably involved in the buying and selling of woven fabrics. As regards the demise of the local linen manufacture, it is interesting to note, within the census, the entries of two

Mennonites: one Thönis Dycker, who changed from linen to ribbon weaving, and one Daniel Loers, who gave up linen weaving to take up the baker's trade.³⁶⁶

During the next twenty years, from about 1740 to about 1763, the expansion of the local silk industry spurred a rate of economic growth unique in the annals of Krefeld history. As the von der Leyen enterprises reached what by the standards of that period was giant size, various segments of the urban population thrived and prospered accordingly.³⁶⁷ At the end of the Seven Years' War, Krefeld town claimed almost five thousand inhabitants of whom probably a thousand or twelve hundred were gainfully employed. Of the latter, as many as 45 percent may have been dependent on textiles and the overwhelming majority of these were employees of the von der Leyens.³⁶⁸ Thus by 1760 the pattern of Krefeld's industrial and social advance was set for generations to come.³⁶⁹

The 1763–89 period was one in which the pace of Krefeld's economic headway remained impressive. However, compared to the earlier two decades, post-1763 progress had slowed down, mostly because of the Frederician policy of excluding Krefeld products from markets in the Prussian possessions east of the Weser.³⁷⁰ Prompted by this discrimination, Krefeld manufacture displayed its aforementioned flexibility. Specifically, the silk and velvet trades sought and found new outlets in Western Europe and above all in overseas territories, which helped them to achieve world renown. Foreign visitors continued to be impressed by what they saw. One traveler, an anonymous Dutchman, came to Krefeld in 1784 and appeared most pleasantly surprised by its sight:

A most pleasing town. . . . To put it in one word, artisans and master craftsmen crowd this city, a state of affairs responsible for its extraordinary prosperity. Here contentment and abundance, as it were, stare happily into one's face. Probably no other place in the whole of Germany is to be found where everything is so closely arranged according to Dutch ways and where the houses and furnishings are as clean [as here].³⁷¹

Most eighteenth-century observers viewed Krefeld's appearance of prosperity and neatness as somewhat of an anomaly. Given their experience, this kind of ambience was traditionally associated with the capital of some minor German principality, such as Weimar, Mannheim, or Bonn. In these areas, the surplus squeezed from the hapless peasantry of the surrounding countryside was accumulated and subsequently lavished upon those resident "unproductive occupations" meant to enhance the glories of the ruling dynasty. In such political and cultural centers, ducal ministers and courtiers, artists, writers, musicians, actors, and retainers, together with court Jews and occasionally with professors, jostled each other, smugly satisfied with the privileged station in life providence had been pleased to assign them.³⁷²

By contrast, the Krefeld of the 1780s was the paradigm of a productive manufacturing town in the era of the putting-out system. In 1787 the number of retired officials living here was no more than 37, that of rentiers only 17.

out of a total population of almost six thousand. The number of clerks working for the von der Leyens and the other *Verleger* was an insignificant 18, a telling reminder of the rather modest administrative requirements imposed upon trade and industry.³⁷³ As for the local traders and shopkeepers, their number, according to Föhl, decreased from 77 to 66 in the half-century from 1735 to 1787.³⁷⁴ On the face of it, this may seem strange, considering Krefeld's impressive expansion during those five decades. But there is authoritative evidence and solid theoretical support why such a decline of the "trading sector" could occur (in relative and sometimes even in absolute terms) in the early stages of economic development.³⁷⁵ During the same time span, the opposite trend was to be observed among those crafts whose growth depended upon rising incomes. Thus the number of tailors increased from 10 to 24, of shoemakers from 17 to 28, of cabinet makers from 10 to 24, of carpenters from 4 to 7, and of roofers from 3 to 7. By the late 1780s, Krefeld's total of gainfully employed reached about fifteen hundred.³⁷⁶

It was reasonable to assume that the various groups engaged in the staple industries of this locality should have dominated the social scene.³⁷⁷ The five "manufacturers in silks, ribbons, and velvet" stood at the apex of this industrial hierarchy. They descended from the five Mennonite linen merchants who early in the eighteenth century had secured the foundations of their families' oligarchic and oligopolistic position. The von der Leyens and to a lesser extent the Heydweillers, Flohs, and von Beckeraths were all-powerful within the community and the sole employers of the 177 master weavers and their 330 journeymen.³⁷⁸

At the time, these silk and ribbon weavers constituted the backbone of Krefeld's social order and in large measure provided the outward expression of the town's stability and contentment. Dependent upon their employers for their raw materials and tools, and dependent upon them in many other ways, these weavers were, in an objective sense, wage earners. Their privileged position within the industry, however, shielded them from some of the humiliations and miseries generated by market fluctuations, thus masking the weavers' true class position. Accordingly, they shared a point of view and a way of life that easily merged with the local artisans and shopkeepers. This in turn helped to strengthen and perpetuate Krefeld's thoroughly petty bourgeois character. This role also applied to the 18 stocking knitters and to the 10 dye masters, though it was probably not quite as true in the case of the journeymen dyers.³⁷⁹

The status of the 290 working in the winding shops was considerably more precarious. Exposed to the vagaries of the economy, their position was at the most relieved (at least for some) by their kinship (as children and wives) of the weavers. Finally, some 195 day laborers rounded out the social scene.³⁸⁰ Unskilled and poorly paid, they constituted the hapless of this society. Because the aforementioned welfare schemes of the silk manufacturers did not extend to them, they became in periods of famine prices and unemployment the concern of the local pauper administration.³⁸¹

The employment pattern suggests a proletariat in the making. Indeed, by

the late 1780s, to judge by the dominant mode of production and the prevailing class structure, Krefeld had become a capitalist society. It was as typical then as it proved to be throughout the first half of the nineteenth century that the handful of *Verleger* employed the majority of urban wage earners. However, in 1787, as many as one-third to almost one-half of those thousand workmen seemed to be aristocrats of labor, the skilled operatives in the silk and ribbon trades, who reaped the benefits of industrial growth. They had been able to adjust to the incipient capitalist order in a relatively painless manner.³⁸²

It would be misleading to exaggerate the extent to which Krefeld enjoyed social tranquility and group harmony in the face of capitalist inroads. Episodic eruptions of discontent point to a chronic malaise smoldering beneath the surface. Already in the late seventeenth century, the local linen masters were hard pressed to compete against the newly arrived, well-to-do Mennonite *Verleger* who undersold them in the product market and who hired away their journeymen.³⁸³ Additionally, these petty producers were to suffer the full impact of rising rents due to the shortage of available housing which followed this spur of immigration.³⁸⁴ It was eventually this type of pressure, rather than religious persecution, that in 1693 supposedly prompted thirteen local families to leave for Pennsylvania and there help found Germantown.³⁸⁵

During the 1720s and 1730s, social tension seems to have simmered without quite reaching the boiling point. In 1735 the local governor, Baron de Kinsky, and other royal officials felt it necessary to issue a stern warning not only to those stealing raw silk (a perennial problem), but also to those deliberately damaging or even destroying this expensive raw material.³⁸⁶ Finally, in 1741 Krefeld witnessed a linen weavers' riot. It was, quite obviously, an act of desperation by a group of men trying to cling to a way of life already in its death throes. The disturbance was quelled without too much difficulty once the ringleaders had been deported.³⁸⁷

The pressures leading up to the city's successive enlargements were similarly indicative of the social strains generated by economic change. As early as 1676, urban expansion through annexation of adjacent lands in the *Herrlichkeit* had become a major issue. The ruling prince of Orange had ordered into Krefeld an official for the purpose of putting an end to abuses supposedly widespread both in the execution of justice and in the general administration of this locality and county. How far this emissary succeeded in eradicating these malpractices has never been ascertained. But it is an established fact that he readily joined those local groups clamoring for an extension of the city limits.³⁸⁸

Permission by the government for the relocation of the city walls was not forthcoming until 1692.³⁸⁹ The delay compounded existing difficulties. When the new construction was eventually ready for use, it came nowhere near satisfying Krefeld's ever-increasing demand for housing space. But it was during this building spurt and in the then newly founded part of town that the Mennonites erected their first house of worship and the von der Leyens (Adolph and Wilhelm) built their mansionlike homes,³⁹⁰ which they sur-

rounded with rows of weavers' cottages characteristic of eighteenth-century textile centers.³⁹¹

Thus even in its imperfect way, this initial *Stadterweiterung* proved to be a pace setter for the four subsequent ones. Steeped in their tradition of mercantilism, the Dutch authorities purchased the land to be incorporated and then sold it in parcels to potential users. Every buyer was given specific instructions on how to put up the individual building so that Krefeld's city plan might eventually achieve that uniformity and regularity of a checkerboard layout for which in the late eighteenth century it was to become famous.³⁹²

The steady growth of the linen industry and the equally continuous flow of immigrants into this booming town created an environment in which by 1711 another enlargement of Krefeld had become necessary.³⁹³ This second extension of the urban areas was twice as large as the first one (343 acres as against 175). The aforementioned Count de Kinsky, who as governor of Moers county under the Dutch had been the leading spirit of the 1692 expansion, continued in this role under the Hohenzollern. He purchased the rural land earmarked for annexation very cheaply and thus was able to sell the subdivided lots at equally reasonable prices to those eager to build on them.³⁹⁴ Again, burghers' homes and merchants' mansions cum manufacturing establishments lined the new avenue at the southern end of town, while the side streets, leading off the leading artery at right angles, consisted in uniform rows of weavers' houses.³⁹⁵ Apart from a few speculators, local as well as foreign, most of these blocks of weavers' cottages were built and owned by the von der Leyens and other silk manufacturers who leased them to their employees.³⁹⁶ This type of landlord-tenant relationship further enhanced the weavers' dependency upon their employers.

Within twenty years, Krefeld had once more outgrown its city limits.³⁹⁷ By 1738 the spectacular rise of the silk industry had caused a lack of housing space and an acute shortage of weavers' houses.³⁹⁸ This is why Frederick William I, who was known to have been enthusiastic about new industry, readily granted permission for the much needed extensions of the town, and in addition pledged subsidies to those involved in the undertaking. Supported by his sovereign, the entire project (an addition of some 377 acres at the northern end of town) was ably directed by the leading local official, Councillor W. R. Müntz. He acquired the necessary real estate at low cost by negotiating land swaps and eliciting the aid of the Mennonite community. Individual lots were then sold at modest prices and in a few instances were given away free.³⁹⁹

Besides the badly needed cottages, the local manufacturing elite, led by Friedrich and Heinrich von der Leyen, built for themselves fine mansions, outward symbols of their rapidly growing wealth. Though the actual construction period of this expansion extended well into the reign of Frederick the Great, the new king did not interfere with the prearranged plans and policies governing this extension.⁴⁰⁰ However, Frederick the Great did intervene on one memorable occasion. In 1743 he summarily overruled the objections raised by local officials and by the city fathers and permitted the rapidly

growing Catholic population in this area to build a school. "In my lands the exercise of religions is free" was Frederick the Great's terse admonition to his bureaucrats.⁴⁰¹

Barely two years after the completion of the 1738–50 expansion, Councillor Müntz, forever alive to the needs of this community, pressed for another extension of the city walls. This particular enlargement was to provide space for additional weavers' cottages and a specific site upon which the nearby Meer monastery could build a church, a school, and some ancillary buildings. After prolonged negotiations between king and monastery (in the course of which Frederick the Great revealed his proverbial parsimony toward his western provinces especially, Krefeld included), the plan for the 1752 annexation received royal assent.⁴⁰⁶ Construction continued until about 1760. This time expansion took place at the western end of town. One hundred sixty-six acres were added, the smallest annexation to date.⁴⁰³

In eighteenth-century Krefeld, the secular boom reached its apogee toward the mid-1760s. The year 1766 was a peak year of economic activity and therefore incorporation of rural territory was urgently requested and promptly granted, if only to provide shelter for those immigrants eagerly seeking their fortune in this prospering town.⁴⁰⁴ This was to be the fifth and last of Krefeld's eighteenth-century enlargements. It was also the largest. On this occasion no less than 502 acres were added, which meant that since 1692 Krefeld's urban area had increased fivefold.⁴⁰⁵

Throughout the next decade and well into the 1770s, rows of cottages were being put up, not least because of the profitability of this venture as rents continued to rise. At the same time, some solid burghers' homes were also being erected. But it remained for the stately mansions, belonging to the merchant princes and dating from this period, to give this era in Krefeld history its uniqueness. Many of these palacelike structures were the work of the architect Leydel.⁴⁰⁶ They were built in the rococo style of that age, though Dutch influences were quite unmistakable. Two residences in particular, "Haus Floh" and "Zum Heydt" (originally owned by Johann von der Leyen and H. H. Heydweiller, respectively), were outstanding examples of the city's architectural accomplishments during that era.⁴⁰⁷

The Mennonites' luxurious mansions were as much a monument to their wealth as they were a repudiation of their ancestors' precepts. As previously stated, on entering Krefeld, the Mennonites made the most of a difficult situation by vowing themselves to a life of hard work and frugality in order to prove their worth in a hostile world.⁴⁰⁸ When these exemplary ways bore fruit quickly and beyond all expectations, the grateful immigrants promptly consecrated this pattern of behavior as a hollowed family tradition. However, in due course so strict a code of conduct was bound to become emasculated, if only by the dialectic of events. Their effectiveness in generating affluence and social acceptance eventually rendered these puritanical maxims of an earlier age increasingly irrelevant and ineffective as a guide for action.⁴⁰⁹

By the end of the Seven Years' War, the Mennonite merchant princes had long passed the stage where they still considered themselves a persecuted

minority. Nor did they feel in any way compelled to practice a false modesty out of keeping with their assets, let alone feign a frugality meant to moderate the envy of the population at-large toward them. Instead, they took for granted their privileged position and the special treatment that humankind, as part of the human comedy, usually reserves not only for pretty women but also for rich and powerful men.⁴¹⁰

In fact, circumstances increasingly propelled the von der Leyens and other Mennonite patricians to assume the kind of life befitting their distinguished position within the realm. As millionaire merchants whose far-flung activities frequently touched upon *la haute politique*, the von der Leyens were co-opted, at first de facto, and subsequently even formally, into the aristocratic Establishment.⁴¹¹ Elevation into the highest strata of society also imposed upon them obligations of living up their new status. Henceforth they were to entertain in a manner appropriate for persons of such means. Distinguished visitors, including the king and his retinue, took it for granted that when staying in Krefeld the leading local family would, as a matter of course, extend to them the most lavish hospitality.⁴¹²

The more conservative members of the Mennonite community became increasingly irked by the ostentatiousness of their co-religionists trying to secure a foothold in the fashionable world. These true believers were especially outraged, and according to Engelbert vom Bruck "not without good reason," by the von der Leyens whose "love of luxury, extravagance, and Lucullan feasts" were an affront to the cherished customs of the old religion.⁴¹³ Moreover, the unabashed arrogance of the von der Leyens offended others, particularly those burghers who regretted the passing of a more simple life as ever-larger numbers of their fellow townsmen came to follow the leading merchant-manufacturers along the path of conspicuous consumption.⁴¹⁴

Vom Bruck was too shrewd an observer of the local scene to let his animosities towards his onetime employers, the von der Leyens, interfere with his evaluation of the benefits (apart from the defects) accruing to Krefeld from their social aspirations and activities. Vom Bruck was aware that by permitting some of the less affluent of the community to join in those grandiose festivities and functions the von der Leyens were not only stimulating local appetites for the "feshpots of Egypt," but also spreading a more refined tone and social polish, which so far had been absent from this industrial center.⁴¹⁵ Inasmuch as the new ambience seemed tantamount to a rejection of the Mennonite creed, it should be recalled that this reorientation was part of a broader movement toward the secularization of thought. At the time, the Krefeld bourgeoisie was assimilating some of the views of the Enlightenment then spreading through Western Europe, and not even the younger members of the Mennonite clergy were immune to the new philosophy.⁴¹⁶ Thus by the 1760s, Krefeld had brought its mode of thought and social mores into line with the rather sophisticated organization of its economy.

By comparison, the pattern of political life followed much more closely the contours of industrial evolution. Throughout most of the eighteenth century their religious code kept the Mennonite merchants from claiming *jus honorum*,

which meant that the various public offices in this community continued in the hands of the traditional elite belonging to the Reformed Church.⁴¹⁷ Nevertheless, even as early as the 1730s, the von der Leyens had come to dominate Krefeld. In fact for all practical purposes, their word was the law as they shaped the development of this policy to suit their specific needs. The von der Leyens were able to dominate with increasing effectiveness both because of their economic superiority and because of their close and frequent contacts with Berlin's officialdom and court.⁴¹⁸

In the capital, the von der Leyens advice on matters of taxation, commercial policy, city administration, and other kindred issues germane to their commercial experience was given considerable weight.⁴¹⁹ Similarly, their specific requests to the king were accorded a sympathetic hearing provided these demands did not prove an additional burden upon the royal treasury or infringe upon some basic principles of Prussian policy. But even in the latter instance there were exceptions to prove the rule. In the case of the 1764 monetary reform, for example, the von der Leyens at least temporarily circumvented the law. They continued, according to contemporary accounts,⁴²⁰ to pay their workmen, especially those of the neighboring Kurköln villages, in old Austrian coin because the lesser nominal value of the new Prussian coin (even though of the same real value as the old Austrian coin) was unacceptable to the peasants from whom the workmen bought their foodstuffs.⁴²¹

Speaking quite generally, it may be said that the von der Leyens, and thus Krefeld, enjoyed the preferred treatment which the mercantilist authorities traditionally reserved for those individuals and groups from whom they expect outstanding contributions to the state's economy. Impressed by what he saw during a visit in 1738 to the von der Leyen plant, and thus convinced that this enterprise and this particular locality deserved all possible assistance, Frederick William I decreed that Krefeld be spared the vexations of the press-gang and the burdens of a garrison.⁴²² Frederick the Great continued the tradition of extending royal favors. In this spirit he confirmed the local ban on press-gang activity (and once again reaffirmed it in 1781)⁴²³ in order to remind some of his overzealous recruiting officers not to trespass upon territory out of bounds to them.⁴²⁴ Shortly afterward, in 1750, he declared Krefeld's imports, especially raw silk, free from all duties.⁴²⁵ Five years later, the king arranged, at the request of the von der Leyens, for Krefeld to be given a postal connection. In doing so he urged the officials responsible for the implementation to see to it that "the runs of the mail coach be adapted as much as possible to the wishes of the Messrs. von der Leyen."⁴²⁶ The latter comment was typical of Frederick the Great's attitude toward Krefeld where eventually he accorded the von der Leyens a monopoly in the manufacture of silken wares. This meant that the von der Leyens were to enjoy monopsony in the local labor market.⁴²⁷

It is equally significant that for a long time Frederick the Great remained adamant on fiscal matters and refused all pleas from his Krefeld subjects that he abolish the hateful excise. Not until 1768, after all his grandiose schemes of tax reform had failed, was Frederick the Great ready to heed their complaints and grant them relief. In that year he commuted the excise into a lump sum to

be paid to the royal treasury by the city. How the levy was to be raised was left for the inhabitants to decide, and in this instance Krefeld opted for a combination of proportionate income plus property tax.⁴²⁸

Throughout this era, the von der Leyens became the beneficiaries of a series of privileges and honors that unmistakably betoken the sovereign's growing appreciation for their achievements. The year 1754 appears to have been a banner one. They were exempted from the administration of local justice and placed instead under the immediate jurisdiction of the Higher Court in Moers. Shortly afterward the king rewarded Friedrich and Heinrich von der Leyen for their contribution to industry and for their services as royal advisers. He appointed them commercial councillors,⁴²⁹ and twenty years later their heirs and nephews were similarly honored.⁴³⁰

It was not until after the death of Frederick the Great, however, that the new king raised the von der Leyens to the peerage.⁴³¹ The bestowal of this distinction upon them marked the culmination in the evolution of a 70-year-long relationship between Krefeld merchant princes on the one hand and "enlightened" despots on the other. For their part, the von der Leyens welcomed every assistance given them by the Prussian state. At the same time they remained on guard against Junker authority. The drift of events presumably convinced the von der Leyens at a rather early stage that their welfare would always be subordinate to that of the industries located in the hereditary Hohenzollern lands. The exclusion of von der Leyen wares from the territories east of the Weser confirmed their suspicions.⁴³²

Aware that they could expect but minimal aid from their government, if not outright hostility, the von der Leyen spirit of independence was strengthened. Consequently they did not hesitate to rebuff, in spite of proddings and enticements, royal invitations to transfer part of their enterprise into Silesia and to assume the management of a china manufacture in the vicinity of Berlin.⁴³³ One might surmise that as entrepreneurs the von der Leyens became increasingly conscious of the special advantages they enjoyed by virtue of their area's most propitious social setting and by the distance that separated Krefeld from proximity to and too frequent control by an unsympathetic officialdom.⁴³⁴ On balance, the von der Leyen and the other Mennonite *Verleger* came to cherish their position as a geographic outpost and also to appreciate their role as political and economic outsiders within the monarchy.

All this would suggest that throughout the eighteenth century cooperation between the von der Leyens and Berlin authorities appears to have been as factitious and as strained as the partners' functional friendship upon which this collaboration was based. As junior members of this alliance, the von der Leyens made the most of a difficult situation without apparently ever deluding themselves about their status within the kingdom. By the same token, the Prussian bureaucracy accorded the von der Leyens the honors and privileges a state has to concede to those whose contributions to the royal treasury and to employment are significant. Notwithstanding these public acknowledgements and professions of royal esteem, the king's ministers were seemingly never quite free from suspicions which they harbored against the von der Leyens.⁴³⁵

As aristocrats these mandarins probably resented the von der Leyen posture of independence as tantamount to arriviste insolence toward their betters.

Given the nature of the Frederician state, such misgivings and tensions between social groupings were not surprising. However, the particular setting within which Krefeld's Mennonites conducted their business with the Berlin authorities proved more viable than its shortcomings might indicate. Indeed, in many respects this framework foreshadows the *modus vivendi* that after 1815 the leading Rhenish industrialists and financiers were to seek for their accommodation with the Hohenzollern regime whose subjects they had reluctantly been made.⁴³⁶

Apologia Borussica

The social tensions were symptomatic of the prevailing atmosphere. Growing richer by the year and accordingly more self-confident, the Krefeld merchant princes were straining at the bureaucratic leash to which they were still attached. Even within Berlin proper such pressures were simmering below the surface; sporadic outbursts of discontent uncovered the chronic pathology of the political scene. At the time, the burghers of the capital were chafing under the same tutelage of Frederician autocracy; they felt more consciously abused ever since a coterie of local intellectuals had opened their eyes to the potentialities of the Enlightenment and thus to the gap between the ideal conditions to be achieved and the harsh realities in existence.⁴³⁷ However, unlike their Rhenish counterparts, the burghers along the Spree were cursed by proximity to the central organs of state. Worse still, for the most part commercially and financially beholden to the crown, they lacked the type of economic base—in contrast to the Mennonites—from which to launch an effective bid for some measure of civic independence.⁴³⁸

German historiography of the more conventional kind has usually played down references to such unpleasanties as political dissensions, class antagonisms, and the shortcomings of different governmental activities. As for expressions of doubt with respect to royal policy, these sentiments have been even more rare throughout the large and varied literature devoted to Frederick the Great in his role as statesman on the home front. This posture toward a specific historic era is, of course, no accident. Indeed, the general environment which initially shaped and subsequently sustained the Hohenzollern hagiography must be seen in a wider context. Here, unfortunately, this matter can be merely touched upon to elucidate, if at all possible, the reasons why the main theme of this investigation differs so radically from the more traditional assumptions regarding the nature of eighteenth-century Prussia.

Carlyle was one of the harbingers of this hero worship. But it was only in the euphoria over belated national unity that the paeans of praise for the imperial dynasty swelled to a massive crescendo. Almost the whole fraternity of "clerks" joined the chorus. Economists and historians, the so-called younger generation of the "Historical School," were among the most vocal of this

choir, effectively directed by Gustav Schmoller. So ruthless in fact became Schmoller's orchestration of this group that a recalcitrant voicing only slight dissonance was mercilessly dropped from its membership and thereby excluded from the generous perquisites which in imperial Germany the academic establishment had to offer.⁴³⁹

It would be as unfair as it would be misleading to suggest that the heirs to Ranke's and Sybel's scholarship deliberately fudged the historical record. Nor did they gloss over failures and unfavorable repercussions due to specific policy decisions. Indeed, most of the authors cited in this study admitted that towards Krefeld's manufacture, the royal authorities had perpetrated acts of indifferences and outright hostility. Similarly, these historians conceded that incompetence and corruption frequently vitiated the effectiveness of mercantilist regulations the sovereign had promulgated on behalf of the economy in general and the Berlin silk trades especially. However, when it came to a general evaluation of Frederick the Great's economic statesmanship, almost all these writers adjudged him and his efforts as of historical significance bearing an indelible and beneficial mark upon the material progress of Germany as a whole and Prussia in particular.⁴⁴⁰

In a lecture before the Prussian academy announcing the publication of the *Acta Borussica* pertaining to the silk industry, Schmoller outlined the purpose of this mammoth project and by implication the sentiments that actuated him and his co-workers in their labors:

How much did we know about Prussia's 18th-century silk industry prior to the publication of our history [on the topic] and how much do we know now? The answer is quite simple. . . . Nothing was known about the industries of Berlin, Potsdam, and the other eastern provinces except for a few statistical data and some brief notes by Büsching, Rödenbeck, Bratring, and a few others. Moreover, toward the end of the century appeared the critical accounts of both native as well as foreign physiocrats, all purporting to prove that the king's pampered pet project was but an artificial and expensive hothouse plant. This indictment is not totally unfounded. Nevertheless, the writings of Mirabeau, Krug, Bassewitz, and others were for the most part the result of ignorance regarding relevant facts and dogmatism. . . . Now we know the history of this industry in all its details.⁴⁴¹

Schmoller might have been expected to advance a substitute theory of economic progress as a basis from which to utilize the newly marshaled evidence in order to counter and possibly demolish the critique voiced by this assortment of laissez-faire apostles. But Schmoller did nothing of this kind. Instead he shunted the argument onto a quite different level of discourse by rehearsing a viewpoint which in the literature has become associated with his name: that mercantilism cannot be meaningfully evaluated according to economic criteria even in their broadest sense:

The whole mercantilist policy can only be understood when it is regarded as a stage and as a means in the creation of a larger economic and political community. As the medieval city-states and the great lordships became more and

more incapable of serving as adequate organs of social life . . . it became necessary that all conceivable means should be employed, if need be, through "blood and iron"—to erect territorial and national states. Enlightened princely despotism was the representative of this great progressive movement.⁴⁴²

Given this interpretation of mercantilism (which to some may seem rather metaphysical), the silk industry assumes a key position inasmuch as the growth of this luxury trade epitomizes the rise of this political entity to economic supremacy. And thus, according to this viewpoint, Frederick the Great was justified in regarding "the silk industry as occupying so very important, if not the most important, place in such a policy."⁴⁴³

So spirited and emotional a defense of the Frederician system left no doubt about the social outlook and the underlying value system animating the younger generation of the "Historical School." They had already and unequivocally repudiated the liberal tradition and all it stood for.⁴⁴⁴ They had also, quite resolutely, rejected classical economics, both as a doctrine as well as a method of analysis, thereby sundering some crucial links with the majority of economists and social scientists active in the Western world, notably in France and England.⁴⁴⁵

This, of course, raises the all-important issue: What was it in the immediate academic environment and above all in the society of imperial Germany at-large that should have nurtured these historians and economists into a national sect, set apart from their international colleagues? Some aspects of this uniqueness were discernible as early as the 1830s and 1840s when intellectual and political ferment swept through the German lands. At the time, emancipation from the tyranny of Metternich's system was the great battle cry. And it was already then characteristic of the philosophic idealism of the students and intellectuals clamoring for greater civic rights that they did not extend their demands to the economic arena. As they perceived the social process, constitutional freedom and economic liberalism were not necessarily allies that had to be effectively welded into a united front against a tough autocracy buttressed by the extant forces of feudalism.⁴⁴⁶

Indeed, to many of these young and high-minded "freedom fighters," classical political economy, or at least what they had heard about it, must have seemed like a strange animal. Its full implications, if ever explored for their benefit, must have sounded even worse. This is not surprising: most of the liberals hailed from petty bourgeois backgrounds and gathered their dominant impressions about life in small, somnolent cities made up of bureaucrats, craftsmen, and their families. And what little these men might have seen of laissez-faire in operation was probably of the negative kind: artisans bankrupted by outside competition and hapless workmen displaced by machines. Thus "Smithianism" elicited from them shudders of revulsion. A doctrine where inexorable forces supposedly transmuted a stable, corporate society into a jungle-type world thriving on injustice was too horrible to contemplate. This is why they probably cherished vague notions of a medieval order as their social ideal—the material basis of a free and united Germany.⁴⁴⁷

Bruno Hildebrand was among the first of the social scientists to articulate

qua economist the hopes and fears of this generation. He recognized the greatness of Adam Smith's contribution, but he promptly proceeded to question not only the philosophy of natural law underlying the Scotsman's reasoning, but the whole core of classic economics. He readily admitted that in this critical stance toward Anglo-Saxon political economy he had been influenced by the writing of Adam Müllers. Yet Hildebrand added that he could accept neither the medieval and feudal notions nor the reactionary policy conclusions propounded by Müllers and his "Romantic School."⁴⁴⁸

Hildebrand's most distinguished disciple, Karl Knies, was to continue in the same vein. Knies had also been a victim—as had been Hildebrand—of post-1850 autocracy: in 1848 he had proved himself a staunch democrat. But his radicalism was specifically indigenous. Thus Knies expressed the patriot's distaste for the cosmopolitanism of the classical school. He also deprecated the very role assigned to self-interest within the classical system as "subversive" of his Hegalian preception of social order—that is, of an organically evolving community which, at each stage of its development, requires its own peculiar form of analysis. What Knies therefore sought was an economic approach and, by implication, an economic policy that would reconcile the peculiarities of German society with the requirements of economic progress.⁴⁴⁹

Be that as it may, the founders of the "Historical School" became in later life tired liberals who eventually had to compromise their early ideals and come to terms with the Bismarkian state. However, the next generation of this group had no such adjustment problem. Raised to manhood in the heady atmosphere of military triumphs won by Prussian arms at Sawowa and Sedan, these epigoni took German unity for granted in the same way that they accepted, rather approvingly, the illiberal framework of the new empire. And to the extent that they were not moved by the ideals that had originally inspired their mentors, these young men could focus more intensively upon the petty bourgeois fears they shared with their elders.⁴⁵⁰

Specifically, the second generation of the "Historical School" was preoccupied with the social and political consequences of capitalist industrialization.⁴⁵¹ This, after all, was the post-1870 age when German industry advanced at break-neck speed, its frenetic drive typical of the industrial "latecomer" trying to catch up with the more developed countries.⁴⁵² Schmoller and most of his colleagues in the Verein für Sozialpolitik were horrified by this pattern of economic growth and especially by the social malaise it had created; they felt nauseated by those ugly manifestations of crass materialism, naked class interest, and overt corruption protruding from almost all layers of the social pyramid.⁴⁵³

Clearly, because of their orientation, the historical economists were quite incapable of perceiving any possible advantages accruing to society from rapid economic progress. By the same token, they identified all the more clearly the "backwash" features of accumulation. Among the latter, the revolutionary clamors of an organizing proletariat seemed to these social scientists the most ominous symptom. Indeed, ever since the 1870s the Red specter had become more than an academic issue; from then on the number of social democratic

votes cast at each successive Reichstag election grew at a rate almost as rapid as the index of industrial production. And with such dreary facts before them to buttress their vision, the members of the "Historical School" assumed it to be an almost foregone conclusion that unfettered capitalism continuing on its rampage would inevitably lead via a socialist revolution to anarchy and finally to the breakdown of all civilization.⁴⁵⁴

Under the circumstances, Schmoller and his group—from now on quite often referred to as "Socialists of the chair"—became the natural allies of the Junkers. These feudal lords had been able to hold on to the senior posts in the bureaucracy and in the army, and thus preserve their dominant position within the imperial body politic. But as shrewd oligarchs these aristocrats were only too aware that their days of power were numbered unless they could adapt their rule to the changes that ever since the 1850s had basically realigned Germany's social and economic structure. Specifically, the Junkers had to devise a formula that would allow them to capture the dynamic of industrialization within a political framework over which they would maintain their traditional hold.⁴⁵⁵ And in the search for an alternative—to a plutocracy embodied in parliamentary government or the horrors of a socialist despotism—Prussia's governing class sought out these scholars who by background and inclination were eager to join in this quest for the "third way."⁴⁵⁶

Eventually, a *modus vivendi* was worked out; it was to be symbolized in the Tariff of 1879 and the Anti-Socialist Laws of the same year. The new barons of industry had become partners, junior partners, to be sure, of the ancient barons of the land. Refurbished, Old Prussia continued to rule supreme. And the members of the "Historical School" provided the rationalization of the new system. Moreover, under Bismark and subsequently under William II, the "Socialists of the chair" became the architects of social legislation that proved to be the basis of the Prussian welfare state. The various insurance laws that were passed meant to achieve one purpose above all: they were to emasculate the revolutionary fervor of the socialist workers and eventually bind them as loyal subjects to the Hohenzollern throne.⁴⁵⁷

Throughout the post-1870 decades, the "Socialists of the chair" were hard put to reconcile the incompatibilities of this strange and tense atmosphere where an up-to-date, bouyant manufacturing system had to adapt to a traditional preindustrial power structure. Inevitably, those among the "historical economists" writing history were bound to project backward, into previous centuries, the problems and difficulties with which they were presently grappling. More important, some of these historians rather consciously exploited historical analogy in order to hallow and consecrate their current policies.⁴⁵⁸ In this sense, Frederick the Great, as a historical figure and as an economic statesman, appeared ideally suited to provide the imprimatur of the past with which to dignify the present. Otto Hintze was very much aware of it and put the matter quite bluntly:

Ever since the Bismarckean era our whole system of government has been influenced, in a certain way, by Frederician ideas, both on issues of domestic

policies as well as on foreign policy. The statesman who understood how to reawaken in Prussian blood the ambitions of power also broke with the principles of pure "Manchesterism" which assigned to the state, in its economic and social life, the mere role of a night watchman. . . . Since 1878 our internal policies reflect, quite unmistakably, the characteristics of the Frederican system. However, comparing then and now, the progress of our material and cultural development has been responsible for major differences in the broad policy outline. The difference is not only one of time periods but also of geographic regions. Our Eastern provinces lag, as regards economic development, those of the West and Middle by a century; the Polish advances have brought home to us, and in a most penetrating way, that some of the limbs of our nation (*Volk*) and state lack the necessary stamina to resist on their own and without assistance of the whole body the Polish virus. . . . This is why a fairly drastic cure is called for. The sluggish circulation of the blood must be quickened, greater activity and more drive altogether must be marshaled and thereby greater resilience achieved. To this end governmental aid is necessary. . . . We have turned our back slowly but surely on the principle of *laissez-faire, laissez-passer*. And thus the means were found which, in a similar way, Frederick the Great had already applied in order to render this young, immature, and incomplete state viable and resilient against the older and stronger powers that engulfed it.⁴⁵⁹

It is this rather dated blend of jingoism and mediievallike conservatism that was to underlie much of the historiography of pre-World War I Germany. In the Weimar years, this approach remained not uncommon and by no means in the minority, but after 1933 this viewpoint became, once again, official doctrine. Strangely enough, this traditional posture survived 1945 and apparently continued to have many devotees in the academies of the Adenauer Republic.⁴⁶⁰ To be sure, the phrases of 1914 are no longer considered respectable.⁴⁶¹ But many of the sentiments remain the same. And thus all those who do not share the inarticulate premises of this vision should appropriately beware when reading accounts of eighteenth-century Prussia, including those investigations primarily concerned with matters economic and social. In this respect, the silk industries of Frederican Krefeld and Berlin are no exception.⁴⁶²

3

From Monopoly to Laissez-Faire: The Early Growth of the Wupper Valley Textile Trades

A “Frontier” in Medieval Days

The Berg territories' secular dynamic and the Wupper valley's industrial advance suggest an *ambiance sociale* favoring economic growth. In this context, the proximity of Cologne assumes considerable importance. Without doubt, it remains one of Cologne's main contributions to post medieval progress that as the region's oldest conurbation Cologne had assumed the guardianship over a civilization which, at the proper moment, it generously diffused throughout the Rhineland.¹

Of itself, the Rhine metropolis lacked the requisite flexibility to adjust to the realignments the newly emerging, modern world had imposed upon international economy. Such a state of ossification was quite common at the time, afflicting many of the urban centers boasting an ancient tradition. A diagnosis of the social malaise is somewhat easily rendered, for all pathological symptoms point to the inflexibility of a corporate structure. Even though a resolute minority of burghers relentlessly pressed for reform, they were unable to dislodge this authority.²

But like flood waters held back in their regular bed, Cologne's progressive elements sought new ways to assert their force. They rushed forth over the city walls in order to galvanize the inhabitants of an unencumbered countryside to pursue their aims. The energy thus applied was an amalgam of what proved best in the industrial tradition of the Middle Ages, revitalized and purified by the pressure of the reformist groups trying to subvert an outdated

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guild system by outflanking it. The impact of these wholesome influences, flowing from town into countryside, was most effective where the rural population was brought face to face with the "rationalism" of an intricate network of long-distance commerce. This was particularly true in parishes adjoining the city gates, in villages along the main highways and those strung along the Rhine. This was due to Cologne's special position as an important "staple." During the Middle Ages and throughout much of the early modern period, the imperial city was a nodal point for both North-South and East-West trade. Men and material moved continuously along these main roads leading in and out of town. As a result, country folk placed in direct contact with this traffic could not avoid being absorbed in the activities of cosmopolitan exchange.³

The parish of Wermelskirchen is typical. "Created on the ridge of a Hansa transport artery, leading from Flanders to Lübeck, and adjacent to the Hansa towns of Cologne, Lennep, Wipperfürth, Radevormwald, Solingen, and . . . Burg," the inhabitants of this parish became haulage men as early as the fourteenth century. "Their wagons," according to one historian, "traversed the world."⁴ Rather revealingly, in the fifteenth century some of the local youths already attended Cologne University.⁵

Cologne's demand for foodstuffs and raw materials was another factor contributing to a profound and widespread transformation of this region. The change came about by the specific pressures exerted by metropolitan purchasing power upon peasants who were drawn into the market economy. This meant that they came to practice a more specialized type of agriculture, rendering obsolete such traditional ties to their neighbors as might have thwarted individual initiative.⁶ In short, however primitive, these husbandmen became entrepreneurs. As they became part of the cash nexus, they helped to accelerate a trend toward the commutation of seigniorial dues into money rents. Thus the feudal bonds, which had been partly eroded in the Rhineland during the Middle Ages, were further weakened. These pressures were never to be reimposed, thus creating a state of affairs of momentous historical consequence for the subsequent development of this part of the world.⁷

Finally, there was the deviant guild member who could not find the necessary elbow room for industrial or commercial innovations within his urban habitat. He chafed under the limitations imposed upon him by the corporate order, and increasingly sought ways to break out of it. By leaving Cologne, he usually gained his freedom. This was achieved either of his own volition or by being compelled, after some altercation with authorities, to try his luck in the countryside. Thus, by moving from the city, the guild member could become the pioneer of rural industry.⁸

The inflow of men and ideas did not spark automatic growth in the backwood area. Indeed, success for such a transplantation (from ancient civilization to as yet "unindustrialized" territory) is never a foregone conclusion. It depends primarily upon the congruence of special sets of circumstances. That these conditions were essentially realized in the Wupper valley must be attributed to its propitious environment. Specifically, an agrarian structure had

emerged in this area and with it a special setting in which the dominant peasantry was already poised to move ahead. Accordingly, this peasantry knew how to maximize exogenous stimulants. Cologne's example of prodding and pressure only hastened what in effect amounted to an established trend.⁹

Because this upward surge was conditioned by the agrarian context, the pattern of rural evolution assumed special importance. The beginning of colonization augured well for the area's subsequent dynamic because the lords, in whom the Berg lands were originally vested, lacked the necessary manpower to work their estates. Therefore, they could only attract colonists by offering them generous terms of settlement. This meant favorable conditions with respect to land tenure and serf status for newcomers. These circumstances were largely instrumental in projecting Berg feudalism on its characteristically mild and lenient course.¹⁰

This emerging tolerant and liberal relationship between master and serf generated its own momentum. Especially the irruption of the cash nexus prompted the advantageously placed peasant to improve his position still further. Eventually, the local serf became a kind of hereditary tenant and de facto was indistinguishable from the freeholders who bordered these lordly estates. As a group, the two categories of tenant and yeoman constituted an elite set apart from the cotters who had to content themselves with a more modest existence.¹¹

These peasants with larger holdings, lived on dispersed holdings and practiced dairy farming, cattle raising, and the merchandising of timber. This diversity was in response to Cologne's massive demand for food and raw materials.¹² Thus the nature of their social existence set the stage for the Berg husbandmen to develop a sense of rugged independence.¹³ In turn, these traits intensified and broadened their entrepreneurial instincts. Soon, the emerging Kulaks were to raise their sights beyond the agrarian sector. In this way, they hoped to make the most of the opportunities that arose from the interregional trade (mostly in linen), that passed through the area.¹⁴

Before long, the Wupper valley merchant-cultivators were called upon to prove themselves capable of facing risks—a challenge inherent in international business. Beginning with the fifteenth century, the dominant trade pattern was in the midst of change. Until then, most of the manufactured linen had been shipped from south German cities via Cologne to the Netherlands and from there to Spain. In the future, this network was to be replaced by a new relationship in which the Dutch bleachers came to rely on brown linen that originated in northern Germany.¹⁵

Such secular realignments caused distress among the erstwhile producers. Cologne was similarly hard pressed. Having previously been a strategic transit center in the old exchange, it was to be increasingly bypassed during the new era. Wupper valley commercial activity adjusted to the altered scene with remarkable dispatch. Though originally very much part of the medieval order and a satellite of Cologne, local industry managed most adroitly to sunder its traditional ties to the imperial city.¹⁶ Alternatively, it sought integration into the regional economy of the Dutch lowlands, which was then in the process of

emergence. Success along these lines was assured because the indigenous operators had learned how to satisfy the growing demand for linen and linen yarn. The prospering cities of Brabant and later those along the Netherlands coast became steady customers. These areas were emerging as the focal points of the world economy.¹⁷

This would suggest that the Wupper valley merchants had attached themselves to rising stars. But superficial appearances notwithstanding, they had not simply chanced upon this course. Rather, they seem to have been steered by the good luck the heavens repeatedly shower upon helmsmen with the knack for lifemanship. Indeed, the wise choice of the Wupper valley's commercial reorientation toward Flanders, Brabant, and eventually Dutch centers, had been predicated upon the area's receptivity toward industrial innovation.¹⁸

Despite its industrial malaise, activity from Cologne offered the most immediate stimulus.¹⁹ The Wupper valley linen merchants assumed the role of principal agents, for they were in a position to take full advantage of this situation. They did so with a vengeance. In the course of their commercial dealings, they visited the imperial city regularly and consequently had first-hand experiences of the difficulties facing corporate industry, bleaching included. Perhaps it was by way of contrast that the peripatetic traders realized the industrial potential that was inherent in the freedom and frontier atmosphere of their native habitat. In any event, they took the initiative. With their expertise and some accumulated resources, they began to transform local bleaching. They transferred what had been a purely subsistence endeavor into a commercial venture destined for export. It was not the heroic figure of Göddert Wichelhaus, as legend would have it, but the prosaic sequence of entrepreneurial expectations that sparked the industry which for more than two centuries was to provide the foundation of the Wupper valley's spectacular progress.²⁰

During the fifteenth century, the first bleaching firms were established here and a definite pattern began to emerge. Moving eastward from the parish of Elberfeld toward the future Barmen, the meadows along Wupper were increasingly transformed into bleachgreens.

By the end of the century, the valley's inhabitants were linked, for better or worse, to the fortunes of this particular trade.²¹ How far this development had progressed can be deduced from a census of holdings taken in 1466, the so-called Beyenburger Amtrechnung. This census shows that the fragmentation of holdings had been going on for some time and could not have taken place without nonagricultural activity providing at least some support.²²

The speed with which such industrial progress had taken place must be viewed in the context of a broader movement. Fifteenth-century trade and industry may not have experienced spectacular expansion. However, production was being subjected to structural changes, generally of a fundamental nature. Industrial output in the countryside and in the newer towns, unencumbered by tradition, gained at the expense of activity in the older ones. This was as evident in the Lower Rhine region as it was in Saxony and in the then flourishing districts of Flanders and Brabant.²³

Moreover, the fifteenth century, especially the second half, witnessed an increase in the class of rich burghers throughout western Europe. Consumption emanating from this group rose accordingly, and the demand for linen, particularly finer linen, enjoyed a secular boom.²⁴ Therefore, it may be said that the Wupper valley had opted not only for what was about to be the most vital mode of production, but also for an activity about to become a growth sector.²⁵

In addition to the availability of water and the advantages of a decent road connection, the Wupper valley inhabitants benefited, on several historical occasions, from a relatively tolerant government. This was certainly true in the thirteenth century when the local counts were intent upon colonizing this territory.²⁶ Similarly in the fifteenth century, the dukes of Berg demonstrated definite concern for the material welfare of their subjects. They rose to defend local commerce against the ire of Cologne merchants who viewed these "Elberfeld merchants" as illegitimate interlopers. But apart from such sporadic aid, probably proffered at the specific behest of the business community, the local potentates remained conspicuously aloof from economic issues. Thus, in one way or another, local industry was to move ahead according to its own lights.²⁷

Rural Industrialization: The Toddler Stage

Since the late fifteenth century, Elberfeld figured more frequently in the extant annals of the famous markets and fairs. During the early sixteenth century, references of this kind became even more numerous. Such prominence was due, in part, to more assiduous bookkeeping, but mostly to a general insistence upon written records. Given the circumstances, one might also infer that the more voluminous supply of historical information concerning the area reflected the Wupper valley's growing reputation as a manufacturing and trade center.²⁸

According to a Cologne document of 1486, Wennemar Teschenmacher, who almost certainly hailed from Elberfeld, was a dealer in linen yarn.²⁹ Along similar lines, a 1504 account indicates that two Cologne burghers were having linen bleached by an Elberfeld establishment.³⁰ Even more significantly, in the late fifteenth century, Berg merchants were reported selling wares in Antwerp. This particular evidence is crucial, for it tends to corroborate the aforementioned supposition that the Wupper valley (akin to other fortunate areas of the Lower Rhine region) was being commercially absorbed into both the Antwerp hinterland and into Flanders.³¹ The latter province had by then become the focal point for the "new" international economy, with the Atlantic as the center of gravity and with linen assuming a pivotal role in the world's textile business.

By 1527 Wupper valley activity had reached a milestone in its development. In that year the local bleachers and yarn dealers demanded and were granted the *Garnnahrung* with all its privileges. The fee for this major conces-

sion was 861 gold talers.³² The merchants were able to raise this sum promptly and the authorities acted with equal dispatch and apparent sympathy upon their request for special treatment. This shows the influence that Wupper valley industry and its immediate representatives had come to exert within the duchy.

At the same time, the official attitude suggests that the potentates were intent upon capturing for their benefit the dynamic of this trade. They hoped that the rules to be enforced by the new order would bolster the various phases of the linen business and thereby enlarge the tax base of the realm.³³ The ducal charter establishing the *Garnnahrung* is a significant document. By implication it provides the earliest available account of linen yarn bleaching in the Wupper valley, including hints bearing upon a social anatomy of the environment.³⁴ Traditionally, local historiography has been appropriately alive to the importance of this ancient record and had therefore not only submitted the *modus operandi* of the projected institution to careful scrutiny, but has even gone as far as to date the beginning of modern Wupper valley history from the implementation of this regulatory system.³⁵

Henceforth, only members of the *Garnnahrung* in the Freiheit of Elberfeld and the as yet unincorporated locality of "Barmen" were to enjoy, within the duchies of Jülich and Berg, the right to "bleach and thread linen yarn for commercial purposes." In this way the duke compensated them "for their recent difficulties, losses and troubles sustained." To the disappointment of those concerned with developments prior to 1527, these problems are not elaborated. Nor, incidentally, are those places mentioned (presumably Schwelm and Werden) which were to be detrimentally affected by this monopolistic legislation.³⁶

This privileged group was to be governed and administered by four trustees, later referred to as *Garnmeister*. There were two each for the two communities, selected annually by the members of their corporation in conjunction with and under the supervision of the ducal officials, the so-called *Amtmänner*. Moreover, the *Amtmänner* were to constitute the highest court of appeal and arbitration in all matters affecting disputes and altercations with the *Garnnahrung* that the trustees were not able to mediate. For rendering these services, the six officials—that is, the *Amtmänner* and the *Garnmeister*—were to be paid a percentage share of total output.³⁷

Prospective members of the *Garnnahrung* had to swear on oath that they would not transplant linen bleaching into other lands nor aid and abet in such undertakings. Provided they adhered to these rules, even incoming foreigners were readily accepted into the *Garnnahrung* on paying the entrance fee of four guldens, a sum eight times the amount (one-half gulden) demanded from native members. However, servants and maids (*bleiche Knechte* and *Mägde*) were explicitly excluded from membership in the *Garnnahrung* until such time when "because of their own trading and bleaching they would benefit by joining it."³⁸

Output was to be limited to 100 pieces annually of bleached linen yard per dealer. Bleachers were limited to 800 pieces; those bleaching and selling their

own yarn, were limited to 600 pieces. Exemptions were to be made in the case of members' children residing abroad. Depending upon circumstances, the trustees were to grant these dependents the privilege of additional quantities. Also, in times of depression, the ducal officials were empowered to reduce the various allotments, on a proportional basis, in response to declining demand.³⁹

A medieval conception of a static society sustained this policy of restrictions. Most traders, artisans, and administrators at the time subscribed to corporate ideals regarding a stable, and above all, an egalitarian income for all concerned. Fears that an individual, if unbridled, might increase production and business generally at the expense of colleagues and in turn subject them to his power were widespread.⁴⁰ Similarly, the need for limits on individual production was universally accepted. Besides, an awareness, given these egalitarian considerations, that returns between the various branches of the linen yarn trade differed, prompted the allocation of differential quotas.⁴¹ In this connection it is worth observing that these viewpoints endowed, at so early a stage, the Berg merchants and bureaucrats with a rather precocious perception that for all the apparent differences that had to be taken into account, profits, rent, and interest were but "species of a large genus."

Moreover, *Garnnahrung* regulations specifying the period allowed for bleaching, March 23rd to May 15th, were very much part of the overall effort to erect a bulwark against forces threatening the status quo. By having set these dates, no one was supposed to disadvantage fellow members through premature sales and thus spoil the market. Nor was speed in production at the expense of quality to jeopardize (given these calendar limits) the reputation of local wares.⁴²

Finally, there were the statutes prohibiting traders and bleachers from working with borrowed capital. These interdictions suggest dark forebodings on the part of contemporaries that loans and interest were sinister elements subversive of the existing order. But, here as elsewhere, almost from the day of their promulgation, the rules against usury and business concentration were honored in the breach.

On the basis of surviving records, Dietz provides telling examples illuminating the subterfuges and loopholes which enabled Wupper valley's emergent capitalism to bypass the medieval obstacles hindering its expansion. The scheme was quite simple: local inhabitants with available savings were to place these funds at the disposal of local traders, with the specific request that these dealers buy, bleach, and sell the yarn on their behalf. These minicapitalists never saw the raw material nor were they, at any stage, involved in its movement. Nor, for that matter, were they concerned to have the loans repaid on completion of the individual transaction. This meant that the aggregate of these small sums contributed a revolving fund of appreciable size, which augmented on a permanent basis the resources and the permissible output of the entrepreneurial elite.⁴³

These petty lenders insisted, however, upon a fairly stable return on their credit outstanding. For the most part they were to be satisfied on this account. As Dietz pointed out, the foundations had been laid for the rudimentary

workings of a joint stock company with limited liability, issuing, as it were, bonds and preferred stock.⁴⁴ At this stage of early modern history, blood relationships and group ties based on religious affiliation were the prime ingredients cementing the framework within which this limited capital market was to operate.⁴⁵

By eroding many of these original statutes, the march of progress contributed to the resilience of the *Garnnahrung*. Such a sequence of events may seem paradoxical, though on second thought proves to be quite straightforward. All that this particular pattern suggests is the truism about an institution proving its viability by jettisoning, easily and willingly, those of its rules and regulations that have outlived their utility. Because the *Garnnahrung* had demonstrated its flexibility and particularly its power of rejuvenation, it was able to continue to lay claim upon Wupper valley leadership.⁴⁶ Stripped of unnecessary paraphernalia, the *Garnnahrung* was to concentrate upon the essentials of control and thus shape the course of local development for centuries to come.

This, of course, raises the question of the nature and meaning of the *Garnnahrung*. It could never have been a monopoly of the orthodox kind, because from the beginning the size of the duchy of Berg made exports all-important. However, "Elberfeld yarn," as it was then called, probably enjoyed a certain uniqueness and appears to have been sold in a few markets among which Cologne remained an important outlet. Thus, in the short run at least, it is safe to assume that the demand for local yarn was low and that as a consequence efforts to limit quantity and thereby maintain prices, especially in periods of decline, were not in vain.⁴⁷ Indeed, concern over orderly conditions in this primarily international market, particularly when a slump threatened, may have been the basic reason for the establishment of the *Garnnahrung*, as references to difficulties within the charter and losses prior to 1527 would indicate.⁴⁸

Sixteenth-century merchants and officials did not and probably could not as yet appreciate the distinction between short- and long-term influences upon prices. Imperfections in the market structure shielded participants in the international economy from the potentially inexorable discipline exerted by the forces of supply and demand. Such a state of affairs provides at least a partial explanation for the complete faith and trust of these contemporaries in economic controls. The men of those days approved in large measure an order where industrial activity was limited to one area in the state and within that particular district to a select number of producers with a given output. They were certain that the country at-large would gain from a system of carefully supervised production. Above all, they believed that within such a framework the entrepreneur would be spurred on to give his best, because he would be protected against interlopers imitating his efforts, stealing his trade secrets and, worst of all, spoiling the market for his goods.⁴⁹

All this smacks of a cartel arrangement as the somewhat heterogeneous though privileged membership was allotted a share of a total output that had been set with due regard to market conditions. In view of these circumstances,

the *Garnnahrung* was subject to those pressures to which a cartel is typically exposed when facing a cyclical and especially a secular boom. In periods of advance, the more aggressive members of a cartel, scenting additional profits to be made by prompt adjustments to the upward shift in demand, were bound to break the prescribed rules: they were willing to enlarge individual output beyond their assigned quota.⁵⁰

It is usually accepted that the sixteenth century was expansion oriented, especially during its second half.⁵¹ The Western world at that time was in the process of digesting and consolidating the commercial gains resulting from spectacular overseas discoveries.⁵² The linen yarn trade, in particular, prospered because of the almost infinite demand for linen thread needed in the flourishing Flanders and French lace-making industries.⁵³

The growth of Wupper valley output reflects the overall upswing in textiles. Dietz estimates that during the early sixteenth century about 3,200 pieces of bleached yarn were produced annually by 44 operators. Not quite a century later, in 1606, the output had risen to as much as 5,000 pieces, the work of some 33 bleachers in Elberfeld and 77 bleachers in Barmen. The increase in the number of Barmen producers suggests that additional land was still available there to be turned into bleachgreens.⁵⁴

This particular pattern outlines and even anticipates what eventually emerged as a Wupper valley characteristic: Barmen was to concentrate on production, while Elberfeld became the area's commercial and financial center.⁵⁵ On scrutinizing production figures of individual members, the economic differences within the *Garnnahrung* were soon conspicuous. Already at this early stage, some of the local merchants had obviously become more equal than others.⁵⁶

This perennial hustle and bustle was to lead to transgressions against *Garnnahrung* regulations, as can be gleaned from some extant decisions against offending members. In 1596, for example, the Elberfeld merchant Caspar Rittershaus was fined 500 gold guilders, to be paid to the duke, plus 400 talers, to be surrendered to the *Garnmeister's* treasury, because of serious infractions against the *Garnnahrung* code. It appears that this early entrepreneur had expanded his output well beyond his permitted quota. As if to add insult to injury, he had permitted the extra amount to be bleached in Schwelm.⁵⁷

This particular incident suggests the affluence of a man like Rittershaus, who was not ruined by these exactions. On the contrary, he continued to prosper in sufficient measure to be cast in the role of founding father of what was later to become a distinguished local family.⁵⁸ Moreover, this case points to the classic malaise regarding members being in violation of *Garnnahrung* regulations. These offenders either had more yarn bleached than they were allowed (notably in Schwelm and Wetter) or they stretched the period of bleaching beyond the permitted dates. In any event, infraction of statutes was the rule rather than the exception.⁵⁹

Such an atmosphere was found to be fraught with conflict; documents from this era are replete with accounts of numerous dissensions. On several

occasions the altercations went somewhat further than those merely symptomatic of a society rent by tensions. Indeed, some of the bickerings had a decidedly prophetic quality about them. These conflicts presaged the social realignments and the altered power constellation of a capitalist society that was in the process of emergence.⁶⁰

Seen from this vantage point, the 1596 dispute between bleachers and merchants assumes historic significance. In that year the Barmen bleachers and merchants, threadmakers and ribbon weavers, submitted a memorandum to the *Ammänner* (the ducal officials), complaining that the Elberfeld and Barmen dealers had decided, with the express permission of the *Garnmeister* and the local justices, to cease the bleaching of yarn within the Wupper valley for the period of one year. Crisis conditions in the world economy and the resulting surfeit of unsold goods were given as the reason for this action. In view of these circumstances, the disadvantaged producers were quick to point out that the merchants themselves were largely responsible for this state of affairs, for in periods of boom they usually expanded their output beyond the norms set by the *Garnnahrung*.⁶¹

This report also emphasized the misery to which those affected by this restriction were being condemned. The account concluded by warning that, in the long run, the whole industry might be ruined because of the stoppage, if those forty bleachyard workers (*Knechte*), now unemployed, were to leave the Barmen area altogether.⁶²

In their reply the *Garnmeister* rejected all allegations of mercantile conspiracy and unseemly haste with which they had been charged. To prove their innocence in the face of these accusations, the *Garnmeister* were at pains to establish that prior to deciding upon a ban on bleaching, they and the supposedly conniving justices had deliberated at length with the elders of the area's trading community. Apart from the substantive points of the argument, which were meant to defend their action and which, in turn, highlighted the drift of economic events, the case presented by the *Garnmeister* also bears upon another aspect of the social scene: the decisive influence the wealthier linen yarn dealers had come to enjoy with the *Garnnahrung* and thus within the Wupper valley at large.⁶³

It was quite obvious that the *Garnmeister* were overwhelmingly drawn from the elite group of merchants.⁶⁴ Consequently, those formal consultations between the "trustees" and their friends and relatives, advanced in justification of proper forms of decision-making, appear decidedly disingenuous. Indeed, one gains the impression that Wolfgang Köllmann is quite correct in his hypothesis that, almost from the beginning, the *Garnnahrung* was the precursor of a "chamber of commerce" through which the local worthies, sitting on its board, made their wishes felt on behalf of the business fraternity.⁶⁵ One might on this occasion be equally reminded of George Unwin's somewhat similar observation about England in the sixteenth and seventeenth centuries, where rich merchants, upon joining a guild, came to utilize the corporate discipline in order to establish their dominance over the less affluent members.⁶⁶

Given this pattern of evolution, it is not surprising that the ducal authori-

ties should have decided in favor of the *Garnmeister* against the bleachers. The original statutes had clearly authorized the *Garnmeister* to reduce output when periods of depression, such as were to prevail at the time, warranted such action. But it is equally significant that despite its supposed concern for justice the ducal government should have prepared to overlook these flagrant violations perpetrated by the merchants. Thus, to judge from its posture, one can only surmise that the state was already under pressure to practice a kind of qualified impartiality on behalf of those who manifested both economic muscle as well as ability at organizing an effective lobby.⁶⁷

In turn, these chronic antagonisms between bleachers and linen dealers were responsible for the hostility that bedeviled the relationship between the Wupper valley communities on the one hand and neighboring Schwelm on the other. Throughout the sixteenth century, quarrels erupted between these localities with almost cyclical regularity. Invariably, yarn illegally traded or bleached in Schwelm was to be the apple of discord.⁶⁸

On one such occasion the ire of Elberfeld merchants was roused and they had Schwelm yarn, in transit through the valley, confiscated. At another time the Schwelm authorities reacted, to what they imagined to be some malpractice directed against them, by incarcerating several Wupper valley merchants visiting their town.⁶⁹ But whatever the proximate reasons for this conflict, one historical lesson stands out: the irrationality of trying to cling to rules which are obviously at variance with the objective circumstances of society. In this particular instance the *Garnnahrung* regulations upholding the Wupper valley monopoly were especially noxious and impracticable, for they ran counter to the profit motive of the most dynamic group, the yarn dealers.⁷⁰

Indeed, a policy purporting to stifle Schwelm's activity was virtually impossible to implement.⁷¹ For one, Upper Barmen belonged to the parish of Schwelm, which meant that religious and family ties had forged close bonds between the two communities.⁷² Second, apart from social considerations, a material factor was of decisive importance. Given Schwelm's rural atmosphere, a lower cost of living and cheaper rents endowed the local bleachers with a competitive advantage over their upper-valley neighbors.⁷³

This circumstance alone was sufficient reason for the *Garnnahrung* rules to be bypassed. However, though these regulations were being ignored (and rather fortunately from the standpoint of the area's secular progress), they were not struck from the statute book. In turn, such a hiatus between an extant law and social reality might have been expected to lead to ever more serious conflict between the contestant groups. But nothing of the kind transpired. Instead, the area settled down to a period of relative quiescence, a state of affairs which can only be understood in the long-run context of economic change. Specifically, from now on linen bleaching was losing the local preeminence it had so far enjoyed. And consequently, the preservation of the Wupper valley's bleaching monopoly, though still important, was no longer to prove the crucial issue it had once been.⁷⁴

It was not as a branch of industrial endeavor sapped of its vitality and lapsing into decline that the bleaching trade surrendered its primacy to newly

emerging manufacturing activity. On the contrary, the seventeenth century was to demonstrate how successful bleaching at its height had been in fashioning a propitious setting which was to provide the "forward linkages" for a new industry. Increasingly, linen weaving and later on ribbon manufacture became the area's principal sources of employment.⁷⁵

Already in the 1549 agreement Schwelm was specifically accorded the right of linen weaving for its poor, who without such complementary employment might have been in dire straits. And half a century later, in the years 1611–12, the *Garnnahrung* was to receive a protest from its best customers, the Rotterdam and Schiedam weavers, who protested that bedspreads and the like were being produced in the Wupper valley and demanded a cessation of this activity.⁷⁶ Interestingly enough, legend has it that immigrants from the Netherlands were responsible for introducing this particular trade into the Wupper valley.⁷⁷

Be that as it may, the Dutch weavers subsequently warned that they would boycott Wupper valley yarn in the event of noncompliance with their request. Obviously concerned about the dire consequences if such a threat were to be implemented, the Elberfeld *Garnmeister* were eager to placate their clientele by proclaiming not only a ban on local weaving, but also an expulsion order against foreign residents associated with this particular business.⁷⁸

However, the Barmen *Garnmeister* were by no means as ready to submit to this form of outside pressure. They dragged their feet about issuing such a prohibition and only acquiesced in Elberfeld's policies of injunction after they had been given to understand that according to law *Garnnahrung* rules were binding upon both communities. The reason why they were so reluctant to follow Elberfeld was simple: in Barmen weaving was already an important source of income, especially for the poorer inhabitants.⁷⁹

Primitive Accumulation Succeeds

During the seventeenth century, linen weaving and ribbon making spread steadily throughout the Wupper valley and even beyond into the Berg countryside, despite obstacles of one kind or another put in their way. Their very pattern of growth betokens the resilience of these up and coming trades and simultaneously suggests a social structure of great vitality able to assimilate and spur on these branches of manufacture. Specifically, the historical sequence also points to the elemental energies of an environment where Kulaks transformed into merchant-manufacturers still possessed drive and flexibility, and try and make the most of shifts in supply and demand conditions convulsing the world economy.⁸⁰

It was therefore only natural that ambitious operators scanning wider horizons should have been bent upon expanding and diversifying their entrepreneurial efforts by absorbing into their existing operations novel ventures especially suited to make the most of "forward linkages" set up by the sustained development of the old established trades. In view of previous efforts

along those lines, the introduction of linen weaving was an obvious move. The manufacture and sale of this particular fabric was to rely not only upon the area's excellent yarn but also upon a host of mercantile arrangements that harked back to the broadly based growth pattern of the bleaching industry.⁸¹

In 1605 linen fabrics constituted about 5 percent of the Wupper valley's export volume and, because of their higher labor content, some 15 to 20 percent of the total export value.⁸² Carried along by the boom experienced during the first two decades of the new century, this new manufacturing sector thrived and waxed in local importance. But in spite of these advances, linen never quite achieved a dominant position within the Wupper valley economy during the seventeenth century. It lacked the basic ingredients for a major spurt. Unlike Haarlem, for instance, with its wide open dunes, ideal for the bleaching of the brown fabric, the Wupper valley was far too cramped for space to contemplate the bleaching of woven pieces even though such a process might have been crucial in helping local linen gain international stature. Nor did the Wupper valley industry enjoy any other special advantage with which it might have been able to challenge the supremacy of the old established centers, notably Haarlem and Bielefeld, in third markets. Thus one can only surmise that during the early parts of the seventeenth century, locally produced linen was limited to sales within the region.⁸³

By contrast, the ribbon trades achieved world renown and, in due course, a strategic position within the Wupper valley economy. The reasons for such success are easily identified. Ribbon and lace making was the type of activity which took to the existing environment like a fish to water, distilling from the established framework the stimuli necessary to feed its secular dynamic. Every possible feature epitomizing the valley's commercial maturity was mobilized in support of the new manufacture. The availability of excellent yarn became a prerequisite for high-quality production. Similarly, the extended network of business contacts and the relatively ample supply of indigenous capital were pressed into service to smooth the path for this fledgling industry to break into export sales.⁸⁴

But for all their effectiveness, the local impulses would have never accomplished their purpose unless exogenous forces sweeping through the area would have provided additional impetus by confronting the new manufacture with the most potent of inducements toward expansion: ever-widening markets. This, after all, was the age of baroque when throughout the Western World ribbons and lace, to adorn raiment and headgear, had become de rigueur for all those who had made it or at least had aspirations of doing so.⁸⁵

During the same period, Cologne, hitherto the region's traditional ribbon and lace center, was more than ever in the throes of industrial paralysis. The craft guilds, dominating this imperial city, were outdoing each other in devising schemes meant to suppress anything that suggested change. Thus in the Rheinland a production vacuum of sizable proportions had been created and it was accordingly easy for such shrewd and unencumbered merchants as those from the Wupper valley to step in and fill this profitable void.⁸⁶

The *ambiance sociale* reflected these entrepreneurial successes. In 1610

Elberfeld was accorded the status of a town and thirteen years later the added right to extend its limits through incorporation of adjacent communities.⁸⁷ By 1640 the new city claimed 350 houses and some 1,900 inhabitants; in the case of Barmen the figures were 239 and between 1,600 and 1,900, respectively.⁸⁸ At the same time, accumulation of wealth, especially in the hands of the more experienced traders, seems to have grown apace. According to a report dated 1635, Engelbert Teschenmacher, a leading Elberfeld merchant, had sold to Heinrich and Jacob de Groot of Rouen, yarn worth 32,858 talers, and supposedly had made a 100 percent profit on the transaction.⁸⁹

Such scraps of extant evidence suggest a period of progress. This is in many ways remarkable considering the trials and tribulations which, throughout this half-century, the Wupper valley had to face. During the first two decades, religious intolerance, including the expulsion of some minorities, darkened the scene.⁹⁰ Then in 1612 and again in 1619 an epidemic hit the area with dire consequences for the local population.⁹¹ Six years later, before the region had time to recover from the impact of this disease, it was subjected to the first of a series of military invasions. During the next two decades, troops, friend as well as foe, passed through the Berg lands with tragic regularity, spreading havoc as they plundered, exacted ransom, and sequestered local resources.⁹² To add to these horrors, the chaos and lawlessness of war had spawned a horde of bandits who roamed the country pillaging and murdering unless resisted by force.⁹³ Finally, this prolonged era of hostilities had dislocated Europe's trade routes and thus made the purchase of raw materials and the eventual sale of finished products more cumbersome than ever.⁹⁴

It is a tribute to the stamina of this economy and its industries to have withstood the ravages of war and, even more significantly, to have come through poised for further growth. The various branches of local endeavor—yarn bleaching, linen weaving, and above all, ribbon making—adapted to the postwar boom, from the 1650s onward, with great zest. The “Dutch loom” was easily introduced into the area. At the same time, sales of bleached yarn to France and England were on the upswing. By the 1660s Elberfeld appears to have been a flourishing community of some 400 houses. In the years 1667–68 no fewer than 57,752 pounds of yarn were sold in Amsterdam for reexport. And not even the French-Dutch war of the 1670s was to interfere with the forward march.⁹⁵

When in 1687 a fire virtually consumed this manufacturing center, a few prominent families left in despair to take up residence in neighboring Barmen. But several immigrants took the place of those leaving this burned out community. The newcomers were attracted by the subsidies and tax exemptions (up to twenty years) promised by the duke. More importantly, they were lured by what seemed to them an opportunity of pursuing profitable activities in a most hospitable environment.⁹⁶

Within a few years, the town, including its Reformed Lutheran church, had been rebuilt.⁹⁷ Recovery from war and destruction was largely complete when, in 1690, Elberfeld claimed but fifteen bleaching establishments and an annual output of 2,400 hundredweight of bleached yarn.⁹⁸ At about the same time,

Elberfeld's population reached as high as three thousand,⁹⁹ Barmen, consisting of 240 houses, probably numbered more than two thousand inhabitants.¹⁰⁰

To an outsider looking down from one of the surrounding hills, the Wupper valley scene, anno 1690, must have appeared a bucolic one. However, it is equally possible that anyone intimately acquainted with local conditions would be focusing on the rate of urbanization making inroads into the countryside. But it would have surely required a social scientist of cosmopolitan background and almost superhuman prescience to view these developments as presaging the historic changes about to engulf land and people.¹⁰¹

The thrust of local progress was in large part due to the excellent market organization which had evolved over the years, assuring on the one hand the regular flow of the necessary raw materials into the area and on the other the prompt disposal of the finished product among far-flung customers. Ever since bleaching had emerged as an important industry, the provision of quality yarn had become of strategic importance. The adjacent districts were soon unable to meet the valley's ever-growing demand for yarn and consequently the local merchants were obliged to look farther afield into the areas around Hagen, Sprodehövel, Paderborn, Herford, Lippe, and Braunschweig. But it was from the Hesse region, with Hildesheim and Kassel as the main outlets, whence eventually the Wupper valley came to draw the bulk of its yarn supplies.¹⁰²

A document from the year 1633 summarizes the proceedings of a *Garnnahrung* meeting. Presided over by the local judges and the four *Garnmeister*, the conclave decided on procedures to be followed during the annual purchase of yarn. Only six traders representing the group were sent to transact the business and they were given definite orders as to the exact amounts to be bought in each market. Commercial practice of this kind would suggest that the Wupper valley merchants were very much aware of the methods through which their monopsony power in the yarn centers would be further enhanced.¹⁰³

By 1648 the Elberfeld merchants were complaining that the yarn they had purchased at Hildesheim fell short of the required length. Six years later, Elberfeld's mayor, Peter Wülfing, addressed the Hildesheim city fathers on this very topic. Again in 1682 the *Garnmeister* emphasized that the continued perpetration of these frauds caused the *Garnnahrung* members heavy losses—between 20 and 25 percent. This was especially so for the Wupper valley traders bought the brown yarn for cash and eventually sold it, when bleached, on credit.¹⁰⁴ Apparently, the Dutch, English, and Flemish customers refused payment once they realized that the bleached yarn they had acquired did not meet standard specifications. The amounts involved in this trade must have been considerable. In 1682 Hildesheim marketed 200,000 talers worth of yarn of which, it is safe to assume, the Wupper valley took a sizable share. In that year alone, Balthasar von Carnap, one of Elberfeld's leading merchants, bought yarn valued at 2,000 talers.¹⁰⁵ Similarly, arrangements responsible for disposing of local goods were the outcome of centuries of evolution and experience, and consequently no less effective than the counterpart framework on the purchasing side. Most probably, the first bales of Wupper valley

yarn bleached for export were sold in Antwerp, at the time the undisputed hub of world commerce. As already shown earlier, by 1540 Elberfeld traders are mentioned transacting business in that city and throughout the next hundred years, Antwerp, with its insatiable demand for quality yarn, remained the Berg area's principal sales outlet.¹⁰⁶

Then a shift occurred. In due course, the Spanish occupation of the Netherlands and the disturbances occasioned by the Counter Reformation played their part in hastening Antwerp's demise as focal point of international exchange.¹⁰⁷ In its place, Amsterdam usurped the pivotal role of world center for international trade and finance. And with their customary flexibility the Wupper valley merchants promptly adapted their output to the specific requirements of the new demand.¹⁰⁸

But in addition to Amsterdam, Frankfurt am Main became, during the seventeenth century, an important outlet through which the Wupper valley merchants channeled their wares into northern Europe, the German lands and, above all, into France. As mentioned earlier, Colbertian France had become a most significant market.¹⁰⁹ When in 1682, to provide one example, Peter Wuppermann's estate came to be probated, his Lyonese factor still owed him the impressive sum of 2,443 guilders for linen fabrics sold there.¹¹⁰

Already in the Middle Ages, Frankfurt had been a notable trading center, a position which, unlike other ancient cities, it was able to maintain and even enhance during the modern era. However, as an imperial city, Frankfurt, like Cologne, was plagued by the internecine warfare of its guilds, which thwarted all industrial progress and condemned all urban production to a standstill.¹¹¹ Because ribbon and lace had been among Frankfurt's staple products, it is not surprising that the Wupper valley merchants were to be most successful as they rushed in to close the gap.¹¹²

Under the circumstances the Wupper valley traders were quick to make their mark on the Frankfurt scene as they gained a reputation for quality products among the international clientele. But the fortunes of prosperity have a way of generating their own pitfalls. It did not take long before the Frankfurt patricians were casting covetous glances at the handsome profits being reaped by the Wupper valley traders and they accordingly tried to share in these gains by insisting on higher market taxes to be paid on products coming from the Berg area. It did not help to smooth matters when collection of these dues was left to tax-farmers who did not shun high-handed methods in order to achieve their purpose. This, quite naturally, exacerbated what was already a tense situation and thus a dispute was unleashed lasting several decades.¹¹³

In the course of these altercations the contending parties issued several memoranda all of which help to illuminate the nature of Wupper valley commerce during this era. It seems that ever since the 1630s Elberfeld merchants had been regularly attending the Frankfurt am Main fairs. By the 1670s they came in sizable numbers. Already then a few of them were resisting the discrimination practiced against them by the Frankfurt government even though such opposition exposed their wares to the risk of confiscation. As for

the supposedly excessive burden of these dues, the gravamen of the charge was amply supported by a report produced in 1723 where it was shown that a merchant disposing of 2,000 talers worth of goods was assessed the exorbitant sum of 46 talers.¹¹⁴

Simultaneously, other aspects peculiar to this trade were brought to the fore. For one, several haulage men who carried these goods to market hailed from Radevorwald (a small Berg township), thus providing evidence that the inhabitants of adjacent Berg communities were being increasingly absorbed into the industrial nexus of the burgeoning Wupper valley.¹¹⁵ Second, the trade figures for 1723 indicate that in this particular year some thirty merchants had come to Frankfurt disposing of 364 bales of ribbon and lace, 263 bales of linen yarn, and 134 pieces of linen fabric. According to W. Dietz's calculations, the total value of these wares was no less than 150,000 talers, which meant an average sale of 5,000 talers per merchant. By the standards of the day, the latter amount is to be considered sizable and leads one to believe that these Wupper valley merchants who attended these fairs were exclusively oriented to this particular outlet. This in turn suggests that these self-styled "deputies of the board of Elberfeld and Barmen merchants" were practicing by way of market specialization a kind of informal cartel arrangement through which they conveniently divided up the world market among themselves. Monopoly and monopsony, as it were, worked hand in hand.¹¹⁶

Finally, one further observation is in order: over the years some of the names of Wupper valley traders attending the fair disappear, others are added.¹¹⁷ However, there also remained a core of families of great survival power whose names reappear decade after decade and who, by virtue of their durability, came to assume the position of a dominant elite within the area.¹¹⁸ The rise of this mercantile oligarchy was very much part of emergent capitalism within local industry. Increasingly, the individual artisan bleacher was to work exclusively for one merchant who gave the orders, supplied the brown yarn, collected it when bleached, and then effected the final sale. This so-called *Lohnbleicherei* (a crude version of the putting-out system) gradually spread through the valley and became, in the course of the seventeenth century, the dominant mode of production.¹¹⁹

In many instances the affluent yarn dealer also owned the bleachgreens he leased to the artisans. This enhanced the latter's dependence upon the former. Moreover, the boom contributed to a secular rise in land rents, a state of affairs which tilted still further in the capitalist's favor his terms of exchange and power position within society.¹²⁰ But it was above all their style of life that gave dramatic expression to the rich merchant's social preeminence. They resided in large and handsome houses covered "not with straw and wood" but with "red and black shingles," and a little spire on top. These spacious abodes, as one contemporary chronicler reported it, stood conspicuously in the midst of walled courtyards with wide gateways opening upon a paved path through which wagons and horses carrying goods could pass with ease.¹²¹

Similarly, sartorial splendor was to distinguish the budding merchant prince from the rest of the local citizenry; he carried a stick studded with brass

and other adornments, and sported a long silken coat with a gold embroidered hat to match.¹²² Education buttressed this exclusiveness as the sons of this *haute volée* attended the local Latin school and besides were sent to be tutored by a French master who had settled in the area.¹²³

In the previous century, landowners, bleachers, and dealers constituted the local establishment, as many a peasant entrepreneur pursued all these activities simultaneously. However, during the seventeenth century the merchants had become increasingly a group set apart from the rest of the solid burghers by virtue of their superior wealth and power.¹²⁴ The very background of this newly created elite offers insights into the social mobility of this age and in turn mirrors, at least on a local level, the workings of the economic process.¹²⁵ Most of the leading families hailed from local freeholders and hereditary tenants whose founding fathers were shrewd enough to concentrate on commerce to the exclusion of all other employment.¹²⁶ But there were a few newcomers among them who had come to Elberfeld from Barmen or from farther afield to try their luck in this buoyant environment. Not infrequently success crowned their efforts only after they had achieved connubial bliss in established circles.¹²⁷ Marriage generally, however, accentuated the exclusiveness of this group; members of the *jeunesse dorée* sought out the nubile daughters of their kin and business partners living elsewhere, a reflection that in the course of the seventeenth century many a local trader had settled in ports and distant commercial centers in order to profit from the widening market for Wupper valley wares.¹²⁸

Under the circumstances, only the steady expansion and the rural environment in which they lived cushioned artisans against the hardships of social descent and thus shielded them, at least temporarily, from the full implications of their quasi-proletarian status. For the time being, whatever tensions existed, they simmered below the surface. At the same time, it is worth observing that the widening of class cleavage was more pronounced in Elberfeld than in Barmen where merchants had not as yet achieved the same kind of prominence.¹²⁹

Be that as it may, "industrial growth" continued to press against the quality controls set by *Garnnahrung* rules. However, the proverbial flexibility of this district saw to it that the *Garnnahrung* edict of 1698 accorded each yarn dealer a much larger quota to trade in than heretofore: 300 hundredweight per merchant plus an additional amount for each child, as compared to 125 hundredweight per bleacher. According to some historians, this edict in effect spelled the end of all limitations on output. From now on quotas were to be continually enlarged until in 1764 they were abolished. Besides, this *Garnnahrung* amendment specifically prohibited the nefarious practice of the truck system,¹³⁰ a pathological symptom of the extent to which by the late seventeenth century capitalism, in its more primitive form, was locally in the ascendant. All in all, a Wupper valley merchant looking back, from the threshold of the new century, upon preceding decades of growth and expansion, had good reason to view the future with confidence and optimism.¹³¹

The Elberfeld bleacher and yarn dealer Johann Plücker was the very

embodiment of such a merchant. Extant documents pertaining to the probate of his estate illuminate the conventional successes of his life and the particular world that was his oyster. Born in 1656 into a family of bleachers and traders, Plücker made the most of the secular boom that marked the second half of the seventeenth century. He enlarged upon inherited activities to include all kinds of new business ventures, most important of which was the manufacture and sale of ribbons. Moreover, by a prudent marriage to Maria Siebels, whose mother, in turn was a Teschemacher, he joined the valley's elite. In due course, he became known for his local benefactions and for his public services, and in 1678 and again in 1688 he was elected mayor of Elberfeld.¹³²

The specific items recorded in the probate of his estate point to a complex and far-flung commerce. At his death in 1709 he was a creditor to customers and suppliers in all parts of Europe. In Antwerp, for example, a client was in debt to him to the order of 14,000 talers; in Rouen, another one to the extent of 7,735 livres. In London a Teschemacher (presumably an Elberfeld native who had taken up residence in England) still had to send him a sizable shipment of Safflor dye. A whole series of Hesse dealers, many of them Jewish, owed sums ranging from 53 to 679 talers. In Sevilla, one Levino Tercy, held, on Plücker's behalf, two "barrels" of ribbons, four bales of yarn, and "600 Marks of silver." And rather significantly, from the standpoint of demonstrating Leipzig's growing importance as a market for Wupper valley goods, at the time of his death, Plücker had stock there (consisting, for the most part, of goods left unsold at the last fair) valued at 3,272 talers.¹³³

Given the nature of Plücker's activities it is not surprising to learn that he kept a ready supply of his main products and required raw materials close at hand. The stock of yarn and ribbons he bequeathed was appraised at 2,440 talers, his inventory of bedspreads at 2,014 talers, and of Safflor at 4,555 talers.¹³⁴ He also had in store some other dye stuffs which would suggest that he carried on a considerable import business in those materials.¹³⁵

Locally held debts owed to the estate, some of them already labeled "bad debts," were sizable and involved many of the most distinguished names in the area, including officials, aristocrats, and even the reigning duke himself. Perusing the roster of these creditors one strongly suspects that, at the time, Plücker and most of the other leading traders in the valley functioned as substitute bankers, operating a rudimentary kind of capital market.¹³⁶ The very conditions bearing upon this latter role are highlighted by the 7,000 talers cash which were part of the Plücker estate. In many ways, the need to hold idle cash was symptomatic of the period. In the absence of a banking system and an effective money market, there were as yet no sufficient outlets where surplus funds might have been invested in "near money" assets which, in turn, the merchants *ex definitione* could have painlessly liquidated whenever they needed money to pay or lend cash to their suppliers, bleachers, weavers, and other workmen whose services they sought.¹³⁷

But it is the description of Plücker's homestead that conveys most suggestively the ambience of the Wupper valley at this particular juncture of its development. Within this large yet simple abode there was as much space

allocated to agricultural purposes as there was to bleaching and packaging of yarn and ribbons. Besides, the house contained, apart from agricultural implements, six cows, four horses, and a large stock of potatoes, rye, wheat, and beans.¹³⁸

This juxtaposition of trade, industry, and agriculture was as typical of the age as it was of the man. *Au fond*, Plücker remained a yeoman-operator, a Kulak.¹³⁹ He trod in the hallowed footsteps of his ancestors, bleaching yarn and tilling the land to provide food for his family, his servants, and boarders.¹⁴⁰ At the same time, the peasant's proverbial shrewdness and vigor never left him; it was to stand in good stead as he seized the opportunities that came his way in order to widen the scope of his business activities. But for all his preoccupation with world events, particularly as they affected the state of his markets, the price of his finished goods and raw materials, and the exchange rates of the currencies he used—Plücker seemed to have remained, above all, concerned about local conditions and the inexorable sequence of seasonal activities that led up to an abundant harvest.

Working the soil must have been for a man so rational and calculating as Plücker more than a mere expression of filial piety. Since most of the other merchants were pursuing agricultural activities as well, one can only assume that at the time farming was a sound commercial proposition. At least it assured the area's self-sufficiency and postponed the day when corn for local needs would have to be imported into the valley at exorbitant prices. The high cost would have been unavoidable since the transport charges incurred in moving so bulky items as grain along almost impassable roads would have been considerable.¹⁴¹

To view these aspects of a "balanced economy" from this particular perspective makes one realize that the successes of Wupper valley commerce were achieved because of the simultaneous continuation of agricultural activities. Cheap, homegrown food provided for low labor costs, which, in turn, endowed the Wupper valley manufacturers with their competitive force in world markets. Once again one is reminded that in the preindustrial age a robust industry can thrive only within the framework of an equally vital agriculture.¹⁴² This point cannot be overemphasized.

Moreover, the feedback from this rural atmosphere was most salutary upon local mores and social attitudes in general. This was still a rugged society. Tastes were simple and work interrupted by supposedly invigorating prayer was the only known routine.¹⁴³ The frivolities of a court and the costly diversions of an aristocracy were as alien and distant to these inhabitants as were the demoralizing inanities indulged in by the *popolino* of a medieval city suffering from decay.¹⁴⁴

Even affluent traders seemed immune to the fashions and luxuries of the big world. With expected regularity these merchants frequented the various commercial centers to attend fairs and to strike bargains with clients and suppliers. During these sojourns (some of them of prolonged duration), they were bound to come into contact with the fleshpots of Egypt. But despite

these temptations they apparently continued steadfast in their rejection of conspicuous consumption by virtue of their strict religion.¹⁴⁵

An inventory of Plücker's furnishings, jewelry, and other household nicknacks drives home this point.¹⁴⁶ Considering his wealth, these belongings were most modest.¹⁴⁷ Plücker and the other rich merchants of the Wupper valley presumably preferred to invest their substantial gains "productively"—that is, in the expansion of their respective enterprises. The results of such a propensity were as prompt as they were obvious. Local exports thrived, symbolic of a vibrant community wholly dedicated to growth.

Early Eighteenth-Century Progress

In the Wupper valley, the eighteenth century had a decidedly auspicious beginning. The ribbon trades flourished. Their prosperity, in turn, created an atmosphere of experimentation and innovation. Henceforth, besides linen yarn, from which so far the ribbons had been exclusively made, silk waste, silk cotton, and wool were used as well. In addition to these half-woolen ribbons, the range and selection of goods offered was further enlarged with cords, trimmings of all kinds, and braids, plain and fancy. Judging by their popularity, the far-flung clientele, notably the French, liked what they got, wanted more and, in due course, identified these items as "Barmen wares" ("Barmer Artikel"). The new label was to become a badge of distinction.¹⁴⁸

Moreover, linen weaving, which in the previous century had encountered difficulties in achieving export quality, now overcame these problems. Its sales soared and as a result the employment statistics for this period point unmistakably to an upswing in this sector.¹⁴⁹ This spurt, in turn, spurred attempts to introduce the cotton warp in the manufacture of linen fabrics. At the same time, the area's staple industry, bleaching, continued to prosper and improve as linens of all types—bedspreads, tablecloths, scarves, handkerchiefs, and the material of slave garments—and of course, yarn, faced a burgeoning demand, above all in the British Isles.¹⁵⁰

The secular boom that marked the early decades of the eighteenth century must be viewed in the broader context of worldwide expansion.¹⁵¹ The buoyancy of overseas markets was strategic. The Spanish possessions in South America, which for a long time had been good customers, now became even better ones. Similarly, from now on, the West African coast, the sugar producing islands of the West Indies, and above all, the North American colonies were even more avid customers of Europe's industrial products, particularly of textiles.¹⁵² And there appears no doubt that the manufacturing districts of the Rhineland, including the Berg area, fully shared in the growth of the newly evolving "Atlantic economy."¹⁵³

The continuous assimilation into an existing industrial structure of new goods for production and sale was a basic feature of the local scene and, as such, a hallmark of its dynamic. But apart from the propitious conjuncture of

growing markets and the solid advantage of a relatively sophisticated commercial environment, there were additional factors which contributed to the area's material advance as well.¹⁵⁴ Most significantly, the configuration of the Wupper valley's social structure was most conducive to progress. The leading merchants remained venturesome, sensitive to changes in fashion and, for the most part, vigorous in pursuit of their business affairs.¹⁵⁵ Moreover, the Wupper valley was still an open society; anyone making his way from below had a chance to climb the ladder of success and, in so doing, invigorate the tired blood of those belonging to the established families.¹⁵⁶

During this era, Elberfeld continued to attract the ambitious in search of a commercial fortune. As before, many of them hailed from Barmen, whose place in turn, was taken by migrants from Schwelm.¹⁵⁷ The latter flow was part of a secular movement out of the neighboring Mark (including Schwelm)—a Prussian possession—into the duchy of Berg and especially into this area. A major proportion of the newcomers were men of military age. They were attracted to this valley not only because of the potential it offered, but also because they sought to escape the vexations of the press-gang. Throughout most of the eighteenth century, recruiting officers roamed the Prussian lands trying to satisfy the notoriously gargantuan appetites of Frederick William I and Frederick the Great, respectively, for tall and brawny fellows to grace their guard regiments.¹⁵⁸ But whatever their motives, those settlers, who brought with them some capital resources, turned to trading and manufacturing, whereas the less fortunate ones were to augment the pool of weavers, spinners, and workmen for whom, at the time, there was a brisk demand.¹⁵⁹

Ever since the seventeenth century, the "duchy's" demographic upsurge reflected the twin forces of spreading domestic industry and steady immigration. This is why by 1680 this area had supposedly made good the heavy losses in manpower (about 20 percent) sustained during the Thirty Years' War. By 1730 the population had once again almost doubled, which suggests a 1–1.5 percent annual increase throughout this period.¹⁶⁰

In this connection, it is worth noting that at the time the Berg area also enjoyed the immigration of Protestants fleeing Cologne, where, because of stagnation and religious intolerance, life had become unbearable for them. The ducal authorities welcomed the arrival of so attractive a group, composed of solid merchants and able craftsmen. Following mercantilist practices then in vogue, such potential subjects were considered worthy of government aid and encouragement because of their expected contribution to the local economy and to the state treasury.¹⁶¹

The newcomers soon proved their worth. They simply crossed the river and settled in Mülheim am Rhein, a sleepy burg which in a few years they were to turn into a bustling center of industrial activity. The Andrea brothers stood in the forefront of this thrust. Having been granted the monopoly rights for the manufacture of silk fabrics, in no time their new business became a resounding success.¹⁶²

Within the principality, Elberfeld and Barmen, quite obviously, registered the most spectacular advances. In 1720 the twin cities claimed a total popula-

tion of less than six thousand inhabitants, but this figure rose to almost eight thousand in 1747 and probably reached almost nine thousand by the 1750s.¹⁶³ In the case of Barmen alone, between 1698 and the mid-eighteenth century, the annual increase was of the order of 1.65 percent. By the standards of that day, so rapid a rate of urbanization was as noteworthy as it was symptomatic of the intensity of industrial activity which had gripped the Wupper valley and its environs during those decades.¹⁶⁴

As part of this overall pattern, Gemarke, one of the twelve constituent localities of Barmen, eventually became the hub of the boom, primarily because of its central location and its proximity to a bridge spanning the Wupper. Gemarke's sudden expansion coincided with the subdivision of the manorial estate¹⁶⁵ and the "communal forest" into thirteen lots which were promptly purchased by eager burghers. Within twelve months two houses had been completed there, thirteen by 1710, and the rest by 1717. In 1728 the town hall was built in the immediate vicinity.¹⁶⁶

In 1698 Gemarke contained 13 percent of Barmen's local population; its share rose to almost 22 percent by 1747. Twenty years later it could claim all the attributes of a city center. The sequence of this transformation, from a sparsely populated hamlet into a vibrant community seemingly bursting at the seams, underscores, once more, the force unleashed by the industry being developed here.¹⁶⁷

From a slightly different perspective, the change in Barmen's employment structure tell the same tale. In 1709 the town claimed 55 engaged in agriculture, 8 day laborers, 15 merchants, 41 master bleachers, 21 journeymen bleachers, 4 linen weavers, 48 ribbon weavers, 2 twiners, 3 shoemakers, 3 bakers, 3 blacksmiths, 3 thimble makers, 6 joiners, 9 publicans, 6 petty traders, 3 coopers, 1 roofer, 3 pig dealers, 1 miller, and 40 paupers. Twelve years later, Barmen boasted 25 merchants, 100 ribbon weavers, 15 twiners, 56 master bleachers, 30 journeymen bleachers, 20 tailors, 12 carpenters, 20 shoemakers, and 30 petty traders. On all counts, the upward trend is obvious. And, as if to highlight its newly gained importance, Barmen erected, apart from its aforementioned town hall, its first Lutheran as well as its first Catholic church.¹⁶⁸

In the case of Elberfeld, statistics for two separate years are not available and therefore the local expansion cannot be as readily shown. However, the figures extant for 1702 demonstrate beyond doubt that, already at this early date, Elberfeld was a community wholly dedicated to trading in and manufacturing of textiles. In that particular year this town claimed in its midst 2 spinners of waste silk, 29 knitters of trimming and braids of various kinds, 1 comb maker, 36 linen weavers, 7 yarn winders, 3 women reelers, 8 twisters, 1 fancy weaver, 57 ribbon weavers, 4 silk carders, 9 dyers, 8 women lace knitters, 1 dresser, and only 6 bleachers. Considering the circumstances, the last figure may appear surprisingly low; but it is really not so when one realizes that most of the bleaching was carried out in the rural parishes adjoining the town. In addition, 43 shoemakers, 6 cobblers, 36 master tailors, 28 bakers, 7 butchers, and a host of other craftsmen and petty traders, among them 13

haulage men, attended to the needs of this textile center. Finally, as one might expect, Elberfeld boasted 15 linen yarn and thread dealers, 10 traders engaged in various kinds of transactions, most of them probably relating to textiles, and 10 export merchants who were the leaders and movers of this economy.¹⁶⁹

Even the neighboring hamlets, notably Wipperfürth, Wermelskirchen, Steinbach, Hückeswagen, and Larnach, were swept up in this surge as Wupper valley merchants were to put out among the villagers ever larger amounts of raw cotton for spinning. By 1736, two thousand bales were distributed in this way, each bale weighing between 300 and 350 pounds. The thriving domestic industry continued to prosper up until the 1760s; then mechanically spun yarn imported from England tolled the knell of this particular activity. But notwithstanding the demise of this trade, the spinners did not suffer unduly, because almost simultaneously, the merchant-manufacturers offered them new and even more profitable employment opportunities.¹⁷⁰

Contemporaneous outsiders visiting this area were appropriately impressed. Writing in 1715, one of them, E. P. Ploennies, described Elberfeld as a town "of distinguished merchants . . . and considerable trade." Commenting on "Amt Barmen," he observed the "numerous bleachgreens where yarn in bleached with which, in turn, traders, for the most part residing in Elberfeld, carry on an extensive business. In addition, there are many here who make a living by combining agricultural pursuits with weaving linen ribbons."¹⁷¹

Fourteen years later, Court Councillor Wülffing opined that Elberfeld "by virtue of its world commerce might be legitimately referred to as a small Amsterdam. There are merchants here whose wealth and business acumen can be compared to that of the Dutch . . . and adjacent to the famous town of Elberfeld is the equally pleasant locality of 'Amt Ober-und-Unter-Barmen' consisting for the most part of linen yarn bleaching establishments and merchants of all kinds."¹⁷²

A qualified analogy with Dutch conditions might be equally invoked when scrutinizing the Wupper valley's political structure. In view of the area's overwhelmingly commercial character, it is in no way surprising that for all practical purposes the rich entrepreneurs should have constituted an indigenous oligarchy. To be sure, this oligarchy was more open-ended than similar power groupings in the older, metropolitan centers of Holland, France, and England. Nevertheless, the Elberfeld-Barmen merchants formed a coterie of interrelated families who buttressed their economic domination by monopolizing, through mutual co-optation, the honorific offices within their respective communities. They accordingly held the posts of church warden, city alderman (including mayor), and *Garnnahrung* trustee as if by hereditary right. Thus, increasingly, these budding merchant-princes came to shape the destinies of local life.¹⁷³

At the time, Gerhard Werner Teschemacher was the prototype of a leading trader. Scion of an old established clan, he married Anna Maria Wuppermann, a woman of almost identical background. In due course he became elder of his

church, city father, and finally mayor of Barmen. Some of his account books, covering the period 1700–40, survive, providing important insights into his ramified business dealings. His activities were as impressive as they were varied.¹⁷⁴ Initially, Teschemacher bought his yarn in the traditional centers: in places such as Minden, Hildesheim, Braunschweig, and Hanover, where for centuries peasants of the surrounding countryside had eked out an existence growing and spinning flax for sale in the duchy of Berg. But subsequently, especially during the second and third decades of the eighteenth century, Silesia became the principal source of their raw material supplies. This particular yarn was to be of very high quality, and distance was not to prove a hurdle to its importation. Specifically, during this period, haulage costs, handling charges, and tolls incurred in transporting bales of yarn from Breslau (Silesia's main market) to the Wupper valley ranged from 7 to 13 percent of the original "F.O.B." price.¹⁷⁵

Teschemacher dealt in bleached yarn, thread, and ribbons. His profits appear to have been handsome. According to available figures, in 1723 he sold bleached yarn in Antwerp at 20.25 Stüber per bale, a price 160 percent above the 7.67 Stüber he had paid for brown yarn. Dietz hypothesizes, on the basis of some rough calculations, that 10 to 12 percent of this markup went for marketing expenses, between 25 and 30 to 50 and 60 percent was absorbed by wage costs, leaving the residual as gross profits. Later on, as Dietz points out, the surpluses waxed still juicier.¹⁷⁶

This, of course, suggests a generally high rate of return. But it should also be borne in mind that during this period foreign commerce was very much a speculative venture, not least because prices both in the raw materials as well as in the product markets were subject to wide fluctuations. Moreover, these "profits" included capital expenditures plus the financing of the sale of the product, which usually took more than eighteen months to mature. At the time, cash payments were not customary in the export trade. More typically, the Wupper valley merchants transacted their sales by drawing bills on relatives who resided in those very localities to which these goods were being dispatched.¹⁷⁷

Little is known as to the proportions of ribbons, bleached yarn, and thread sold by Teschemacher, though probably ribbons were the most important item. Nor is there any evidence available regarding the relative importance of the various outlets. But it is an established fact that Teschemacher's customers were spread throughout Western Europe, in France, in the southern Netherlands and, above all, in London and in the ports along the Dutch coast where these wares were reexported to the expanding overseas markets.¹⁷⁸ It was a time of secular buoyancy and Teschemacher's business enjoyed impressive growth rates. His annual volume of sales was worth 8,700 guilders in 1705, reached 18,700 in 1715, 54,800 in 1730, and declined to 4,800 guilders in 1735. Given such successes, it is not surprising that when, in 1740, Teschemacher died, he should have left his heirs what by the standards of the day was a considerable estate. The amount was in excess of 25,000 talers.¹⁷⁹

Similarly, all the other information about this period points in the same way

to an environment in which rich and knowledgeable traders were able to make the most of a world boom in textiles. Above all, the biographical entries concerning the dealers and manufacturers are most specific on this point. Peter Wichelhaus (1646–1723) provides a classic example. He was Barmen's leading merchant and the moving spirit behind Gemarke's growth. At this time other bleachers produced about 100 hundredweight of yarn annually, but his output for 1721 had already reached about 300.¹⁸⁰ According to Werth, France was Wichelhaus's principal outlet and he assiduously adapted his products to satisfy the tastes of his main customers. He even set up dye shops for this purpose. In due course, his manufacture flourished and the profits to be derived from this business proved quite exceptional.¹⁸¹

But in spite of these achievements, Wichelhaus was not content to rest on his laurels. More ambitiously, he was forever seeking new spheres of activity. In 1692 he applied and was promptly granted the monopoly privilege for making thimbles. His entrepreneurial expectations were to be satisfied. Five years later he petitioned for land to be granted him in order to set up a second thimble manufacture. Finally, he asked and was given space and permission to build housing for Dutch workers he recruited for this particular endeavor.¹⁸²

His eldest son Peter (1699–1772) continued as a rich merchant. But above all, it was his two youngest sons, Johannes (1704–1781) and Peter Caspar (1706–1783), who expanded the paternal business and considerably increased the family wealth. As life-long bachelors, the two brothers became Barmen's principal philanthropists; their fabulous legacies to the church and to various charitable institutions were eloquent testimony to their commercial successes.¹⁸³ In this connection it is also interesting to note that some of their gains had been invested in land.¹⁸⁴ This particular investment propensity would suggest that the wealthiest among the local capitalists at times experienced difficulties in finding safe and profitable outlets in commerce for the surpluses accumulated in the course of their business activities. This, of course, is a predicament typical of an economy that had not as yet experienced the industrial revolution.¹⁸⁵

As a member of one of the founding families, Peter Wuppermann, a wealthy and active merchant, was no less impressive. When he died in 1682 he left his heirs not only a large inventory of yarn and ribbons but also, as referred to earlier, a sizable amount of cash (4,000 talers) plus debts still to be collected from Lennep and Amsterdam clients. Notwithstanding his riches, Wuppermann remained, according to the account of his grandson, a man of simple tastes who still walked to the Frankfurt fair. His sons Peter and Hildebrand and, in turn, his grandson Johannes continued the family business, bleaching yarn and manufacturing ribbons.¹⁸⁶

The prospering state of this valley and the potential for gain available to capitalists was equally evident among the Bredts, a family whose ancestors were also among the earliest settlers in the area. True to form and tradition, the Bredts bleached yarn and produced ribbons. In so doing they came to accumulate ever-greater wealth which they channeled into the enlargement of

their businesses and into good deeds. They were to distinguish themselves as benefactors of their church and as community leaders.¹⁸⁷

Under this relentless pressure of expanding wealth, social mores had to change. Slowly but surely, the habits of Spartan life, which so far had been a hallmark of the local scene and had been deeply ingrained among all inhabitants irrespective of rank or class, gave way to a different tone and outlook. No longer were luxuries necessarily viewed as a sin to be avoided at all cost. The new posture the mercantile elite adopted was in part an instinctive response to growing affluence, in part a conscious effort to live up to what they believed to be their new station in life. From now on, the acquisition of expensive possessions was to be as much a badge of distinction as it was the result of deliberate strategy planned by the rich dealers to enhance their commercial and political status.¹⁸⁸

As has been pointed out, the Wichelhaus residence, built in 1701, reflected rococo influences and as such marked the beginning of a new era.¹⁸⁹ Many of the rich merchants, who had spent years of apprenticeship in cosmopolitan cities and who subsequently maintained close contact with clients all over Europe, were now ready to project some of the tastes and fashions they had experienced abroad. They increased the number of servants in their households, kept riding horses in their stables, and sent their daughters to finishing schools.¹⁹⁰ Above all, they were to build their new houses expressing awareness of the current styles.¹⁹¹ Moreover, on those occasions when the reigning sovereign visited the twin cities, they entertained the duke lavishly and offered him munificent gifts. Undoubtedly, pride in their wealth as reflecting their achievements was one of the reasons for their display of luxury.¹⁹²

Whatever their motives, this type of self-assertiveness was a far cry from the rustic modesty of a Plücker or a Peter Wuppermann whose inverted snobbery made a fetish of their parsimony. By contrast, the generation of traders reaching its prime during the 1730s and 1740s would have none of such meekness. Irrevocably it turned its back upon its peasant heritage, ready to assume the role of an urban gentry. Indeed, looking down from some of their portraits, with their fancy wigs, lace-studded silk coats, and spouses to match, these mid-eighteenth-century merchants exude the confidence, if not quite the power, of a bourgeoisie able to command respect from the world at-large.¹⁹³

But there was another side to the local scene. The capitalist impetus which had catapulted the dealers into prominence and wealth had also created an atmosphere of popular reaction against them. By their very nature, entrepreneurial activities, as practiced by these merchant-princes, undermined traditional relationships. In turn, those adversely affected by the erosion of the status quo—craftsmen, petty dealers, and the *menu peuple* generally—opposed the new order and vented their displeasure upon the worthies who seemed most directly responsible for it. There were others again, those from the middling ranks, who simply disliked these leading families for their grand manner and their arrogant ways. Whether this type of resentment was central to the scheme of things or just a marginal phenomenon is difficult to assess. However, the existence of discontent during this period seems beyond dispute.¹⁹⁴

Local historians have usually devoted considerable attention to the religious revivalism that swept through this valley during the eighteenth century. Unfortunately, none of the chroniclers ever probed the social origins of such a movement. Yet the possibility of a connection, between chiliastic stirrings and widespread social malaise, appears not too far fetched even though, to date, evidence on this score has not been forthcoming.¹⁹⁵

During the 1730s, millenarianism reached a high pitch. The Ellerians, named after their charismatic leader Elias Eller, became restive as relations between them and the majority progressively worsened.¹⁹⁶ By 1737 the adherents of this sect had tired of life in Elberfeld and decided to leave their home sites and seek their Jerusalem in the neighboring hamlet of Ronsdorf.¹⁹⁷ The new habitat was to prove a more propitious setting. Soon after their arrival in this locality, the Ellerians established a thriving ribbon manufacture and thereby laid the foundations for a prospering community as well. By 1741 they had set up a Latin school. Four year later the authorities raised this village to the rank of a town and gave it a court of law. In time, the ruling duke, Carl Theodor, must have been appropriately impressed by the developments. In 1747 he paid a visit to Ronsdorf and was received by the local inhabitants with due pomp and circumstance.¹⁹⁸

By their commercial achievements the Ellerians enhanced those very forces of economic expansion and change against which they, qua dissidents, had originally reacted. The dialectic of success emasculated the radical implications of their millenarianism. They continued to espouse chiliastic teachings as part of their religious ritual. But eventually these doctrines were to lose their erstwhile fervor, given the affluence of the Ronsdorf manufacturers and the speed with which they were being absorbed into the local establishment.

During the same period, though on a somewhat different plain of social discourse, the linen weavers were resisting the pressures generated against them by a buoyant environment. Within this area the linen weavers were a new group. At the beginning of the century there had been but a handful of them in the twin cities, but their numbers had grown to about three hundred masters and three hundred journeymen by the 1730s. The increase reflected the recent expansion of this trade within the district and more specifically its resounding success in world markets. Apart from bedspreads and half-cotton pieces, the staple products consisted of blue and white checkered fabrics used as garments for slaves on plantations.¹⁹⁹

The linen weavers were recruited among the ribbon weavers, the sons of cotters and small peasants and, as suggested earlier, among the ranks of young men fleeing the Prussian press-gang in neighboring Mark.²⁰⁰ Whatever their background, they all joined the trade within the framework of a domestic industry. In his own house, the master, his family, and his journeymen were to be engaged in a joint effort. Women and children, as expected, performed the ancillary activities, leaving the men to weave the yarn. The raw material had been supplied to them by a *Verleger* who, in turn, collected the fabric and paid the master for it on a piece-rate basis. Given this mode of production, the weaver was increasingly dependent upon his rich employer

and despite his formal artisan status became, for all practical purposes, a domestic wage earner.²⁰¹

Against such a background of social stress, efforts by the linen weavers to improve their lot were a most natural reaction. They tried to exploit the rising demand for their particular services by launching a bid for a guild of their own. They were to be granted their wish in 1738.²⁰²

So prompt a response to craft demands by authorities was, in part at least, due to the confluence of special circumstances. At the time there seemed little love lost between the Catholic officials resident in the valley and the merchant elite consisting entirely of either Lutherans or Reformed Lutherans. Consequently, the local bureaucrats were only too willing to support the formation of an institution that could conceivably emerge as a countervailing force against the all-powerful *Garnnahrung* dominated by the Protestant worthies.²⁰³

Despite its trappings, the new guild was no more a craft corporation of the traditional type than the *Grannahrung*. Loosely organized, a characteristic of such groups in the eighteenth century, the linen weavers' guild was essentially an organization meant to protect the craftsman in his new status as domestic wage earner.²⁰⁴ This is why its first task was to control and possibly reduce the supply of domestic weavers by limiting the number of apprentices per master and by regulating entry into the trade. Furthermore, the new guild forbade local entrepreneurs to distribute yarn among unincorporated weavers living outside the twin cities—thus hoping to eliminate, within Elberfeld-Barmen, the competitive pressures exerted by neighboring Schwelm.²⁰⁵ Frederick the Great's efforts to promote a weaving industry throughout the Mark, and especially in Schwelm, had resulted in the creation of a source of cheap labor which the Wupper valley merchants were anxious to utilize.²⁰⁶

But this injunction appeared to have been of limited effectiveness. The guild was no more able than the *Garnnahrung*, with respect to bleaching, to put a complete stop to the practice of sending yarn to be woven outside the confines of its jurisdiction. The reason why such smuggling persisted is obvious: the Mark province, and Schwelm in particular, still enjoyed a rural setting where living costs and land rents were lower than in the more urbanized context of the Wupper valley.²⁰⁷

The local weavers were adversely affected by continued outside competition. For them these specific pressures constituted an additional irritant superimposed upon their general problems created by capitalist penetration. The result was that these artisans never quite shared in the benefits of rapid expansion which the linen industry and especially the weaving sector experienced throughout the first half of the eighteenth century.²⁰⁸ Their earnings declined; at best, they remained stationary as the immigration of weavers from outside the duchy could not be stopped. Moreover, the weavers' plight was further aggravated by a tacit agreement among the merchant-manufacturers to maintain existing wage levels by not bidding for each other's employees.²⁰⁹

Internal dissensions, weakening the guild since its inception, were evidence that the clash of opposing interests was not limited to dealings between merchants and craftsmen. Industrial expansion had exacerbated the master-

journeymen relationship at well.²¹⁰ Eventually, growth made even the master craftsmen turn against each other when a few of them waxed rich and ascended, for all intents and purposes, into the capitalist class.²¹¹

These fortunate few expanded their workshops and integrated production by adding to their traditional activity and preparation of the linen yarn and the finishing of the completed fabric. Thus they claimed an ever larger share of the available supply of journeymen. The smaller masters, disadvantaged by these developments, protested vehemently. Above all, they resented the manner in which they were denuded of their work force. Because of their impecuniousness, they were unable to provide the better lodgings and better food that constituted, in a period when payment in kind still predominated, the principal attraction for the journeymen to work for a master with larger holdings.²¹²

Consequently, masters with smaller holdings called upon the government to put an end to the competitive bidding within the labor market. The ducal government complied and in 1754 passed an order making it illegal to give journeymen warm food at suppertime. Even the serving of hot coffee or tea was specifically forbidden. The same edict enumerated a list of foods, with relevant substitutes, that the masters could give their journeymen.

Not surprisingly, all these efforts, purporting to attenuate excessive competition in the labor market and thereby save the small master from ruin, were doomed to fail. They ran counter to the drift of events. The food and the remuneration which the more substantial masters offered their journeymen could not be effectively controlled. More significantly, the journeymen were being increasingly paid in money wages. Thus they came to buy their own food, which in turn, rendered the food list with its ancillary rules otiose.²¹³

The master bleachers were confronted by similar difficulties. Despite their ancient tradition as a local craft, and despite their membership in the area's most venerable corporation, the *Garnnahrung*, they were hard put by the advance of capitalist irruption in ever-more sophisticated forms. The specific "backwash" to progress from which the bleachers suffered came by way of a "scissor movement." On the one hand, they were exposed to the pressures of the Mark bleacheries. The competition of these latter establishments became more intense because of lower production costs and because of the energetic support given them by Frederick the Great. In view of such strategic advantages accruing to the Mark firms, it is in no way surprising that, in defiance of strict rules against outside bleaching, some of the Wupper valley dealers persisted in this illegal practice, thereby jeopardizing the very existence of indigenous craftsmen.²¹⁴

On the other hand, the bleachers of Elberfeld and Barmen faced increasing living costs and, to the extent that most of them were tenants, rising rents for the bleachgreens they leased. Given so unfavorable a constellation of market forces as far as they were concerned, the local bleachers were intent to counteract these inpropitious circumstances by bleaching with the use of various chemicals. By so doing, they hoped to lower costs as they expedited the process of production. The dealers, in turn, feared a deterioration in the

quality of the product and therefore reacted to these new methods by pressing the *Garnnahrung* to reiterate its uncompromising stand against unnatural bleaching. Though a reminder regarding such a prohibition was promptly issued, the order was largely ignored. Eventually, of course, whitening with the aid of chemicals became the rule.²¹⁵

These stresses and strains threatening the social order did not inhibit the steady advance which was a hallmark of the Wupper valley throughout the first half of the eighteenth century.²¹⁶ Not even the many wars which darkened the European scene during this period, nor the periodic famines and financial crises, impeded the area's economic progress.²¹⁷ Local buoyancy seemed unquenchable. The twin cities' bleached yarn continued to enjoy a fine reputation and a correspondingly brisk demand in world markets.²¹⁸ The other branches of the textile trade fared equally well, most notably the manufacture of braids and ribbons, made of linen with admixture of cotton or silk.²¹⁹ At the same time, the valley's most recent activity, half-cottons (the so-called *Siamoisen*), experienced a massive upswing.²²⁰

This sort of success was to feed on itself as a spirit of optimism and a penchant for experimentation seized the commercial imagination. The Elberfeld-Barmen merchants exuded the confidence one observes among those who never had to tolerate failure. Flushed with the profits that betokened their triumphs throughout this boom, the entrepreneurs were continuously seeking new outlets for what appeared to be their underemployed talents and their surplus funds.²²¹

By the 1740s and 1750s they accordingly introduced into the valley the weaving of silk ribbons, fancy ribbons (with all kinds of embroidery), and the manufacture of silk fabrics. With respect to silk fabrics, the Andrea brothers in Mülheim am Rhein were to protest most resolutely that for this branch of the textile industry they alone had been granted monopoly privileges within the duchy. Consequently, within the Wupper valley efforts along those lines had to be temporarily postponed. But in spite of such an injunction, official directives in no way cramped the vigorous style displayed by Berg entrepreneurship.²²²

Moreover, the local dealers expanded their hitherto more limited role to become the *grands marchands* of the whole region. They took in commission or traded on their own account Krefeld silks, Solingen wares, and the various other products of the Lower Rhineland. Increasingly, exports and imports, covering an ever-wider radius, moved by virtue of the Berg traders' commercial acumen and their financial resources.²²³ The opening, in 1754, of the first Elberfeld Bank, "Gebrüder Kersten," confirmed the organic pattern of this evolution. At the same time, the new institution was symbolic of the age.²²⁴

Over the years this particular firm had dealt most successfully in the export of textile articles and, to some extent, in the import of colonial products. By the very nature of their international business, Abraham Kersten and his sons had become involved in all kinds of financial transactions. It is therefore not surprising that in the end they should have decided to specialize in the provision of banking services, which in the area were sadly lacking and which, if supplied, promised handsome returns.²²⁵

Most significantly, such pioneering activity helped in establishing the nucleus of a local money market. Henceforth, available savings were to be more effectively channeled into profitable investments. Even the workings of the credit mechanism underlying foreign commerce became more efficient as the valley's merchants wanting to purchase or discount bills of exchange no longer had to rely on the services provided by out-of-town banking houses. By virtue of these new institutions (including those that followed in the Kersten footsteps), doing business in the twin cities had been endowed with additional advantages. And the long-run implications of this innovation were equally favorable: the indigenous forces of progress were given a powerful boost for years to come.²²⁶

Halcyon Days of *l'Ancien Régime*

The period 1746–56 marks the beginning of that strong, secular boom that spanned most of the second half of the eighteenth century. Throughout this decade many new firms came into existence. For the most part these businesses were headed by *novi homines* bent on success by making goods previously unknown in the valley and by applying novel techniques of production and organization.²²⁷ The manufacture of bed linen and materials, for use as sailors' shirts, stood in the forefront of these innovations. These fabrics complemented the manufacture of *Siamoisien*, the half-cotton pieces introduced into the area during the 1730s and, at this particular stage, enjoying a very notable rate of expansion.²²⁸

At the same time, bleaching and the traditional activities based on the use of fine yarn thrived as well. Those working along established lines enlarged the range of their offerings, of ribbons, cords, braids, and all kinds of other small wares known as "Barmen articles." Improved contraptions were being added to the ribbon loom in order to raise the effectiveness and the variety of weaving fancy items.²²⁹

To some extent at least, the rapid growth of local manufacturing was only feasible because the valley's entrepreneurs were able to draw on the labor supply of the adjacent localities in the Berg area. Some of the communities, such as Lennep, Hückeswagen, and Radevor, boasted an ancient tradition of woolen cloth manufacturing. At mid-century this industry happened to be in the doldrums, a state of affairs which facilitated the mobilization of these inhabitants to spin and weave cotton and linen.²³⁰ Besides, since the 1740s, some of the Wupper valley merchant-manufacturers began to supply linen and cotton for weaving not only in the Mark but also in localities on the left bank of the Rhine, especially in the Gladbach-Rheydt district.²³¹

In turn, the dynamic of this forward thrust altered the functional division of roles between the twin cities and the valley's economic structure in general. So far, Barmen and its environs had specialized in bleaching and the manufacturing of ribbons, and Elberfeld was the region's commercial center. Henceforth, Barmen continued to depend on the products of the bleachgreens and

the ribbon loom. However, from now on, Elberfeld, in addition to its mercantile activities, engaged on an ever-larger scale in the manufacture of fabrics. In due course, the latter branch achieved a key position within the valley.²³² This also meant that within this polity the newcomers, crowding into this particular sphere, were given the chance to gain the prominence that was being accorded to men of substance.²³³

As on previous occasions, the sweep of this textile boom engulfed all aspects of the local economy. Social capital, including the "infrastructure," was among the first to feel the pressure of increasing demand.²³⁴ It was a decidedly rural context within which the Berg area process of industrialization evolved.²³⁵ This explains why this area possessed none of that extra margin, with respect to housing and transportation, one might occasionally observe in medieval-type settings, where after perfunctory repairs, abandoned buildings and roads belonging to an earlier age can be hastily resurrected to meet the exigencies of later progress. In this frontierlike atmosphere no such aid from the past to sustain the claims of the present could be expected. Shortages of amenities of any kind had to be made good by the determined efforts of contemporaries.

In 1738 Peter Wichelhaus's widow died. Her heirs disposed of parts of Rolingswerth, the family estate, in small lots. By so doing they sparked a building boom within the Gemarkte district of Barmen that lasted until 1761. Whole blocks of new streets appeared on the scene.²³⁶ The consequences were to be similar when, in 1753, Barmen's chief official, Judge Alhaus, decided to replenish the state treasury by subdividing the ducal estate Dörnerhof and auctioning off the plots of lands. The various holdings were promptly taken up by eager customers in need of housing to live and work in. Construction on this particular location continued throughout the 1760s. And once again, a series of new sections of town were established.²³⁷

The success of private initiative in supplying the additional services so necessary for the growth of Wupper valley manufacturing was, at least in part, due to the foresight and support proffered by the authorities. The aforementioned Judge Alhaus, who was the local embodiment of state power, behaved very much in the then fashionable tradition of a Dutch-type mercantilist administrator. He not only seemed to appreciate the benefits accruing to government and society from the extension of industrial activity, but he appeared equally alive to the desirability of official intervention on behalf of an enlarged and more effective "infrastructure" that would invigorate the entrepreneurial climate.²³⁸

In 1748 Alhaus decided to press, in the name of the duke, for the widening of the road leading from Rittershausen, via the center of Barmen, to Elberfeld. Given his status, Alhaus may not have possessed the power to do anything about the Wupper valley's woefully inadequate connections with the outside world. But he was at least able to make his contribution to intradistrict transportation and he did so with élan, eliminating all the obstacles that stood in the way of the program.²³⁹ He immediately engaged in negotiations with those who had to cede the land for the enlargement of the thoroughfare. He

arranged for a loan of 7,630 talers to be raised by Barmen to pay the construction costs and he eventually petitioned the provincial government in Düsseldorf to put at his disposal troops to do the actual work, after he had been unable to secure locally the necessary labor force.²⁴⁰

With military aid, the improved highway was opened to traffic in 1752. All indications suggest that the project was acclaimed a success. In any event, during the following year Alhaus was, once more, busy building another road, this one connecting Wichlinghausen with Wülfling. At the same time, he had another road paved with stones.²⁴¹

To judge by all his accomplishments, Alhaus must have been a man of many parts.²⁴² He was not content to confine his attention to the transportation sector of social overhead capital. Simultaneously, he was concerned with the provision of all the amenities that might raise the quality of life of the people under his jurisdiction and thereby, indirectly at least, increase the area's productive efficiency as well. In 1752 he set up the first local poor house and in addition outlined a scheme that was to rationalize the town's eleemosynary activities. Soon after, he was energetically pursuing measures to combat the pilfering of yarn left to whiten on the bleachgreens. This abuse had gone on for ages and had inflicted considerable losses upon the industry.²⁴³ Finally, Alhaus stood in the forefront of a plan to provide Barmen's growing Catholic community with a new church plus burial ground.²⁴⁴

But to enumerate some of the contributions rendered by an official, however meritorious, is not meant to exaggerate the extent and significance of governmental action. At the time, bureaucratic endeavor was strictly confined to set the pace by the example of a few projects. For when all was said and done, most of the social overhead capital created during this period still derived from private initiative; a goodly portion of it the result of the profit motive (as in the aforementioned case of new housing), the rest due to communal action on the part of some religious denomination.²⁴⁵

In either instance, the rich traders were the moving spirits. They were the ones who possessed the requisite funds to be channeled into investments and into charitable foundations. Besides, more so than other mortals, they had the spare time and the organizing experience to get things done. Most important of all, these "worthies" sensed more keenly than their less affluent contemporaries the importance of adequate social amenities in preserving and cementing the cohesiveness and stability of society. Thus in the Wupper valley an instinctive understanding of these social relationships was, so it appears, as significant a factor in upholding civic responsibility as the prevalence of a religious code that stressed the duties of the elect.²⁴⁶

In 1744 a Lutheran church with a preacher of its own was provided for rapidly growing Wichlinghausen.²⁴⁷ Four years later, booming Lower Barmen, still part of the Elberfeld parish, was granted, by the elders of the local church, the necessary funds to set up a reformed Lutheran school and hire a teacher. During the same period, communal improvements of a secular provenance made similar headway; in 1747 Barmen strengthened its fire-fighting service by purchasing new equipment; in 1754 a new bridge was built, crossing

the Wupper from the southern part of the recently subdivided Dörnerhof. By the standards of the day, all these accomplishments were not insignificant; they betokened a vibrant society doing everything possible to maintain its vigor.²⁴⁸

The resilience of export sales provided the obvious basis for the general buoyancy which, as mentioned earlier, was so dominant a feature of the Wupper valley throughout the 1750s.²⁴⁹ At the time, the demand facing the area's manufactures, notably in France and the overseas colonies, continued to rise. The gains of the local merchants were correspondingly large, especially so among those traders who sought their outlets, with traditionally regularity, at the Frankfurt am Main and Leipzig fairs.²⁵⁰ According to an account for 1776, there were by then 300 mercantile houses doing business in Frankfurt; out of this total, 240 were of German origin and no less than fifty of these hailed from Elberfeld and Barmen.²⁵¹

In 1756 the outbreak of hostilities was to cast a shadow upon this progressive and prosperous scene. That the ruling duke should have involved himself in the Seven Years' War on the side of the Austrians was to cause his Berg subjects no end of trouble. Periodically, Hanoverian and particularly Prussian troops occupied the twin cities as enemy territory, demanding quarters and sequestering resources without consideration for the inhabitants. Worse still, on one occasion Frederick the Great's soldiers manhandled Judge Alhaus and then took him hostage with some of the leading merchants in the two communities. By such draconian means, the Prussians hoped to expedite payment of a 15,000 taler levy they had imposed upon this valley.²⁵² Besides, even the presence, in either town, of French troops, who ostensibly came as allies, proved a nuisance. Finally, there was at times mention of sagging markets due to dislocations, though details on this point have never been forthcoming.²⁵³

But despite these trials and tribulations, most local historians seem to agree that the war and its consequences did not in any basic way interfere with the quiet, solid advance of this industrial economy.²⁵⁴ Old established businesses forged ahead; decline in sales does not appear to have been serious. Nor was the area to suffer from destruction. Though troops, friend and foe, regularly passed through the region, neither the valley nor its immediate vicinity became a battlefield. And judging by the absence of contemporary comment, local firms must have been sufficiently strong and prudent to have escaped any major losses arising from the financial crisis that gripped most commercial centers in the very year that peace had been declared.²⁵⁵

In 1763 bankruptcies spread through Europe like an epidemic, undermining credit and hampering the flow of trade. But the short duration compensated at least partially for the virulence of this deflationary phase. Besides, a few of these defaults actually had some redeeming features: they eliminated, with one swoop, the speculative excesses and patterns of misinvestment that are characteristic by-products of a prolonged period of hostilities. Thus within twelve months the downward trend was reversed and the stage set for a postwar boom, the proportions of which seemed unbelievable to contemporaries.²⁵⁶

The Wupper valley was more than ready to share in this phenomenal

expansion. In Elberfeld the manufacture of *Siamosen*, bedspreads, and striped linens, which had been so successfully introduced into this city during the 1740s and 1750s, was given an additional boost by the buoyancy of world markets.²⁵⁷ In fact, Elberfeld's rate of industrialization reached so feverish a pitch as to spill over into neighboring communities. At the time, Johann Schuchard became Barmen's first merchant-manufacturer of *Siamosen*.²⁵⁸ Soon, others followed his lead. Subsequently, the weaving of fabrics was even further extended into Lüttringhausen, Hückeswagen, and Wermelskirchen.²⁵⁹

Barmen was no less fortunate in its ability to enlarge and diversify the output of its traditional and by then well-known activities—the bleaching of yarn and the production of various types of ribbons, braids, and tapes. Here again industrial growth was to overflow into Ronsdorf, Schwelm, and some of the other adjacent villages.²⁶⁰ All in all, the whole Berg area and even districts of the Mark became, during this period, extended parts of the Wupper valley economy.

In 1767 Carl Theodore promised to visit the twin cities. In anticipation of this event, the *Garnnahrung* prepared a census of industrial activity and employment, as presented in Table 3.

On the face of it, the figures in Table 3 appear a gross exaggeration, considering that during this period the total number of Wupper valley inhabitants did not exceed 20,000 to 25,000 and that the whole population in the duchy of Berg was barely above 215,000.²⁶² Yet, the statistics may not seem quite as farfetched if viewed against their historical background. As men of affairs, the *Garnmeister* preparing this report took their environment for granted and never bothered to spell out the modus operandi of the domestic industry that endowed tabled categories with a very specific meaning.²⁶³

The heading of Table 3 is a case in point. Given the prevailing mode of production, economic progress, and the continued dispersal of manufacturing activity over an ever-wider area were twin phenomena of the same process. This is why in this instance "Wupper valley industry" did not refer to the two cities only, but to a broader region encompassing all those communities where weavers and spinners, working for Elberfeld and Barmen merchants, happened to be located.²⁶⁴

To clarify matters further, it is equally relevant to emphasize that within the framework of a domestic industry the family constituted the basic work unit. Consequently here as elsewhere under similar circumstances, women and children performed auxiliary chores for the male weaver. That these ancillary duties did not amount to full-time work in the presently accepted sense of the term hardly needs further elaboration. Even for many a cottier who wove ribbons or coarser fabrics, these nonagricultural pursuits were only a supplementary employment helping him to eke out a modest existence. Along those lines, the last category of Table 3, "knitters and spinners of waste silk," is particularly symptomatic, since at that time, tasks of this sort were left to the weak and the aged.²⁶⁵

With these qualifications in mind, the statistical account strongly suggests that the employment figures presented in Table 3 apply to the whole duchy

TABLE 3 State of Wupper Valley Industry (1767)²⁶¹

| | | |
|---|--|--------|
| 1,500 <i>Siamoisien</i> looms | the number employed in this sector including factory operatives, weavers, and spinners (12 persons assumed per loom) | 18,000 |
| 2,000 linen looms | specializing in striped linens (the so-called <i>Bonten</i>) of middling extra fine quality, destined for the East India market (assuming four persons employed per loom) | 8,000 |
| 2,000 ribbon looms | (assuming three persons per loom) | 6,000 |
| 100 bleaching establishments | (six workers per plant) supposedly yearly bleaching at that time 40,000 cwt. of yarn | 600 |
| | dyers and their journeymen | 200 |
| | factory hands | 500 |
| | knitters and spinners of waste silk | 600 |
| Total number of those engaged in Wupper valley manufacture: | | 33,900 |

of Berg and include those engaged in the textile trades plus all their dependents. And given such assumptions, the estimate that almost one-sixth of the duchy's population was, in one way or another, connected with the production of textiles may still seem somewhat high, but it no longer seems quite so incredible.²⁶⁶

During the years 1773–74, one of the duchy's senior officials, Friedrich Heinrich Jacobi, prepared a report on the state of Jülich-Berg industry.²⁶⁷ In essence, the document corroborates the *Garnmeister's* earlier estimates. According to Jacobi, the number of looms being operated in the production of *Siamoisien* and striped linen fabrics (the so-called *Bonten*) reached four thousand at the peak of the boom, fell to three thousand in a recession, and stood at thirty-five thousand during half-way points of the business cycle. Taking the final figure to be the mean and reckoning that per year and per loom fourteen pieces were being produced, the total annual output in this branch of the textile trade supposedly amounted to 49,000 pieces which were exported for 1,542,142 talers.²⁶⁸ At the same time, 280 looms were in operation throughout the duchy, producing bed quilts worth 135,124 talers in annual exports.²⁶⁹

Turning to yarn bleaching and the making of ribbons and thread, Jacobi estimated that twenty-four hundred ribbon looms were being plied during brisk periods and sixteen hundred in a slump. Again, Jacobi assumed the middle figure of two thousand looms to be the average, generating, together with the sale of bleached yarn, annual exports of 1,590,344 talers.²⁷⁰ This, of course, would suggest that, at this stage, in value terms the manufacture of fabrics was locally almost as important as the output of the traditional products—"narrow wares" and bleached yarn. All in all, during this period, yearly exports of Berg textiles came to 3,267,664 talers.²⁷¹

But once these figures have been cited in support of the *Garnmeister* table, it becomes more important to stress the virtues of the Jacobi survey. Within

this area, it is a document of historical significance. Virtually all the cost figures presented by Jacobi in the appendices are put in the context of all kinds of marginal comments and additional information which illuminate in a most striking manner the Wupper valley industrial structure, and indirectly the social setting of this era as well.

For example, the 49,000 pieces of fabric produced during that year required for use as warp 345,550 talers worth of fine quality yarn "imported from Braunschweig, Hanover, Hildesheim, and even from Stade . . . and carried hither as return freight by Limburg and Aachen haulage men journeying home from the Braunschweig fair. . . . even those carriers who had originally attended the Leipzig fair came back via Braunschweig . . . thus the greater the attraction to attend these fairs, the lower the transportation costs incurred by the Berg merchants."²⁷²

At the same time, lesser quality yarn (the so-called *Moltgarn*) to be used as weft and valued at about 147,000 talers was brought here from "Osnabrück, Ravensberg, Melle, and Lübeck." Besides, to meet the needs of this manufacturing branch, twenty-six hundred bales of raw cotton worth 250,000 talers (CIF) were imported from Holland. In turn, the Wupper valley merchants distributed this cotton to have it spun into yarn at a cost of 208,000 talers. According to Jacobi, half of this sum was spent on spinners abroad—that is, on those living in the Prussian Mark, in the principality of Schwarzenberg, and the Cologne electorate; the other half was spent on Berg residents.²⁷³

The ribbon and thread manufacture and the bleaching trade required 656,566 talers worth of fine yarn, 580,555 talers worth of lesser quality yarn, and 175,000 talers worth of yarn to be bleached and made into thread. In addition, Jacobi indicated that annual earnings per ribbon loom came to 200 talers. Thus total yearly income reached 400,000 talers, exclusively drawn by Berg labor. This would suggest that in terms of providing employment, this sector maintained within the Wupper valley a preeminent position.²⁷⁴

Jacobi's enumeration of the various export markets where Berg textiles found an outlet offers no surprises: "the thread is being sold in Brabant, France, and England, the linen tapes and the various other kinds of ribbons are sold partly throughout the [German] empire, partly in Holland. . . . Striped linens (*Dobbelstein*) and checks (*Siamoisien*) are exported partly into the [German] empire, partly into Holland . . . while most of the bed quilts find their customers in the empire." Complementing, as it were, these observations on the different export markets, Jacobi also calculated the net surplus—the net foreign exchange earnings—of each textile branch: 616,343 talers in the case of the ribbon and yarn trade, 569,303 talers in the case of fabrics, and 16,152 talers in the manufacture of bed quilts. The total came to 1,201,868 talers.²⁷⁵

Computations of this sort, including comments to the effect that some industrial activities might be carried on "at the expense of the foreigner," betray the author's mercantilist leanings. Given the period, such an outlook is not surprising except that in this instance these etatist views were at odds with the physiocratic doctrine Jacobi expounds at length in his introductory re-

marks. In view of this contradiction one is led to surmise that as *philosophe* and man of letters, Jacobi's understanding of the economic process was at best superficial. Nor can one avoid the impression that for all his professions of liberalism, Jacobi remained true to his role as the conservative and parochial bureaucrat of a petty principality.²⁷⁶

But the lack of a coherent framework does not detract from the value of this survey. Jacobi dwells with authority, if not with perspicacity, on some of the key problems characteristic of the contemporaneous scene. To judge by the space allotted to the issue, he must have considered the bleaching monopoly of the *Garnnahrung* a principal deterrent to the duchy's progress. Whatever its original utility as an agent of industrial growth, Jacobi demonstrates with the aid of statistics that by the mid-eighteenth century this monopoly had degenerated into an abuse.²⁷⁷ In fact by then many of the local merchants were disregarding *Garnnahrung* rules and had most of the cotton and linen yarn bleached outside the Berg area.²⁷⁸

Jacobi suggests that the lesser members of the *Garnnahrung* were quite eager to see this monopoly abolished. However, he does not elaborate why, for example, the Barmen section of the *Garannahrung*, which specialized in bleaching yarn, should have been the one to favor the dismantling of those regulations, whereas the Elberfeld merchants, who honored these restrictions in the breach, insisted upon their preservation.²⁷⁹ The clue to this paradox, as one recent historian points out, is to be sought in the particular position hitherto enjoyed by the Elberfeld merchants. These particular entrepreneurs did not really care about the bleaching monopoly per se: what they feared was a challenge to their mercantile preeminence by other communities in the duchy where businessmen, such as those in Ronsdorf, might gain in strength on the basis of a thriving bleaching industry.²⁸⁰

There are some historians who have argued that by the time Jacobi mounted his attack on the bleaching monopoly he was already flogging a dead horse.²⁸¹ Indeed, one might generalize and say that whenever Jacobi delivers himself of a supposedly weighty pronouncement and a dire prophecy, his observations are more indicative of his *weltanschauung* than of the local scene:

By having perfected their industry, Elberfeld and Barmen achieved within a few years a high level of prosperity accompanied, as always, by a growing population. But should this demographic upsurge not find adequate space, then those towns, like luxuriant plants, will choke to death in their own juice.²⁸²

Whatever this may mean, expressions of this sort suggest, above all, a man fearful of the changes being wrought all around him. However, Jacobi's asides, meant to buttress some of the dubious forecasts, provide useful insights into Wupper valley development:

Until recently Elberfeld's vegetable gardens sufficed to feed the local burghers; now, twice weekly scores of peasants from the Düsseldorf district travel there to sell their products. Also, most of the rye consumed in Elberfeld gets there via Düsseldorf.²⁸³

And turning to the corollary of soaring food prices, Jacobi notes that in the Wupper valley "the value of an ordinary peasant holding has increased by 50 percent since the years 1740–50. . . . Besides, since the end of the war 130 new houses have been built in Elberfeld and Barmen." Quite obviously, the course of these developments was also responsible for the soaring price of real estate. This is why, according to Jacobi, "progress in the Berg area is no longer feasible. Population must either stagnate or emigrate."²⁸⁴

Similarly, Jacobi's reactionary and pseudo-aristocratic biases are reflected in his distaste for the rising merchants who were to concentrate in their hands ever-larger aggregations of capital. Jacobi senses that the increasingly unequal distribution of wealth is a by-product of progress. But as he alludes to these "rentiers as greedy vermin, a veritable locust," he also senses that the evolution of this "state of affairs is not generally understood" (i.e., in the area.).²⁸⁵ Jacobi was particularly incensed about two bachelor brothers (the above mentioned brothers Wichelhaus), residing in Gemarke, "who virtually own the whole district" and supposedly exploit their monopolistic position when selling off individual lots to potential house owners.²⁸⁶

Usually, a conspicuous exception underscores a general rule. At least with respect to one prediction, Jacobi was proven right. He noted that the Wupper valley was eminently qualified to become a silk manufacturing center.²⁸⁷ In fact, as early as 1770, J. H. Simon, previously a foreman of the Andreä brothers in Mülheim, tried to start a silk industry in Elberfeld. His initial efforts were to be stymied by the authorities and it was not until 1775, after the Andreä monopoly in the duchy of Berg was annulled, that Simon was able to launch a thriving manufacture of silken wares. His success or at least the promise of success must have been enticing to contemporaries; promptly, two other firms, Peter Carl Wever and J. H. Funcke, followed Simon's lead.²⁸⁸

The fledgling trade seems to have experienced no difficulties in attracting the skilled labor needed to instruct local workmen in the new techniques; these master craftsmen came from Hanau, Krefeld, and France.²⁸⁹ Nor was marketing of the new products to prove a problem. The silken handkerchiefs, scarves, and fabrics found ready outlets in the German lands, Holland, and America despite competition on the part of French and Swiss producers.²⁹⁰

At about the same time, Caspar Engels (Frederick Engels' great-grandfather) pioneered in this valley the making of various types of fancy lace which within a short period were to emerge as one of Barmen's principal exports.²⁹¹ Shortly thereafter, J. H. Bockmuhl invented and then applied within the area the "Riemenstuhl," an improved version of the ribbon loom powered by water and weaving linen tapes diagonally. In due course, the new contraption permitted a lucrative expansion of this particular manufacture.²⁹²

Progress, in fact, was all-pervasive throughout the Wupper valley during the 1770s. New firms responsible for all sorts of innovations were being established by various newcomers. Some of these entrepreneurial types were recent immigrants; others were scions of old established families (as were Engels and Frowein) who so far had not participated, at least not prominently, in the region's *Wirtschaftswunder*.²⁹³ But whatever their origins, the

emergence of "new men" points unmistakably to the persistence of an "open society," the hallmark of a dynamic economy. In turn, so propitious a configuration of the social structure was at least partially responsible for the magnetism displayed by the twin cities in absorbing into their manufacturing sphere new products and new techniques.²⁹⁴

Moreover, the vigor of this forward thrust was notable for some of the difficulties it had to surmount. Inundation and a poor harvest in 1771 and a cattle epidemic in 1772 caused famine prices.²⁹⁵ In 1775 the consequences of the American war of independence disturbed the Amsterdam market and led to a decline in demand for goods traditionally offered for sale by Elberfeld and Barmen.²⁹⁶ That the twin cities should have been able to cope with such irritations was as much a tribute to their affluence as it was to the resilience and flexibility of their industrial setting.²⁹⁷

Investments in the infrastructure and enlargement of the area's social capital were to round out the buoyant scene. Since 1763 the authorities had constructed about a hundred kilometers of new roads at a cost of almost 50,000 talers. During the same era, several new bridges came to span the Wupper, and local worthies busied themselves building new churches and schools. Finally, between 1775 and 1786, two hundred new houses were to dot the skyline.²⁹⁹ Is it too farfetched to surmise that Goethe was reminiscing about a view from the surrounding hills looking down into the Wupper valley when he wrote, following a visit to the Berg area in 1774:

The bustle and affluence of neighboring towns and villages contributed in no small measure to enhance a feeling of inner contentment. The very sight of this busy district suggested peace and contentment because here the useful seemed the product of order and cleanliness. And in contemplation of all this we whiled away a few happy days.³⁰⁰

Wupper valley industry continued along the path of expansion throughout the 1780s. During this decade virtually every branch of local commerce prospered and grew. Led by the spectacular advances made in the output of *Siamoisien*, yarn bleaching, ribbon and lace making, and the manufacture of linen fabrics registered almost equally impressive gains. In this way solid progress on so broad a front not only helped to create a framework of potential "linkages" but also sparked the will, by virtue of rising profits and heady expectations, to make the most of these advantages. Thus a drive for continuous innovation remained an integral part of the district's dynamic economy.³⁰¹

Along those lines, two such efforts stand out. At the time, the twin cities witnessed the initial imports of mechanically spun cotton yarn from England, an event which soon afterward prompted within this area the first attempts to produce cotton pieces, the so-called calicoes.³⁰² Even more significantly, local preoccupation with the finishing processes of the textile trades led in turn to the introduction of the Turkish red dye industry. Supposedly brought here in 1785 by a Saxon craftsman, the new venture became, in a very short time, one of the Wupper valley's most celebrated activities.³⁰³

In 1792 F. W. Wiebeking published a semiofficial account, a kind of sequel

to the Jacobi Report, about economic and social life in Jülich and Berg. And trying to survey, with the aid of some statistics, the material conditions of the duchy of Berg in particular, the author waxed quite enthusiastic: "I was astounded by the prosperity of the manufactories, by the diligence and well-being of the inhabitants; and I discovered, on probing the development of all this activity, that most of the rise in industry and commerce had occurred during the last fifty years."³⁰⁴

According to Wiebeking, Berg boasted by 1792 some seventy-six hundred looms devoted to the manufacture of *Siamoisien* and various types of striped linens; thirty-four hundred of these looms were located in the surrounding communities and forty-two hundred in Elberfeld-Barmen proper.³⁰⁵ However, Wiebeking admitted that the latter figure was taken from a 1780 census and that in the twelve years since then the number of looms in the twin cities had probably increased. At the same time, Elberfeld and Barmen boasted some 2,540 ribbon looms at work, and the woolen cloth manufacture of Lennep, Hückeswagen, Wipperfürth, Wermelskirchen, Langenberg, and Radevormwalde claimed 284 looms in operation. Finally, there were in the valley about 150 bleaching establishments producing an annual output of 40,000 hundredweight of bleached yarn.³⁰⁶

The Berg textile trades provided work for more than forty thousand persons. Even with the reservations referred to earlier regarding employment statistics in a domestic industry, this figure is still impressive considering that the total population of the duchy of Berg was about 261,000 at the time.³⁰⁷ Specifically, during this period, in the parishes of Elberfeld and Barmen the number of employed in the textile production—that is, in the manufacture of *Siamoisien*, linens, and bedspreads, in the making of ribbons and in the finishing and marketing branches of this industry—reached 20,500 and generated an output valued at 3,820,791 talers.³⁰⁸ The same figures with respect to the hand spinning of cotton yarn in the communities of Steinbach, Hückeswagen, and Muth were 7,244 persons and 386,000 talers; in the woolen manufacture of the aforementioned Berg townships, 2,804 operatives and 1,036,070 talers. And the number of those engaged in the *Siamoisien* manufacture outside the twin cities—in Lennep, Radevormwalde, Luthringhausen, Wipperfürth, Ronsdorf, and adjacent villages—stood at 6,800, with a total production value of 1,382,000 talers.³⁰⁹

Though on Prussian territory, Schwelm fared equally well. Political frontiers seemed irrelevant in the face of this boom. Having originally developed as a geographic extension of Elberfeld-Barmen activities, as a kind of satellite economy, expanding Schwelm industry became, in the course of the eighteenth century, increasingly independent. By the 1780s, indigenous entrepreneurs managed substantial businesses manufacturing *Siamoisien*, linen, and woolen fabrics and, ever since the 1750s, even ribbons. Firms like Sternenberg produced a wide assortment of goods for the French and Brabant markets and employed a labor force numbered in the hundreds and dispersed throughout Westphalia.³¹⁰

All the other indicators of this age point similarly toward a buoyant economy working at full capacity. This was especially true of the valley's

ribbon manufacture. One contemporaneous account had it that the brothers Wichelhaus refused an order which promised them a return of 45 percent. Apparently profit rates of 80 to 100 percent were not considered exceptional during this period.³¹¹

Given these conditions and given the structure of Wupper valley industry in particular, it is not surprising that during this decade the leading merchant-manufacturers accumulated sizable funds. An extant account book belonging to the manufacturing firm of Wuppermann and Müller in Barmen offers valuable insights into the nature and extent of its business during the years 1790, 1793, and 1799. In 1780 the net worth of this firm was 100,580 talers. Not surprisingly, a substantial part of these assets was in the form of inventory; there were inevitable shanks of yarn of varying quality bleached and dyed and either destined for export to distant markets or to be distributed for further manufacture among the weavers of Barmen and its environs, "to the north and east in Mark territory and perhaps to the west in the Elberfeld area."³¹²

Besides yarn, the inventory contained not only a wide assortment of "Barmen articles," which were the firm's stock in trade, but also soaps, dye stuffs, boilers, barrels, other tools, and raw materials needed in production. Finally, one significant item in the asset structure was the credit outstanding to domestic weavers and customers. A partial list of the clientele survives; all the names on it are French, which would suggest that for this firm, France was at the time an important, probably the most important, outlet.³¹³

The accounts for 1793 and 1799 reflect a similar asset structure except that by then the net worth of this firm had risen, primarily because of an enlarged inventory of ribbons, to 1,456,290 and 1,574,000 talers, respectively. These amounts demonstrate the affluence of this firm and its steady advance. By all accounts, Wuppermann and Müller was a solidly successful enterprise and as such, according to Dietz, typical of the textile houses owned by Barmen's leading families, "von Eynern, Keuchen, Rittershaus, Engels, and others."³¹⁴ Wiebeking was duly impressed by all this wealth:

Because the local factories have enjoyed remarkable prosperity, the merchants have been handsomely rewarded for their diligence. Their fortunes have grown unbelievably these last fifty years. Millionaires can be found among them and the number of those possessing 100,000 talers cannot be insignificant. With respect to this I would like to cite a typical businessman's comment made by a now deceased merchant to a man still living: "In my younger years a man worth 20,000 talers was considered here [i.e., in Elberfeld] rich and was accordingly honored by us. Nowadays a man who has 100,000 talers is not even esteemed."³¹⁵

Social Consequences

Again, as in previous decades, the industrial expansion of the 1780s was accompanied by a construction boom; roads were enlarged, additional bridges, churches, and schools were put into operation to meet, at least in part, the rising

demands of a growing population. Similarly, land so far used for farming or bleaching was turned into subdivisions with streets lined with row after row of new houses.³¹⁶ But of all these new structures, the recently completed homes of the merchant-princes were the most conspicuous. By their size and elegance, these palacelike dwellings stood out from those inhabited by lesser mortals, symbols of the eminence and power the local merchant-manufacturers had achieved by the end of the eighteenth century.³¹⁷ By then, even to a casual observer, the Wupper valley's urban character and highly differentiated class structure had become quite obvious.

Also, more knowledgeable contemporaries were struck by the speed with which the bucolic, frontierlike atmosphere of this valley had been transformed into a teeming city. Writing at the beginning of the next century, a Rhenish author described these developments as follows:

If the Duchy were to have in its midst an old man of 125 years, who in his youth had been intimately acquainted with the area and who now still remembers it, he indeed would be the embodiment of the history of almost all local industry, population and progress. . . . Such an old man would know . . . that about 100 years ago the children of Elberfeld still twisted rope in front of the house doors and that sixty years ago Barmen seemed quite different from what it is now; there were cow pastures where presently yarn is being bleached.³¹⁸

Population figures are hard to come by. However, qualitative observations originally made by contemporaries and subsequently corroborated by local historians seem unanimous in emphasizing the relationship that supposedly existed between the expansion of Berg manufacture and a demographic upswing. "Because of these factories," commented Wiebeking, "the increase in population was unbelievable." This seems to have been as true of the adjacent villages like Wipperfürth and Hückeswagen as it was of the twin cities proper.³¹⁹

According to Haacke, Barmen's rate of population growth doubled during the second half of the eighteenth century; specifically, between 1747 and 1804, the number of its inhabitants rose almost threefold, from 3,790 to 12,895.³²⁰ Wolfgang Köllmann, the leading authority in the field, elaborated upon this population explosion: "So the development of the crafts sparked off the process of immigration, which from then on determined the development of the population of Barman. . . . As early as the eighteenth century, in the second half of which there were, at a rough estimate, for every three inhabitants born in Barmen, about two migrants."³²¹

This expansion would allow one to speculate that during the early 1790s Barmen claimed about 7,000 in its midst. As for Elberfeld, a conservative estimate would put its size during the same period at close to 10,000. No wonder outsiders were impressed by the Wupper valley as a metropolitan area of some 16,000 to 17,000 inhabitants.³²²

Writing in 1789, a Schwelm minister, Friedrich Christoph Müller, delivered some very insightful observations concerning the local population and

especially its demographic behavior as shaped by the secular boom of the area's domestic industry. Considering the consequences of the high price of food prevailing in and around Schwelm, Müller commented:

That the least productive day laborer, working for a farmer and receiving four to five meals a day, would consider himself as it were committed to the galleys, if he had to stand from morning to night, weaving day in and day out, and have no other sustenance but weak coffee, black bread, and potatoes. . . .

This bare existence has affected the health of this manufacturing population in a most detrimental manner. Most of them have a haggard look. Few seem well fed and pink-cheeked. Many, however, appear knockkneed, rheumatic, and blearily eyed. Many kachektische women are among them. In my opinion, much of this is due to the incessant consumption of coffee. And yet it is a beverage the manufacturing men cannot forego. It is simultaneously his food and drink. . . . He imbibes it therefore four to five times a day.³²³

Nor do I consider the black bread [pumpernickel] these people eat as desirable. . . . The crust is thick and devoid of all nutrients. . . . It seems to contain none of the real flour which the bakers have largely reserved for the fancier rye bread destined for the table of the merchant.³²⁴

However, it is curious that despite their weakly constitution the majority of these local women experience easy and uncomplicated childbirths. Within two or three days after their confinement, they are in sufficiently good condition to carry on with their domestic chores. Possibly this natural function comes more easily for women who are weak and whose muscles are flabby. . . . It is therefore not surprising that in the homes of this manufacturing population children abound.³²⁵

Many children are an asset for a family engaged in the domestic industry. From their sixth year they earn their keep spinning, sorting, sizing, and winding. . . . The only regrettable aspect of this state of affairs is the fact that the education of these children is much too neglected. . . . Many adults are to be found here who have had no education and who have not been confirmed. In view of this lack of education, it would be desirable if in these local manufacturing districts one were to set up English Sunday Schools.³²⁶

Continuing his fascinating analysis of the causes and consequences of this demographic pattern, Müller observes:

Concern about feeding their children does not particularly worry these working people. They marry in haste and frequently. Illegitimacy is most rare since customarily nuptial vows are solemnized sometime between conception and birth. Marriages are entered into at the very early ages of 18 and 19 which easily explains within this area the continued increase in population.³²⁷

Finally, Müller turns to a consideration of the supply of housing and its impact upon family formation and fertility:

The fewest families own their own homes. A whole house would be much too large for such a family. This is why four or five families . . . live in one house. Each renter seems to be satisfied with one room and an anteroom for which

he pays about 15 to 20 talers per annum. And this circumstance, too, favors a growing population. Unlike young people in other regions, here engaged couples need not postpone their marriage because they lack house and yard where they would find shelter. . . .

The latter advantage, considerable as it is, derives primarily from the use of coal as fuel. A coal oven needs no chimney and can without difficulty be put in each room because the smoke can be gotten into the open by way of an iron pipe put through the wall.³²⁸

Within so limited a space as the Wupper valley, mounting population pressure tended to push up the cost of living more powerfully than heretofore. Rents rose and, most important of all, so did food prices, for the area became dependent on grain, vegetable, and meat imports from increasingly distant parts. The result of these long-run forces at work was obvious. Over the long haul, wages had to rise, a trend which in this particular decade was to be accentuated by a strong boom causing, temporarily at least, a labor shortage.³²⁹

In an age when, in terms of a decade, productivity improvements by way of new machines were practically insignificant, the prices of final products were most sensitive to change in labor costs. In a similar manner, the impact of a wage change upon the industrial structure as a whole was equally considerable. This is why the centrifugal tendencies of some Wupper valley industries, initially observed in the mid-century, gathered momentum during the 1770s and 1780s. By then production of cheap goods dependent on very low wages could no longer survive in the expansive environment of the Wupper valley. Increasingly, Elberfeld and Barmen dealers were to feel these pressures and consequently transferred the manufacture of *Siamoisien* and calicoes across the Rhine, into the Gladbach-Rheydt district, where they established subsidiary firms for that purpose.³³⁰ At the same time, the entrepreneurs and artisans residing in the twin cities were to concentrate their efforts on those products requiring experience and skill, and thus able to absorb the soaring labor costs. In due course, the evolution of this particular pattern in the division of labor, between town and country, became here, as elsewhere, quite pronounced.³³¹

Some years later the high prices prevailing in the Wupper valley were subjected to a perceptive and doctrinally rather interesting appraisal. Writing in 1803, one local author commented on "the disadvantages which, at all times, result from excessive money wealth":

These difficulties first became evident in Elberfeld and Barmen when an overabundant circulation was to manifest, in a very obvious manner, its noxious impact by way of rising wages. It is a fact that for a long time to come the local manufacturers might have been spared the unpleasant pressures arising from the unceasing flow of the *numéraire* into a spatially very limited district, if the money had spread more uniformly through the whole country. This would have been especially so if there had been proportional distribution of the cash flow into less favored areas. The latter were conspicuous for their contrast when compared to the neighboring districts luxuriating, as it were, in wealth. And these poorer areas could have been stirred into activity,

even without having to wait for governmental prodding, by the introduction of industry if a monopoly privilege incorporated into the state constitution had not barred the way.³³²

For whatever shortcomings within the Berg countryside the *Garnnahrung* may have been responsible, Elberfeld and Barmen, including the immediate vicinity, thrived. Contemporaries and many historians since then have expressed their admiration for the progress achieved by the twin cities during the last decade of the eighteenth century. Moreover, these observers agreed, almost unanimously, that this happy state was in no small part due to the propitiousness of existing political arrangements.³³³ Residing in Mannheim, a carefree Carl Theodor and his equally pleasure-seeking court were not really concerned with the mundane matters of as distant a place as the Wupper valley. Nor could the provincial government in Düsseldorf, limited by its meager resources, mold in any consistent manner the twin cities' course of development. Only a few locally resident officials were to exceed, at one time or another, their mandate and try to implement, according to their own lights, some modest mercantilist schemes fashionable at the time.³³⁴

This was laissez-faire by virtue of "benign neglect."³³⁵ To be sure, the ducal authorities were glad to see Elberfeld and Barmen waxing rich if for no other reason that the inhabitants of these towns were to make a much needed contribution to a chronically hard pressed treasury. Given fiscal considerations of this sort, the government was ready to pass laws and regulations supporting Berg's industrial expansion, provided such a program was not expensive. Religious tolerance and exemption of the twin cities from military conscription were the most notable and probably the most effective of these measures.³³⁶ Taxes during this period were low and tariff duties, though insignificant, more often than not honored in the breach.³³⁷

Because of their persistently precarious finances, the duke and his officials resorted frequently to the sale of government lands situated in the Wupper valley. Usually they did so in haste and below market price. Not surprisingly, the rich local merchants were the principal beneficiaries of these transactions. They were the ones with the ready cash to avail themselves of the favorable terms thereby foreshadowing a pattern the Rhenish bourgeoisie in general was to enjoy when Napoleon decided to market the estates he had confiscated from the church. One of the historical consequences of these real estate sales by the ducal authorities was that the Elberfeld-Barmen capitalists enhanced still further their already unchallenged position in society.³³⁸

The passivity of the ducal government created a power vacuum which the rich and established dealers were able to fill. As Sidney Pollard had perceptively shown, in a manufacturing society prior to full-blown industrialization and the coming of the welfare state, leading entrepreneurs cannot escape the obligation to fashion for themselves the total environment in which to conduct business.³³⁹ Given the peculiarities of the political scene in this locale and the area's long tradition of social responsibility, the Wupper valley merchants were especially willing to continue to bear the burdens of public office. For

centuries they had discharged the duties of aldermen, including mayor, elders in their respective churches, and administrators of the *Garnnahrung*. But whereas until recently these *optimates* had done so as “worthies” of quasi-overgrown industrial villages, from now on they were to do so as a citytype gentry in a decidedly urban context.³⁴⁰

By the late eighteenth century this mercantile elite had become a close-knit oligarchy, with entry becoming increasingly difficult.³⁴¹ No longer concerned about the criticism voiced by a minority bewailing the passing of simpler days, the successful dealers and manufacturers practiced a life of luxury that befitted their affluence. Fancy houses, elegant furnishings, expensive jewelry, good wines, private tutors, and their wives corresponding in French were some of the hallmarks of this select group.³⁴²

In 1775, as if to underscore their preeminence, Elberfeld’s most prominent men of affairs decided to establish a club, the so-called “geschlossene Lesegesellschaft.”³⁴³ The roster of its founding members reads like the city’s “social register.” Rules about blackballing undesirable applicants were promptly incorporated into the society’s statutes. But such exclusiveness could hardly have been directed against the hoi polloi; even if an ordinary Elberfelder had wanted to join, the price of admission would have been sufficient to deter him. For by the 1780s, the membership fee (collected from fifty members) had been set at no less than 350 talers, almost the equivalent of an average weaver’s biannual earnings. These very high dues were to finance the new building with its library and spacious club rooms, plus an ample larder and equally well-stocked wine cellar.³⁴⁴ The building was completed in 1783.

It was in this kind of elegant setting that the *recherché* company gathered every Wednesday. They began their meeting with an elaborate meal, a practice which in all probability their ancestors would have denounced as an ungodly tribute to Bacchus. Having satisfied their palates and lubricated themselves into loquacity, the assembled members finally reached what was presumably the main part of the agenda: a lecture followed by a discussion. In this manner, it was hoped that these men of action, immersed in their daily problems as traders and honorary office holders, would at best have some opportunity to broaden their minds by sampling the refinements of culture and learning.³⁴⁵

A program of the lecture series survives. To judge from this list, the subjects discussed on these occasions covered a wide range.³⁴⁶ Holding forth at the inaugural ceremonies of the club’s new premises, one orator described what transpired to date during these “Wednesday evenings”: “Either a member or an outside lecturer delivers a paper on a topic in history or ethics or physics or statistics or business.”³⁴⁷ However, two years later the banker Abraham Kersten, the *rector spiritus* of this society, addressed one of these weekly sessions and was moved to utter some harsh words concerning lapses on the part of the membership from the lofty purposes which had originally inspired the founders of this organization:

It is true that during the early stages [of this society] we were more expertly instructed by our learned gentlemen and we experimented with electrical and other machines. Indeed, there are a few among us who are experts in these fields. But it may be that some of us have annoyed these learned members by disturbing their lectures by side conversations. Be that as it may, from this year on [1785] . . . we would at least utilize that one hour (on Wednesday, from 6–7) more fruitfully and more interestingly. In fact, a certain writer, whom I have not read myself, has reported that we devote but one hour a week to nurturing our mind while the rest of the time we indulge our body.³⁴⁸

Here then was a group of men by no means as dedicated to the pursuit of knowledge and the advancement of science and technology as their remarkable contemporaries in Birmingham's Lunar Society.³⁴⁹ Though well heeled and well traveled, the locals were not the refined literary types; when in 1774 the resident physician and philosopher June-Stilling brought the already well-known Goethe to one of those weekly dinners, no one present had as yet heard his name.³⁵⁰ Clearly, Elberfeld's *haute volée* preferred to enjoy the surcease, after a day's labor, in a convivial atmosphere given to free and easy talk and good food and wine. But even though earthy men did not wish to tax their brains unduly during their leisure time by pursuing highbrow endeavors, it still would be most interesting to know what they talked about and how they viewed the world around them.

Rhenanus non scribet, at least for the record, and thus posterity will never know the extent to which these merchant princes had been exposed to the currents of contemporary thought.³⁵¹ Had at least some of them, in one way or another, embraced the Enlightenment or the skepticism of a Voltaire? And if so, did they challenge, from this vantage point, those among them who remained faithful to the canons of the old religion? And even more directly relevant to this study, how did these men, in the leadership roles as the area's principal employers and major competitors in world markets, react to rapid urbanization and, more generally, to the changes being wrought in the economy and society, here and abroad?³⁵²

The strict censorship imposed by the authorities and, more specifically, official distrust of associations like the Lesegesellschaft as potential havens of subversion go far to explain this atmosphere of silence.³⁵³ Under these circumstances the Berg inhabitants, and especially the most notable burghers, considered it the better part of wisdom to be reticent about their views on any issue of public import. Political events, great and small, foreign and domestic, were surely raised in the club rooms of the reading society, but the members saw to it that the gist of these conversations never reached the marketplace.³⁵⁴

These developments point up an important though by no means unique phenomenon of European history: for all their commercial acumen and success in the capitalist race, the Wupper valley merchant-manufacturers were men devoid of political power, a kind of stunted bourgeoisie with no hope of sharing directly in the decision-making process of government. In turn, the suppression of public discussion as practiced by the Berg officials also ac-

counts for the absence of public opinion. Finally, the long-run implications of this kind of illiberal environment led to an obvious hiatus, typical of an ambience stifling political life and public debate. This commercially, highly developed society never articulated commensurately sophisticated views regarding the tensions and pressures to which, in one form or another, those living in the Wupper valley were being subjected.³⁵⁵

The ban on criticism and dissent was meant to preserve the established order. But the authorities did not always succeed in their efforts. Occasionally, censorship simply drove the malaise underground where it festered before erupting into the open. At such a stage, anxious officials could not avoid paying at least some attention to what seemed an overt threat to social harmony and peace. Countless petitions, counterpetitions and bureaucratic marginalia have found their way into archives where they survive. In the absence of pamphlets, newspaper articles, and books, these extant documents are the only evidence by which historians have been able to assess the nature as well as the extent of group rivalries and class antagonisms straining Wupper valley society during the last decades of the eighteenth century.

Resentment on the part of Barmen's entrepreneurs over Elberfeld domination within the *Garnnahrung* was the proximate cause of one of those altercations. This long-drawn-out dispute, expertly summarized by Walter Dietz with respect to sequence and issues, epitomizes some of the local problems at a time when the economy was experiencing rapid progress and structural change.³⁵⁶ To repeat, a thriving Barmen specialized increasingly in the making of narrow fabrics, the so-called Barmen wares, and the bleaching of linen yarns. By contrast, a no less prospering Elberfeld concentrated on the manufacture of broad fabrics and, above all, on commerce and finance. In turn, the almost ineluctable consequence of so pronounced a differentiation of functions between the twin cities was an equally marked divergence among the respective burghers in their general viewpoint and specifically in their perception as to what the *Garnnahrung* could and should do to promote the public weal.

As bleachers, the Barmen producers paid the so-called *Zentnergeld* which constituted the *Garnnahrung's* principal revenue. Given the size of their contribution, these bleachers felt that their representation within the *Garnnahrung* should be in some way proportional to their taxation. Yet Elberfeld's merchants enjoyed a commanding position within the *Garnnahrung* by virtue of their wealth and their strategic role as the leaders and bankers of the region's textile business. To appreciate all the implications of this conflict, it is well to remember that the *Garnnahrung* remained the most powerful institution within the Berg economy. Though no longer imposing output quotas on the bleachers, the *Garnnahrung* had managed to extend its supervisory functions over virtually all the textile activities located in the twin cities.³⁵⁷ Even more significantly, the ducal authorities recognized the *Garnnahrung* as an early type chamber of commerce performing the role of spokesman and representative for the manufacturing and commercial interests of this valley.³⁵⁸

The Barmen members were not shy in expressing their specific grievances.

They were particularly annoyed that *Garnnahrung* meetings—the annual convention and the more frequent sessions attended solely by the eight *Garnmeister* and their alternates—were being exclusively held in Elberfeld. The Barmen burghers resented the long trek to Elberfeld as an imposition and as an insult, symbolic of the subordinate status to which they felt their neighbors were subjecting them. At the time, Barmen's contributions to the *Garnnahrung* treasury were one-third larger than those made by Elberfeld. And this is why Barmen demanded that the *Garnnahrung* rescind the practice that was introduced only in the eighteenth century and revert to the old custom of holding its sessions alternately in both cities.³⁵⁹

Additionally, the Barmen members were incensed by some of the consequences of Elberfeld's privilege. Whenever an issue debated at a *Garnnahrung* meeting was controversial and its outcome in doubt, the Elberfeld oligarchy, by virtue of its locational advantage, was able to summon relatives and petty traders who resided nearby and who had previously been instructed how to cast their ballots. Invariably, the delivery of the bloc vote secured a comfortable majority for the Elberfeld side.³⁶⁰

Given this power constellation, it is not surprising that *Garnnahrung* policy reflected the interests of the entrepreneurs in Elberfeld rather than of those in Barmen. The latter felt themselves sorely disadvantaged. When, on behalf of the *Garnnahrung*, Elberfeld's leading official took the Barmen traders to task for engaging in the illicit traffic with yarn bleached in the establishments of the neighboring Mark, they refuted the charge. They replied by reciting their accomplishments during the last hundred years. In no uncertain manner, they accused the *Garnnahrung* of using its funds to advance the Elberfeld silk manufacture while ignoring the difficulties of Barmen's bleachers when the French raised by about 20 percent the import duties on Barmen yarn.³⁶¹

As part of this antagonism, the Barmen merchants also felt that their counterparts enjoyed an undue advantage of having their own court of law where Elberfeld aldermen were competent to deal with commercial cases; the city fathers obviously did so with understanding and sympathy for the merchant's position. By contrast, the Barmen court was presided over by a judge, who as a bureaucrat and a Catholic, viewed traders and their enterprises primarily in terms of their contributions to the state treasury.³⁶² Be that as it may, the officials at the Mannheim court seemed neither too concerned nor too well informed about the causes and consequences of the disputes. Routinely, they referred all complaints to the Vice-Chancellor Knapp in Düsseldorf. Though Knapp was supposedly partial to commercial interests, he agonized over these problems without ever reaching a decision.

At the end of the century, animosities and invidious comparisons between classes and groups in the Wupper valley became increasingly acrimonious. Given the pervasiveness of the regional boom, this is not surprising. From the pinnacles of success, the rich merchants sought, with characteristic impatience, to consolidate their present gains and to prepare the basis for further advances. Specifically, they tried to bend the institutional framework of Berg

society in the direction that would allow them to escape the grip of *Garnnahrung* regulations.³⁶³

In social terms, this type of entrepreneurial thrust amounted to a frontal attack upon the existing privileges of the petty bourgeoisie—the local bleachers, domestic artisans, and traders. These middling ranks were already feeling the pinch of market forces and consequently resisted with great vigor any further encroachment on their time-honored rights. In view of current developments, these efforts proved largely in vain. But whatever their outcome, these struggles point unmistakably to the widespread uneasiness among a social class that had to adapt, at times painfully, to the consequences of industrial expansion.

To what extent fears of proletarianization were the main reason for these anxieties and resentments can be gleaned from some of the arguments enunciated in the course of the Schlickum affair.³⁶⁴ J. P. Schlickum, one of Elberfeld's leading *Siamoisien* merchants, was the son of a well-known family and husband of a Siebel; he definitely belonged to the local elite.³⁶⁵ In 1792 the Barmen section of the *Garnnahrung* brought charges against him for having ordered a ribbon loom from the Wichlinghauser cabinet master Serrenberg. The loom was ordered in order to ship it to the Alsatian town of Rappolsweiler. As the plaintiffs pointed out, Schlickum had already set up, in the form of a company *en commandite*, a business in that locality and had sent one of his former employees there to manage it. Presumably one reason for establishing this new business was to facilitate the importation of Wupper valley textiles into France. The other alleged reason was to provide the basis for the manufacture of Barmen wares and thereby escape the tariff barriers the new French government was expected to impose on manufactured imports.³⁶⁶

Considering that this was still the mercantilist age, these were serious accusations. Here as elsewhere the promotion of local industry outside prescribed geographic limits was considered a major offense. Accordingly, the Barmen *Garnmeister* requested that the Elberfeld judge issue a warrant for Schlickum's arrest. Significantly, Elberfeld's *Garnnahrung* trustees dissociated themselves from the Barmen charge.³⁶⁷ No less noteworthy was Schlickum's reaction; he fled the valley and did not return to defend himself until he was granted a safe conduct.³⁶⁸

To Schlickum's great satisfaction, Vice-Chancellor Knapp was the official entrusted by the ducal government to examine and possibly adjudicate this conflict. Knapp issued his report in May 1792. In essence this memorandum reproduced the arguments made by Schlickum in his own defense. Knapp did not so much as deny the *Garnnahrung* charges, least of all the existence of the firm in Rappolsweiler. Instead he minimized their import. Clearly, this kind of bureaucratic posture was to reflect Knapp's unquestionable partiality toward the rich merchants.³⁶⁹ However, it remains a moot point whether Knapp's biases were the result—as the *Garnnahrung* hinted—of outright bribery or the result of a view that hard-driving entrepreneurs like Schlickum, especially if given a free rein, were the embodiment of progress. Even though the dispute does not seem to have been resolved, some of the information

produced in the course of this conflict allows one to assess from another vantage point the structure of the Wupper valley textile industry and the mood of those involved in its manufacture.

Mounting his own defense, Schlickum enumerated his contributions to the local economy. By no means reticent about these accomplishments, he claimed to have been a pioneer of the Wupper valley Turkish red dye industry and an innovator with respect to new and costly machines. Similarly, he asserted that the new firm set up in Alsace would serve the long-run interest of this area as well.³⁷⁰

According to Schlickum's testimony, his annual wage bill amounted to 25,000 talers. With this figure, he obviously meant to impress the authorities regarding his role as an employer of hundreds of persons. Simultaneously, he wanted to issue a warning that these jobs would be in jeopardy unless the government heeded his demand and grant him a ducal moratorium to stave off his creditors.³⁷¹

Schlickum elaborated that his temporary insolvency had come about despite his basically sound financial position. His annual profits reached 11,000 talers. His net worth stood at 45,000 talers. Additionally, he stated that he could expect some 50,000 guilders at the death of his mother-in-law.³⁷² His predicament, therefore, was simply the result of the notoriety he had gained following the charges made against him and, more specifically, because of calumnies the *Garnnahrung* had spread about him. Under these circumstances, his creditors had become increasingly nervous and suddenly pressed him for repayment. He, of course, could not meet these demands all at once, in view of the aforementioned slow turnover of his business transactions—that is, most of his assets were in the form of inventories and loans outstanding to weavers, other suppliers and, above all, to customers.³⁷³

Schlickum's "liquidity crisis" raises some interesting points concerning the as yet rudimentary nature of the Wupper valley capital market. It appears that the practice (observed during earlier periods) for local burghers to place their funds at the disposal of the larger merchant-manufacturers continued throughout the eighteenth century. In the absence of other investment outlets, the smaller savers had virtually no alternative but to lend their surpluses to the export traders who could turn them to profitable use. This meant that the financial structure of this valley economy was built on somewhat precarious foundations. Akin to latter-day savings and loan associations, *grands marchands* like Schlickum were incurring considerable risks as they engaged in borrowing short in order to lend long.³⁷⁴

In any event, Barmen's *Garnnahrung* trustees were not to be cowed by what they castigated as "the shortcomings and the blatant partiality of the [official] investigation to date."³⁷⁵ In a *Promemoria* and subsequently in a printed memorandum, the trustees sought to refute, with seemingly solid evidence, both the gist of the Knapp report as well as the arguments advanced by the defendant.³⁷⁶ Schlickum's affairs were hardly in a state, the trustees insisted, to rouse invidious comparisons. More important, the defendant's contention that the supervisory competence of the *Garnnahrung* did not extend to ribbons any more than to

“the trade in Lyonese silks . . . of Swiss watches,” the trustees rebutted by assuming the stance of a pedagogue about to teach Schlickum and his bureaucratic supporters a lesson in local historiography:

Because the Garnnahrung edict specifically mentions the yarn trade only, the opinion handed down by the Privy Council seems to assume that the sale of ribbons is not forbidden. However, such an assumption is fraught with the greatest danger for the local manufacturing community and, besides, is totally wrong. . . .

In olden days, at the time the *Garnnahrung* privilege was originally granted, bleaching and the yarn trade were virtually our only source of income. Now, however, it is the ribbon manufacture which sustains the current prosperity of our business. Because of this manufacture the present volume of yarn sales exceeds a thousandfold the yarn sales of those early years. . . .

Presently, the ribbon manufacture is our staple production and provides a livelihood for several thousand workers. For Barmen’s commerce, France is the principal outlet, a market that would be irrevocably lost if production were to be transferred there and Barmen goods, as a matter of course, would be declared countraband.³⁷⁷

According to Jacobi and Knapp (as Mohrmann perceptively points out),³⁷⁸ those opposing the *Garnnahrung* dared not as yet express these opinions aloud, neither in 1774 nor in 1784. However, by 1792 the atmosphere had sufficiently changed, in part because of the boom, in part as a result of political developments in France, for those advocating *laissez-faire* to bring these views into the open. Eventually, even the ducal authorities dismissed the *Garnnahrung* claims and thus in effect sided with Schlickum.³⁷⁹

Though the dispute had been laid to rest, the question still remains unanswered as to why Schlickum was singled out for prosecution. After all, over the years many Wupper valley merchants had, in one way or another contravened *Garnnahrung* rules without evoking reprisals. Since on most occasions the *Garnmeister* clearly preferred to ignore these peccadilloes, one is tempted to hypothesize that the *Garnmeister* bestirred themselves only against those who, by virtue of their prominence and the spectacular nature of their activities, threatened the basis of the status quo. This is probably why the *Garnnahrung* took so determined a stand against men like Bockmuhl and Schlickum, and last but not least against Johann Gottfried Brügelmann.³⁸⁰

J. G. Brügelmann (1750–1802) was the prototype of a Schumpeterian innovator.³⁸¹ Initially apprenticed to his father, a prominent Elberfeld *Verleger* and mayor, the young Brügelmann subsequently proceeded to Basel for further training. At the time, this Swiss city was the hub of a rapidly expanding cotton manufacture and it is probably from the experience gained in this buoyant environment that Brügelmann embraced the dominant vision of his life: Berg industry, if it wanted to progress, would have to absorb the superior technology practiced by its West European competitors. In this sense, Brügelmann was the first of a long and distinguished line of Rhineland pioneers who, throughout the nineteenth century, exhorted their fellow manufacturers to install in their plants the more up-to-date machinery that Belgian,

French, and above all English entrepreneurs had already been using for some years.³⁸²

Given this type of orientation, Brügelmann's journey to England in 1780, essentially became a "spying mission." Visiting many of the island's celebrated manufacturing centers, Brügelmann observed with expertise all new forms of production and management. At the Arkwright factory he even managed to obtain a spinning machine which, according to his own admission, he smuggled out of the country. By the standards of the day, this was a rather risky undertaking.³⁸³

Once installed in Elberfeld, the new machine could not be made to function properly. But Brügelmann was not daunted by so minor a setback. He promptly secured the services of an English mechanic who, in turn, sought the cooperation of local loom makers and craftsmen who were attuned to the needs of the Wupper valley textile industry. Together these men were able to produce, with the imported spinning machine serving as a model, a new one that worked.³⁸⁴

At the sight of these spinning machines, the Elberfeld members of the *Garnnahrung* were seized by all kinds of fears. From their petty bourgeois perspective, the revolutionary requirements of the water frame and mule, with respect to power and factory organization, seemed ominous. Accordingly, they pressured their *Garnnahrung* trustees to oppose Brügelmann's petition to the authorities demanding a monopoly privilege for a spinning mill he planned to erect. Brügelmann considered it only right that his considerable expenditures to date—amounting to about 20,000 talers by 1783, and his proposed outlays should be secured against interlopers. Finally the ducal government accepted the validity of Brügelmann's argument and granted him a monopoly for twelve years—not for forty years as he had requested.³⁸⁵

Brügelmann built his five-story-high spinning mill in Ratingen, near Düsseldorf. He named it Cromford, in honor of Arkwright. Driven by water power, it was an imposing-looking establishment, the first of its kind in the German lands. The new venture proved a resounding success. From the beginning, the various numbers of yarns produced on the water frame, on the mule, and the mule jenny, respectively, were of the highest quality and found ready customers at home and abroad. The superiority of the mechanically spun warps was especially conspicuous and prompted Brügelmann to set up on his own premises weaving looms manufacturing muslin, towels, and napkins. He also installed mechanized knitting frames, producing stockings, underwear, and knit wares.³⁸⁶ Finally, in 1789, Brügelmann opened a Turkish red dye plant on J. H. Jacobi's former estate in Pempelfort. He was thus able to claim to be the first in the Rhineland to operate a vertically integrated textile mill.³⁸⁷

Brügelmann was not content to devote his efforts only to one business. In partnership with his brother, he continued to manage the parental firm while simultaneously assisting his brother-in-law J. F. Bredt in starting a mechanized cotton spinning mill in Barmen. For a short time, Brügelmann was also involved in a partnership with Johann Lenssen in Rheydt and finally in manu-

facturing enterprises in Cologne as well as Munich. He clearly had the golden touch. At his death in 1802, his worth was estimated at 600,000 talers.³⁸⁸

Whatever his triumphs, it is significant that in 1782 Brügelmann decided to build his Cromford mill outside the Wupper valley, somewhat distant from the “external economies” the twin cities had to offer. The hostility to innovations by his colleagues may have been one reason for this change of venue. But there may have been another and more weighty reason—friction with his weavers. At the time, the Wupper valley merchants were engaged in a serious dispute with the linen weavers and their guild. Brügelmann was in the center of it. And curious though it may seem, the *Garnnahrung* membership, which feared and opposed his innovations, in this instance of class antagonism admired Brügelmann for his determined stand against the weavers and their demands.³⁸⁹

Brügelmann’s hassle with his operatives was the culmination of a long altercation between the valley’s masterful merchant-manufacturers and their embittered weavers. The weavers had much to be angry about. Ever since the mid-century—in fact, since they appeared on the scene in sizable numbers—their position had been deteriorating. Not even their guild was able to arrest this tendency toward proletarianization.³⁹⁰

The guild rules and regulations proved ineffective in countering the decline of the weavers’ status for several reasons. For one, the linen and *Siamoisien* trades located in the neighboring Mark and the rural Berg parishes set the overall tone—price and quality—for the entire region’s industry. This was hard on the Elberfeld-Barmen weavers who, in order to survive under these competitive circumstances, were forced to absorb the high food prices and soaring rents of their urban habitat.³⁹¹

To aggravate matters still further, the second half of the eighteenth century witnessed a trend toward increased concentration of the *Siamoisien* manufacture’s ancillary activity in the merchants’ workshops. To be able to rationalize production in this way, the rich *Verleger* offered the journeymen better terms of employment in order to hire them away from the struggling masters.³⁹² As elaborated earlier, the guild’s protests against these practices proved fruitless. The ensuing changes in the industrial structure dealt another blow to the already hard pressed masters who, so far, had derived a sizable share of their income from the employment of journeymen. Specifically, the masters had traditionally pocketed as “wages of supervision” one-half of the journeymen’s piece rate.³⁹³

Caught in a “scissor movement” of mounting costs and at best stable prices for the finished product, the impoverished linen masters became progressively worse employers. This, in turn, drove the remaining journeymen to seek out the larger workshops or to set up, more hurriedly than before, as independent masters. Prompted by conditions of this sort in the labor market, the number of master linen weavers rose from 300 in 1740 to about 1,100 in 1781; the number of journeymen, at the latter date, reached about 1,000, of whom 400 were foreigners.³⁹⁴ One need hardly elaborate that such an increase in numbers did little to improve the weavers’ bargaining position. To all intents and

purposes, the linen weavers had become domestic wage earners in everything but in name, beholden to the hundred merchant-manufacturers who dominated the twin cities' *Siamoisen* industry.³⁹⁵

From the beginning, the rich *Verleger* had disliked and opposed the guild and what it stood for. Despite its basic ineffectiveness, these entrepreneurs viewed the guild as an intolerable interference with their power to manipulate and dispose over their work force as they saw fit. Indeed, the *manufactocracy* ascribed to the existence of the guild the prime reason why the *Siamoisen* manufacture had lagged in its progress when compared to some of the other area trades.³⁹⁶

With such ingrained attitudes, the manufacturers felt clearly outraged when the linen weavers exploited the sudden boom (occasioned by the West Indies' demand for linen-cotton), to press for higher wages. According to entrepreneurial complaints, the petty masters, at this stage, inundated by orders, supposedly accepted yarn and then, having left it lying around their workshops, failed to deliver the finished pieces on schedule.³⁹⁷ This was one way for the weavers to demonstrate their hostility against the employers. The merchants were furious; unable to obtain redress from the authorities yet unwilling to accept the conditions as given, they set up a special fund to combat what they considered as outrageous behavior on the part of their employees.³⁹⁸ At the same time, the merchants vowed to expell anyone from the *Garnahrung* who dared to deal with the guild.³⁹⁹

Within a year—by 1780—economic conditions had swung from boom to slump. The Netherlands had become involved with the United States war for independence and because of the war Elberfeld-Barmen shipments to America encountered increasing difficulties.⁴⁰⁰ Unemployment ensued, and in the linen trades wage rates were reduced from 3.5 to 2.5 talers.⁴⁰¹ Once again, the *Verleger* had gained the upper hand and, considering the circumstances, they were not loath to exploit this advantage. Symptomatically, in 1781 Brügelmann withheld payment from a weaver who supposedly had delivered a piece of short measure.⁴⁰²

Punitive acts of this sort caused an uproar among the masters. The guild, to quote Thun, "threw down the gauntlet" as it presented a memorandum to the authorities accusing the merchants of arbitrary and provocative activities and also of illegal procedures. The merchant-manufacturers refused to bring differences with their weavers to the guild masters for arbitration.⁴⁰³ The judicial competence of the guild was never quite clear and invariably the merchants tried to bypass it whenever they could.

In response to the guild memorandum, the merchants argued that differences between themselves and the weavers were, legally speaking, a private matter that only the courts could settle.⁴⁰⁴ To this, the weavers replied that from the local judge and the magistrate they could never hope to get justice:

Both the city tribunal and the magistrate consisted almost entirely of people who were *Garnahrung* members. Indeed, one might almost view the whole group of Elberfeld merchants as virtually constituting one single family

which, by monopolizing its position in the magistrate and in the court, held the reins of power of this city in their hands.⁴⁰⁵

Brügelmann, for example, was a magistrate, as were his brother-in-law and his cousin.⁴⁰⁶

In subsequent petitions, the weavers reiterated their pleas to the government not to leave them at the mercy of the employers, "these all-powerful people" who seem to believe that "they can force any issue by the strength of their money bags."⁴⁰⁷ On another occasion, the weaver complained that the *Verleger* were bent to reducing them to "mere slaves," demanding "greater subservience than even an Oriental monarch would require."⁴⁰⁸ At another time a weaver took offense to the term "Brodherrn" with which the merchant-manufacturers commonly referred to themselves.⁴⁰⁹

Feeling secure and confident that their actions and attitudes befitted as much their station in life as they confirmed the drift of events, the merchants were unwilling to concede a point. Wages, they said, could not be raised, because of competitive pressures exerted by Swiss, Silesian, Saxon, and Hessen producers.⁴¹⁰ "Anyway, who are these men," asked Brügelmann rhetorically and with all the arrogance typical of his class, "nothing but weavers."⁴¹¹ As for the widespread discontent and "regrettable efforts of these workmen to achieve dominance over us," the *Garnnahrung* members were convinced that the guild and some local agitators were the cause of it.⁴¹²

Vice-Chancellor Knapp was once again entrusted with the mission of mediating the conflict. The solution he proposed was very much in line with his noted proentrepreneurial biases. But under the circumstances, his suggestions were totally impolitic. Specifically, in July 1782, the guild was given new statutes, all of which were obvious concessions to the merchant's demands. For example, employers could have their pieces woven wherever they wished and could set the rate of remuneration as they saw fit. At the same time, weavers were forbidden to congregate; the offense was punishable by fine. Also, strikes were strictly prohibited; first offenders were to be fined, and subsequent offenders were to be jailed and subjected to corporal punishment.⁴¹³

Not surprisingly, the promulgation of these new regulations caused a furor among the linen weavers, masters and journeymen alike. In 1783 there were disturbances in the twin cities. In session during this period, the Berg estates, consisting for the most part of landowners, promptly took up the weavers' cause. The duke did not seem amused. In no uncertain terms, Carl Theodor rebuked his aristocrats for their biases in favor of supposedly outworn abuses and excoriated them for their hostility against the Elberfeld merchants.⁴¹⁴ Whether the duke's stance was taken for fiscal reasons or because of his political viewpoint, is not clear. But it is obvious that the sovereign and his officials sided unequivocally with the rich merchants and with capitalist expansion.

This kind of impartiality was not meant to becalm the ruffled scene. On February 3, 1783, a full-scale riot erupted. The linen weavers forced their way into the home of the Elberfeld mayor and dragged him to the town hall where they demanded that he sign an agreement revising the new guild statutes.

However, during that night, the city fathers called upon the military in Düsseldorf. Arriving the next day, the 360-person contingent reestablished "law and order" without too much difficulty. By the end of the month the military was ready to return to its garrison; thirteen weavers were taken along in chains. The weavers had been beaten and the *Garnnahrung* had achieved its purpose. In December 1783 the guild was abolished.⁴¹⁵

All this would suggest that in the local *Siamaisen* trade the pains of capitalist penetration were so keenly felt by the weavers because the forces of growth, which, at the time, could have attenuated and alleviated social dislocation, were in this instance offset by the competitive pressures emanating from regions with an obvious cost advantage. Though linen-cottons continued for some years in the twin cities, in the long-run their location had to be elsewhere. During the next decades and throughout the next century, silks and cottons, requiring high-quality workmanship, were to be the staple products of this district.⁴¹⁶ The Wupper valley economy continued to exude considerable dynamism and versatility. There seems no better way to demonstrate this resilience than to point to the skill with which, during the next twenty-five years, Elberfeld and Barmen industry was to roll with the punches, pounded hard by a world economy that was plagued almost continuously by war and revolution.

4

Growth Deterrents of a Medieval Heritage: The Aachen Area Woolen Trades Before 1790

The Rise and Decline of Guild Industry

Aachen was the Rhineland's main woolen center. Its cloth manufacture boasted a tradition that supposedly reached as far back as the days of Charlemagne.¹ Yet the nature of its industrial past posed problems that point to some of the city's economic difficulties—at least in the period preceding the nineteenth century. Weighed down by custom and ancient practice, most of Aachen's craftsmen and merchants seemed unwilling to absorb the technical and social innovations sweeping Western Europe after the breakup of the medieval world.² This is why, throughout the first three centuries of the modern era, Aachen's economy did not benefit from the environmental advantages characteristic of this region. Nor did Aachen partake of the buoyant economic progress that became a hallmark of the other Rhineland textile areas, particularly since the end of the seventeenth century.³

The origins of Aachen's clothmaking are rooted in the developments of medieval commerce. Situated at the crossroads of the Roman-built East-West road system, this city emerged as an important entrepôt trading center and raw wool market. Enjoying close ties to the thriving metropolis of Cologne, Aachen became, above all, through Bawai and Dinant, a Western gateway to the then flourishing textile towns of Flanders and Brabant as well as a major outlet for their fabrics.⁴ In turn, preoccupation with the textile trade brought about the evolution of various commercial facilities, including wide business contacts. These connections eventually led to the growth of local cloth manufacturing for customers beyond the immediate vicinity. During the twelfth

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century, Aachen cloth was already being sold as far north as the fairs of Osnabrück and Hildesheim.⁵ At the same time, Aachen weavers, endowed with market privileges and increased wealth by industrial efforts, became the objects of envy and hatred on the part of the peasantry in the surrounding countryside.⁶

During the next three centuries, Aachen's woolen trades rose to international stature. By following the lead of their Flemish "master," they first concentrated on brown and gray fabrics and subsequently upon *bombassins* (half-cottons), *bays* (half-worsted), *say*, *Arras* (unfulled woolen cloth) and Berry cloth. These products had previously proven their worth at the famous medieval fairs.⁷ By the fifteenth century, Aachen's wares had found their way into markets as far afield as Hungary, the Baltic region, Russia, and Provence.⁸ It is estimated that total annual output at that time was probably seven thousand pieces of cloth.⁹

An elaborate division of labor was the natural consequence of industrial progress. Groups of weavers, spinners, fullers, shearmen, dyers, and workmen in the ancillary occupations of the woolen manufacture became a prominent feature of the city's social scene. The immigration of foreign craftsmen and merchants, including Lombards and Jews, accelerated local progress and swelled an already rising population.¹⁰ According to some accounts, Aachen's population supposedly reached forty thousand at the height of its medieval splendor. Though this estimate appears to be somewhat exaggerated, the figure nevertheless must have been considerable, if only to admit of such exaggeration.¹¹

Rapid economic change usually summons the emergence of new economic institutions. Provided their respective environments are similar, it is probable that the spread of an industry from one region to another will not be confined to techniques alone, but will also extend to principles of organization.¹² In view of Aachen's urban tradition, it is not surprising that it should have absorbed the requisite knowledge and skill for this manufacture as well as the prevailing medieval framework of urban industry—namely, the guild system and all it stood for—monopoly of the industry and the corollary to monopoly, domination by the guild over its membership.¹³

In Aachen, the so-called *Wollenambacht* became the principal guild incorporating virtually all the crafts of the woolen trades. Following a slow and obscure start in the thirteenth century, the *Wollenambacht* gathered momentum during the next hundred years and reached the peak of its effectiveness in the second half of the fifteenth century and the first half of the sixteenth century.¹⁴

To secure the necessary monopoly position and maintain its hold over the membership, the *Wollenambacht* claimed many corporate prerogatives, including control over entry into the trade, insistence upon high standards of workmanship, and inspection of the finished cloth. Above all, the *Wollenambacht* enforced a code of behavior which governed the relationships between masters, journeymen, and apprentices, on the basis of the judicial power vested in its own court. In return for subordination to this order, the individ-

ual craftman was assured (at least in the heyday of the guild) eventual ascent to master status. In addition, the craftsman was at all times guaranteed a standard of living appropriate to his rank and station in life.¹⁵

By virtue of the all-encompassing nature of its corporate functions, the *Wollenambacht*, being the principal guild, became the embodiment of the industry. Its fortunes reflected the trade's checkered history. Moreover, as the organized representative of the town's staple industry, the corporation emerged as a basic constituent of the body politic. Power in Aachen became inseparable from power within the *Wollenambacht*.¹⁶

Conscious of this power relationship, the patrician oligarchy of this imperial city jealously guarded its traditional prerogative of appointing members of its own ranks to the chief positions within the *Wollenambacht*. That foremen and controlling bodies of the guild were only "outsiders," and that appointment to other positions within the *Wollenambacht* depended upon the approval of the aristocracy, obviously violated the principles of the corporate idea, which had craftsmen autonomously decide.¹⁷ Such inroads into craft autonomy aggravated the resentment of the town's *menu peuple* against their rulers and especially against the feudal landlords and the rich merchants who enjoyed a strategic position with the trade.¹⁸

The periodic occurrence of bloody riots throughout the centuries provides vivid testimony to prevailing class antagonism. The insurrections of 1269, 1348, and 1368 were relatively minor and served as a prelude to the revolutionary fervor reached during the 1428 uprising. At that time, Aachen's enraged citizenry, led by the fullers and weavers, chased the patrician city fathers out of office and temporarily replaced them by nominees of plebeian choice.¹⁹ Dissatisfaction with the oligarchic maladministration of corporate and city affairs, and discontentment over the mounting burden of excise taxes to meet a financial crisis not of their making, were some of the reasons that had driven the artisans to rebellion.²⁰ But the roots of this chronic malaise must be sought in Aachen's social and economic structure, which had endowed a few leading families with property rights, to various feudal rents, and obligations, to be exacted from the townsmen at large. It was this concentration of wealth with its attendant political power that spelled the disenfranchisement of the embittered craftsmen both as guild members as well as burgesses.²¹

Overcome by this elemental display of revolutionary power, the patricians surrendered their privileges. But so prompt an abdication of their rights was also a tactical retreat that gave the ousted rulers time to call upon outside help, which eventually enabled them to crush the insurrection and execute its ringleaders.²² However, once victorious, the city fathers realized that, to attenuate social tensions, some of the concessions wrung from them under duress had to be incorporated in some permanent reforms. This is why, in 1450, the aristocrats assented, after further bloodshed and wrangling, to the *Gaffelbrief*, a kind of concordat between them and the guilds.²³ According to the statutes of the agreement, the city's guilds were to have representatives sit in the council, Aachen's supreme legislative authority, to which hitherto admittance had been hereditary. The corporate deputies were to participate in

the discussion of this chamber, partake in the nomination of city officials, and finally to have access to the town's financial accounts.²⁴

These seemingly broad reforms did little to improve the political status of the corporations. Appointments to the leading posts within the *Wollenambacht* and admission of new members into the guild, (crucial issues in the power struggle), remained aristocratic prerogatives. Moreover, the oligarchy viewed craft representation in the council an anomaly and never ceased to undermine the basis of the 1450 agreement.²⁵ Later reaffirmations of the Gaffelbrief (the patricians' usual form of conciliatory gesture following a craft insurrection) are proof that in the interim the document had been a dead letter.²⁶

In the period before 1400, these social struggles were fought in an atmosphere of industrial expansion. The flow of immigrants into the city and the success of Aachen's fabrics at the various fairs proved some indication of the town's progress and potentialities.²⁷ However, after the middle of the fifteenth century, the woolen trades and consequently the entire Aachen economy experienced difficulties that became more serious as the century progressed. The English, who previously had limited themselves to the export of raw wool, now turned to an efficient system of cloth making. Within a short time this new English manufacture manifested a dynamic characteristic of the industrial "latecomer" in world markets. West England cloth soon outpaced, both in quality and price, the products of Europe's old established textile centers, including Aachen.²⁸ According to some accounts, no fewer than 150,000 bales of English woolen fabrics flooded the German lands in the early sixteenth century.²⁹

Support by a sympathetic government and, more importantly, ability to bypass the fetters imposed by guild-dominated towns and locate manufacturing activity in the countryside, were some of the factors responsible for Anglo-Saxon industrial success. In Aachen, as in the older textile towns of Flanders, northern Italy, and England, the woolen guild reacted to this challenge by tightening its discipline over the membership.³⁰ It reasserted its traditional role of closed inspection of the productive process and the finished product by increasing the number of supervisors.³¹ Instead of adjusting to the innovations and recognizing the greater flexibility and inherently lower production costs of rural industry, the *Wollenambacht* fought these capitalist stirrings both inside and outside the city, with all the resources at its command, including help from the patricians who had a stake in the preservation of the status quo.³³

The Journeymen's revolt of 1477, preceded by riots in 1467 and in 1474, was part of a broader movement. At the time, Ypres, Ghent, Bruges, and Cologne were similarly shaken.³³ Judging by the nature of the grievances, the *Wollenambacht* journeymen struck primarily for non-political reasons. They demanded abolition of the excise tax, reduction of the price of beer, and dismissal of an unpopular warden (*Werkmeister*). However, the special pleas made by the strikers to limit those corporate regulations that "infringe upon civic freedom" points to the broader issues of the particular dispute. It sug-

gests that the intraguild squabble was, as it were, the subplot to the main drama—the corporation battling to survive the decline of the medieval world.³⁴

Religious Strife: Symptom of Corporate Stagnation

The subsequent social struggles over the city's adjustment to the new economic forces were complicated by the religious strife that plagued most of Europe throughout the next one hundred fifty years. Whether the thirty Flemish weavers who settled here in 1544 were Aachen's Protestant harbingers remains a moot point.³⁵ It is probably more significant, to an understanding of the city's Protestant beginnings and subsequent social development, that the more substantial native clothiers and exporters were early converts to, or at least sympathizers with, the Reformation. This was especially true of the younger generation, which in many cases had spent years of apprenticeship and training in the woolen manufacturing towns of Flanders and Artois, which were then centers of anti-Catholic teaching.³⁶

After 1550 local Calvinism, by far the most important Protestant sect in this city, was given a decisive spurt by the immigration of wealthy clothiers fleeing the terror of the Alba and Burgundy regimes.³⁷ The presence in town of such men, imbued with a broad business outlook and great religious fervor, endowed the new faith with the prerequisites for a solid organization, and a sound economic base.³⁸

If initially the Protestants were unable to join the corporations, including the *Wollenambacht*, in 1574 they gained not only the rights of guild membership, but went on to acquire all the privileges pertaining to a burger's *ius honorum*.³⁹ Finally, in 1582, the Calvinists, who by this time accounted for one-third of the city's total population,⁴⁰ constituted a majority on the council. This, in effect, meant that they had become Aachen's rulers.⁴¹

As expected, the Catholic potentates of the adjacent regions were uniformly hostile toward the Protestant government. Embroiled in the religious power struggles preceding the Thirty Years' War, they regarded Aachen as a dangerous outpost of Calvinism.⁴² Among these staunch defenders of the Counter Reformation, the Spanish governors in the Netherlands were the most militant, and they promptly prepared an attack upon Aachen in order to rid the city of its infidel leaders. The plan never materialized.⁴³ However, the duke of Jülich, eager to exploit the religious issue to enhance his influence in the imperial city, actually imposed a blockade upon Aachen goods in transit. This proved to be a grievous blow to the city's exports, which already faced difficulties in world markets.⁴⁴

Harrassed by pressures from the outside and further weakened by internal dissension, due to bickering with local Catholics and Lutherans,⁴⁵ the Calvinists had no alternative but to accept the imperial edict of 1593. They were forced to resign from office and surrender all their political rights.⁴⁶ By 1598, despite these setbacks, the Calvinists regained considerable influence in city

affairs by virtue of their strategic role in Aachen's economic life. Their wealth and knowledge were indispensable to local manufacturing and therefore no one as yet dared to discriminate against the Calvinists as merchants and producers, for fear that Aachen's ailing economy be further impaired.⁴⁷

Conscious of their strength, the Calvinists were confident of the future. Although several of their leading spokesmen preferred to leave the city or were forced to do so by imperial condemnation, most of the Calvinists remained, undaunted by recent reverses. They continued their profitable ventures, hoping in due course not only to regain their lost privileges and positions of power, commensurate to their economic importance, but also to reshape the city in their own image and according to their own needs.⁴⁸

The strategy to be pursued matched the magnitude of the design. The Calvinists initially strengthened their position by playing upon differences among members of Aachen's leading families and between the guilds and the council.⁴⁹ They also made the most of the international tensions that continuously bedeviled Aachen's peace. When the duke of Jülich waylaid Aachen transports, the Protestants spearheaded a plan for the invasion of Jülich territory. The action was to serve a twofold purpose: to end an intolerable situation and to undermine, through turmoil and social upheaval that usually accompany hostilities, the authority of Aachen's Catholic regime.⁵⁰

Given their purpose, these moves proved eminently successful. Within a decade of losing office, the Calvinists had recovered most of their former positions. De facto, at least, they dominated the body politic. Indirectly they shared in the city's administration and they publicly professed their faith.⁵¹ Furthermore, the international power constellation, a key factor in shaping Aachen's course of events, shifted in favor of the Protestants. The old duke of Jülich had died in 1609, to be succeeded by a prince of marked anti-Catholic sympathies who was willing to use his influence and judicial prerogative over the city on behalf of the Reformation.⁵²

The ease and speed with which they had gained their initial objectives emboldened the Protestants to reach out for their ultimate goal: the monopoly of political power within the city. They also felt strong enough to apply force whenever necessary to advance their cause. In 1611 the Calvinists carried out a *coup d'état* to chase the Catholic rulers out of office and replace them by men of their own faith.⁵³ But having resorted to violence, the Aachen Calvinists had embarked upon an adventurous road from which there was no return. They had challenged imperial authority and by so doing had destabilized still further an already precarious balance of international power.

Europe's Protestant potentates promptly rallied to Aachen's side. They unleashed a flurry of diplomatic activity to endow the new government with some measure of international recognition.⁵⁴ But moral support of this kind was the most the Protestant states dared to offer. Apprehensive of entanglements that might embroil them in war, they refused to extend military assistance, even in 1614, when Aachen faced the armed might of the Counter Reformation. In that year the emperor had decided to force the issue by ordering the Spanish General Spinola to take possession of the imperial city

and restore Catholic power. Spinola had no difficulty in accomplishing this mission. Deserted, to all intents and purposes, by its allies, Aachen's Protestant government opened the city gates to the invading troops to avoid bloodshed in a hopeless battle against overwhelming odds.⁵⁵

The Spanish general and his occupation troops promptly mounted an attack on all facets of Protestant life.⁵⁶ Having reinstated the ousted government, they expropriated and expelled the insurrectionist leaders. They then proceeded against the Protestants at-large, burdening them with heavy fines and excluding them from membership in the city's guilds.⁵⁷ The latter act of discrimination was the culmination of Counter Reformation policy and the ominous expression of an overall plan to emasculate the Calvinists' influence by undermining their economic preeminence.⁵⁸ Though Spinola and his men were militant and singleminded in pursuit of their aims, they were never quite able to implement all their objectives. For one, the Calvinist entrepreneurs remained very important.⁵⁹ Too abrupt and radical a curtailment of their activities was not feasible, if only because it would have endangered the precarious livelihood⁶⁰ of scores of Catholic artisans and workers who were already troubled by rising food prices and sagging export sales.⁶¹ Furthermore, the rise to preeminence in the seventeenth century of the United Provinces as the most dynamic economy, strengthened the position of that Protestant state on the international scene and gave to Dutch efforts, on behalf of their hard pressed co-religionists in Aachen, increasing effectiveness.⁶²

Paradoxically, the havoc wrought in the city by the Thirty Years' War proved the Protestants' most important ally in the struggle against Spanish oppression. Apart from their sizable contributions to the various levies, tributes, and sequestrations imposed upon Aachen by Catholic armies in transit,⁶³ the Calvinists constituted a pillar of economic stability the city government did not wish to see shaken by further acts of discrimination.⁶⁴ With such tacit support, the Calvinists recovered much of their lost ground. By the late 1620s, they once again dared to hold prayer meetings; though these gatherings were illegal, their existence was an open secret. Similarly, notwithstanding strict regulations against it, many Calvinists not only continued as members of the various corporations, but retained, in some instances, their majority in these guilds as well.⁶⁵

However, Protestant recovery proved to be as temporary and precarious as the perverse conditions that had given rise to it. Once the worst of the wartime chaos had been surmounted, the civic authorities, supported by the might of the Counter Reformation, again directed all efforts toward their traditional objective of achieving Catholic supremacy. Moreover, the Treaty of Westphalia reaffirmed Aachen's Catholic status.⁶⁶ Henceforth, disregarding all possible economic consequences, non-Catholics were to be banned from the city. It was only due to the prompt and resolute intervention of the Swedish and Brandenburg governments that expulsions of Protestants were limited to a few.⁶⁷

But by the late 1650s pressures exerted by foreign governments on behalf of religious tolerance became progressively less effective. Following the city

fire of 1656, when the Dutch expressed willingness to assist the hapless inhabitants in rebuilding the ravaged city, their advances were rebuffed.⁶⁸ Though they needed all possible help, the local aldermen refused to entertain any offers of aid that were tied to concessions favoring the Protestant community and which, in turn, would jeopardize Catholic power.⁶⁹

Well connected in the commercial centers of the world, the Protestants were not to be cowed. Indeed, the manner in which they maintained their preeminence in business generally and the woolen trades in particular during the next one hundred fifty years points to a characteristic resilience and flexibility nurtured by years of experience in facing up to the challenge of persecution.⁷⁰ Nevertheless, a few enterprising Calvinists, weary of the tribulations to which they were being subjected, decided to leave the city altogether. Emigration of this kind had been prevalent in Aachen since the beginning of religious strife. It was to continue, in fits and starts, throughout the eighteenth century. But even at peak periods—usually associated with a revival of discrimination—the outflow remained a trickle and never involved more than 5 to 6 percent of the Protestant community.⁷¹

The exodus was prompted by a variety of motives. The rich and most active merchants predominating among the emigrants were motivated by considerations other than religion. This seems beyond question (unless one assumes that their Protestant fervor and devotion exceeded that of their less affluent co-religionists who stayed behind). Nor does it appear arguable that these men alone, because of their means, could afford to remove themselves in order to escape the humiliations of religious discrimination. Most probably, sound economic reasons determined, in large part, their decision to leave, as a local historian points out.⁷² Yet Asten simultaneously emphasizes that it would be wrong to overestimate the material aspects, for most Protestants who remained in Aachen continued to fare reasonably well.⁷³

Unfortunately, Asten, without elaboration, merely touches upon the possible interplay of these religious and economic forces, which seem strategic determinants of the exodus. This is especially true when viewed in the context of the latter's limited scope and restricted social composition. For it can be argued that it was a hallmark of those well-to-do, would-be refugees to take a broader and longer-range perspective of current developments than the population at-large. Consequently, they perceived in these persecutions ominous signs of a future bedeviled by rules and regulations stifling the kind of enterprise and economic progress of which they were the local pioneers. Specifically, they foresaw that in Aachen the Counter Reformation would try, as part of its overall policy, to revive and revitalize the corporate system in order to gain the support of those artisan groups which regarded the activities of the Protestant merchants and manufacturers as hateful innovations undermining the basis of their craft existence.⁷⁴ Taking so gloomy a view of their prospects in Aachen, the Calvinist patricians felt that they had no alternative but to seek, outside their home town, a new environment that was more conducive to entrepreneurial activity and more tolerant of religious dissent.⁷⁵

Though the withdrawal of capital and entrepreneurship was a serious drain

upon the city's resources, it was never of sufficient magnitude to be assigned a major role in an analysis of Aachen's economic malaise. Rather, this loss of men and money is more appropriately viewed as a symptom of prevailing ills whose causes can be understood only against the all-pervasive background of the town's outmoded industrial framework. Similarly, at a somewhat later date in France, the much dramatized Huguenot exodus was not the cause, but the by-product, of French stagnation for which, as Scoville shows, a perverse social structure and backward economic institutions must be held responsible.⁷⁶

The impact of the Thirty Years' War hastened Aachen's industrial decline.⁷⁷ Prolonged hostilities throughout Europe disturbed the traditional channels of commerce. The raw material supplies of the woolen manufacture, the city's principal source of income, were at times jeopardized.⁷⁸ Simultaneously, this industry faced even greater difficulties than before in marketing its traditional cloth products at the various international fairs, against the mounting competition from the newly developing textile regions producing the "new draperies."⁷⁹ Moreover, for almost thirty years, the burden of occupation costs weighed heavily upon this city.⁸⁰ Military leaders, both friend and foe, were attracted by this metropolis as a place to encamp their troops. The soldiers came to live off the citizenry, exacting tributes and sequestering, commandeering, and at times even plundering the meager local resources.⁸¹ Finally, the emperor, hardpressed in his conduct of the war, never ceased his requests for subsidies and loans.⁸² Aachen's rulers met these demands partly by taxation, but largely through borrowing.⁸³

The consequences of these financial pressures were disastrous. The city treasury was plunged into a state of chaos even worse than before.⁸⁴ At the same time, they reduced the already dwindling resources of the more substantial burgesses who, on other occasions, might have been willing to help their less fortunate fellow citizens. In part at least, this is the reason why the famine of 1623–27 caused such widespread distress.⁸⁵ That the hardpressed artisans and workmen were desperate seems confirmed by the ease and speed with which Aachen's government was able to recruit, from among these starving men, three thousand mercenaries. Resigned to their fate, these hapless persons, according to some observers, felt that in one way or another they were already doomed to die.⁸⁶

These ravages of war were by no means negligible. Yet in Aachen the devastations were less universal than in many other parts of Europe where, despite wholesale destruction, postwar recovery proved much more rapid.⁸⁷ Inability to muster the necessary energy to mobilize its resources for reconstruction points to the city's basic economic weakness and the unfortunate state it had already reached on the eve of fighting.⁸⁸ Religious dissension and the noxious influence of the guild system were the twin culprits accounting for this industrial prostration.

By the mid-seventeenth century, Aachen's corporate framework had outlived its purpose. Increasingly less effective in coping with the competitive pressures unleashed by a rapidly changing world economy, with its emphasis upon brighter and more colorful products, the guilds degenerated into a drag

upon initiative and progress.⁸⁹ This was particularly true of the *Wollenambacht*, whose rules and regulations were being perverted into caricatures of their original functions.⁹⁰ Within some of these institutions (of which the apprenticeship system was the most glaring), corruption and nepotism had become current practice. Children of masters were co-opted into the guild without having to satisfy the traditional prerequisites of training and examination. At the same time, those youngsters who came into the industry from families outside the trade, spent—as the story goes—more time assisting in the master's scullery than in the workshop.⁹¹ Consequently, the quality of craftsmanship left much to be desired.

These defects, observable both in the factor as well as the product markets, were further accentuated by the inflexible response on the part of the woolen trades toward change. After the middle of the seventeenth century, the indigenous development of the delivery of materials system was to strike a most telling blow at the unwieldy structure of Aachen's corporate framework.⁹² That this new industrial order, harnessed to the profit motive and dominated by hard-driving entrepreneurs, exuded an elemental dynamism is reflected in the speed with which the *Verlag* was to gain a foothold in the various branches of local manufacturing. Naturally, such a confrontation with the harbinger of capitalist production constituted a much more dramatic challenge to the *Wollenambacht* than any of the international pressures to which the city's woolen goods had been thus far exposed. At the same time, social tensions were exacerbated, for these early merchant-manufacturers had declared war upon the tradition-bound master craftsmen out of whose ranks they themselves had but recently emerged.⁹³

Initially, the leading capitalists did not mount a direct assault upon the city's corporate bastions. Instead, they pursued a strategy that elsewhere, under similar circumstances, had already proven its worth:⁹⁴ namely, the *Verleger* outflanked and bypassed the guilds by locating some of their industrial activities in the unincorporated rural vicinity and some in neighboring towns.⁹⁵

Within Aachen's woolen manufacture, the dyeing trades were the first branch to experience this transformation.⁹⁶ The clothiers began sending raw cloth, on their own account, to be dyed red, blue, green and black⁹⁷ in Eupen,urtscheid, Forst, and Leiden. According to a contemporary report: "here in Aachen it is in no way as yet possible to produce the required colors in as good and as marketable a form as in the dyeing establishments outside." This was the principal reason for this movement.⁹⁸ But apart from the problem of quality, the lower labor costs prevailing in the countryside were an important factor in accelerating these centrifugal tendencies of urban industry. This was especially true of the dyeing trades, where in the seventeenth and eighteenth centuries wages amounted to almost half the total costs.⁹⁹

City authorities, the guilds' political representatives, did everything in their power to combat these developments. They issued ordinances exhorting merchants to curtail their outside connections. They reasserted the total prohibition concerning the weaving and finishing of textile materials by workmen who were not members of the *Wollenambacht*. Above all, they reaffirmed the

ban on the dyeing of black cloth outside the city. Finally, the council imposed, in the hope of stemming the tide, a stiff duty on raw cloth, sent out of town for the final stages of manufacture.¹⁰⁰

Despite these obstacles, the system of distributing materials to workers in their homes grew and prospered.¹⁰¹ By the late seventeenth century and throughout the eighteenth century, up to one-fifth and more of all raw cloth manufactured in Aachen was dyed in neighboring areas.¹⁰² At the same time, weaving and some of the other finishing operations were being increasingly entrusted to domestic workers outside the city gates. The prosperity achieved in this decentralized mode of production under such difficult circumstances is a tribute to its resilience. Furthermore it was proof of the countryside's industrial potential that was ready to be mobilized and exploited by capitalist initiative.¹⁰³

The Aachen guilds, because of their industrial tradition, might have counteracted the competitive pressures by concentrating on high-quality output, especially Spanish cloth requiring considerable craft dexterity and experience, and enjoying at that time brisk demand.¹⁰⁴ However, the rules that had already been responsible for the chronic deterioration of local production made such an adjustment impossible. Instead the *Wollenambacht* tried to enforce, even more rigorously than before, the time-honored limitations with respect to the number of looms to be operated and the journeymen to be employed by one master.¹⁰⁵

Such restrictions, in turn, were incompatible with the utilization of the mounting capital outlays required to set up a craft establishment. Inability, because of corporate impediments, to vary the factor proportions in an optimal manner may have been responsible for the excess capacity of some of the investment and thus may have been one of the causes of high unit costs of output that supposedly bedeviled local industry.¹⁰⁶ Besides, cyclical influences and increasing restiveness among journeymen put the final touches to this dismal scene.¹⁰⁷

Though the upswing of the late seventeenth century aroused a temporary optimism regarding Aachen's commercial future, the overall picture remained one of stagnation.¹⁰⁸ It was in the hope of infusing fresh blood into the seemingly anemic industrial environment that Aachen's *Rat* (in 1677) offered potential immigrants (provided they were Catholic) the freedom of the city and subsequent free membership in the guilds.¹⁰⁹ Yet very few of those active men being sought responded to this appeal. They probably shunned the town for the same reasons that had driven Aachen's active spirits to forsake their ancestral homes: to seek a more auspicious economic climate in the unincorporated regions of the vicinity.

Rural Dynamic: The Expansion of Domestic Manufacture

The drain on Aachen's entrepreneurial talent was the countryside's gain. The urban refugees who settled in the villages and on isolated holdings of the

town's vicinity promptly installed plants and workshops for all kinds of manufacturing activity. Most important of all, they were the regional pioneers who introduced a thriving woolen industry into this rural setting, an innovation that set the pace for a secular boom lasting from the mid-seventeenth century well into the French era and even beyond it.¹¹⁰

The surprising ease with which the initial problems of rural industrialization were surmounted was largely due to the physical and social advantages the Aachen countryside shared with the other parts of the Rhineland. This was especially true of the Jülich district and the Dutch territory of Limburg where marketplaces like Eupen and Vaels now emerged as towns. Neighboring Düren made equally rapid strides. Freed from all guild regulations, the local merchants and manufacturers were able to expand their plants and output, as far as their resources and the size of their market would permit.¹¹¹

Burtscheid, just outside the city gates, was one of the first localities to benefit from this development. Though formally under Aachen jurisdiction, the village in fact was governed by the abbess of the local convent.¹¹² Religious tolerance, in part pursued because of the gains to be expected from it, was the hallmark of this feminine rule.¹¹³ At first, the twin circumstances of proximity and leniency prompted Aachen Protestants to consider Burtscheid as a place to visit in order to hold prayer meetings that were banned in the city. Subsequently, as life for them in their hometown became increasingly intolerable, the city's non-Catholics came to view this hamlet as a place of permanent settlement.¹¹⁴ Burtscheid boasted a long tradition of coarse cloth making, undisturbed by corporate restrictions since the sixteenth century. This proved to be an additional attraction for entrepreneurs seeking a base from which to conduct their far-flung activities.¹¹⁵

By 1663 Aachen's shearmen were protesting to the council that more worsteds and other types of cloth were being scoured and finished in Burtscheid than in the city itself. At the same time, they reminded the authorities of the dire consequences to be expected from such a development: progressive reductions both in craft employment and in local tax receipts.¹¹⁶ The petition probably exaggerated the actual magnitude of Burtscheid's manufacture. Yet it was largely correct in its appraisal of the impressive growth rate enjoyed by village industry throughout this period. Not surprisingly, guild members and all others tied to the fate of the corporate order had good reason to be alarmed.

This is why a worried *Rat* promptly issued an order to Burtscheid's abbess demanding that henceforth no foreigner be allowed to settle within her domain without the permission of Aachen's judicial officer, the *Meier*. In addition, the city fathers asked the abbess to dismantle all cloth presses within the village, for their original installation had been illegal. They were particularly insistent about destroying a press belonging to an Anabaptist woman whose commercial success seems to have been a special thorn in Aachen's side.¹¹⁷

The abbess flatly refused these requests and continued in her traditional ways. She even insisted that it was her good right to settle outsiders in her village. Aachen's aldermen, exasperated by their dealings with this lady,

dragged her before the imperial court. Eventually, the court decided in Aachen's favor by reasserting its overlordship in the hamlet.¹¹⁸ Such legal opinion, however, appears to have been of no practical importance. Burtscheid continued to thrive and throughout the eighteenth century the shrill and strident tone of Aachen's unsuccessful complaints became in some way a measure of the growing gap between the city's stagnation and the buoyancy of rural industry.¹¹⁹

During the 1750s and 1760s, crisis conditions in Aachen reached a peak, and the hapless craftsmen took the law into their own hands. Like desperate men, unable to comprehend or adjust to the course of history, they resorted to direct action. They formed a mob and marched into Burtscheid to destroy the plant and equipment that to them symbolized their doom.¹²⁰

But Burtscheid's progress was not to be impaired by such disturbances. As early as 1698, it claimed six *Verleger* with large holdings. These resident manufacturers not only employed a considerable number of master weavers and domestic workers in and around Burtscheid, including Aachen, but they also owned sizable dye shops and finishing plants in which they prepared raw cloth for final sale.

Thirty years later, Aachen's shearmen once again protested that "in Burtscheid there are several merchants. They prepare, full, and . . . cloth, produced for them by hired journeymen, to the greatest detriment of our craft."¹²¹ The artisans specifically mentioned one Aachen merchant, Niset, who, "contrary to the council edict, has cloth produced in Burtscheid and thus is turning our town, as regards its trade and industry, into a village, and Burtscheid, by contrast, into a veritable commercial and manufacturing center."¹²²

By 1790 Georg Forster, explorer and adherent of the French Revolution, confirmed this prediction. Touring the Rhineland, he wrote: "proportionately Burtscheid employs more operatives in the manufacture of cloth than Aachen. The largest factory there belongs to Mr. Loewenich. The plant consists of spacious and well-constructed buildings and produces cloth of great distinction."¹²³

Forster added that Aachen and Burtscheid cloth, unlike that of Verviers, was being dyed in the piece,¹²⁴ a very expensive technique and only used in the case of high-quality products.¹²⁵ Such specialization proved very fortunate. Then, as in subsequent decades, rural manufacture generally and the Burtscheid trades in particular, enjoyed virtually uninterrupted expansion and prosperity.¹²⁶

But of all the developments in this region, the industrial rise of Montjoie was the most spectacular and, in many ways, given its historical context, the most symptomatic event. Situated to the south of the imperial city, within the Ardennes part of Jülich territory, Montjoie stood halfway between the Aachen and Verviers woolen districts, thus benefiting from the influence of both.¹²⁷

Protestants had come to settle in Montjoie in the late sixteenth and throughout the seventeenth centuries. To what extent economic motives pre-

dominated over religious ones in making the clothiers leave the imperial city is a moot point. However, it is certain that they were attracted to this picturesque and hidden township by the soft water of the river Rur and, in the surrounding Eiffel villages, the availability of cheap labor familiar with the various branches of the cloth industry. A manufacture of this kind, producing coarse cloth for the local market, had existed there since medieval times.¹²⁸

To make use of the free environment and to do justice to their wealth as well as their far-flung connections, the Protestant clothiers knew that they would have to produce for the world market.¹²⁹ They also realized that they could compete in the world market, especially against the English, only if they were to concentrate on high-quality products, in order to overcome the prohibitive transportation costs arising from Montjoie's isolated location.¹³⁰

The introduction of the fine cloth industry into the district dates back to the seventeenth century. But it was not until the eighteenth century that Montjoie's fine cloth manufacture was to experience considerable expansion. Its growth coincided and was largely prompted by a basic reorientation of the existing export pattern. The decline and virtual demise of the region's traditional outlets in Western Europe were due to the mounting competition exerted by the more advanced Dutch, French, and English textile centers. This is what forced the woolen manufacturers within this area to seek new markets in Spain, Portugal, northern Germany, and the Levant and, by reason of the fairs of Braunschweig, Frankfurt, and Leipzig, in Russia. Throughout the eighteenth century, the vast czarist empire, with its steady demand for heavy black cloth, became the Aachen area's most important customer.¹³¹

The worldwide fame and reputation that Montjoie cloth achieved during this period is usually associated with the name of Scheibler—Johann Heinrich, the founder of the firm, and his two sons, Carl and Bernard George. Bent on escaping the limitations imposed upon them by geography, they were the first to produce plain colored cloth from imported Spanish wool. The innovation earned them handsome profits and, above all, brought them the first flurry of international recognition.¹³² Sometime after 1730 they pioneered the manufacture of cloth of a patterned weave for men's vests. The new fabric, already known in Verviers, had become the raging fashion and as such offered vistas of virtually unlimited sales, particularly after 1745. The same was true of the brilliant scarlet cloth, the so-called *drap de sérail*, destined for the harems of the Orient.¹³³ The Scheiblers and subsequent imitators seized upon these opportunities with zest and competence. Their success was reflected within the phenomenal growth that Montjoie's woolen industry was to enjoy throughout the latter half of the eighteenth century.¹³⁴

From the beginning, the Scheiblers seemed to have had the golden touch. In 1752 Bernard Scheibler opened new plants on Prussian territory, and Frederick the Great considered the event sufficiently important to grant the incoming entrepreneur and his workers immunity from the vexations of the pressgang.¹³⁵ Four years later, on his return to Montjoie, the duke of Jülich went even further and raised Bernard Scheibler to a minor peerage. The ennobling potent stressed his contributions to the local woolen industry, especially his

accomplishments of having improved the quality of the cloth "where it could compete successfully against the English and the French."¹³⁶

At the time the Scheiblers were without question the most important entrepreneurial family of the entire Aachen area. The rococo residence "Das Rote Haus," which they built for themselves at the enormous cost of 90,000 talers, was the outward symbol of their prominence and wealth.¹³⁷ By 1762 they employed six thousand workers, producing six times as much as all the other Montjoie cloth manufacturers combined.¹³⁸

The speedy growth of Montjoie's industry soon led to shortages of labor, particularly skilled labor. Consequently, competent shearmen who were indispensable for high-quality production, had to be brought into the town from southern Germany and Verviers.¹³⁹ Spinning and weaving had to be re-arranged as well. Initially these tasks were done as a supplementary employment by the peasants and their families in the Eiffel villages. However, greater emphasis upon quality prompted the Montjoie clothiers to distribute increasing amounts of the Spanish wool among the dairy farmers of the Limburg district. The soft hands of the rural population, a characteristic of those engaged in dairy farming, were admirably suited for the more delicate work that was required.¹⁴⁰

The Verviers district clothiers, who had previously enjoyed a monopsony in this particular labor market, hated to surrender this privilege. The tone of a 1765 memorandum addressed to the authorities betrays their resentment toward these upstarts. They wrote: "fifteen or twenty years ago neither Montjoie nor its manufacture were known here; but since that time the latter has greatly developed."¹⁴¹ By 1774, according to a report prepared by the court councillor J. H. Jacobi, more than half of the cloth finished in Montjoie was spun and woven in the Limburg area.¹⁴²

Even the organization of the process of production was subjected to changes by the rapid advance of the fine-cloth industry, as the framework of the domestic industry, then the dominant mode of production, proved somewhat cumbersome to meet the exacting requirements of the world market. The merchant-manufacturers, sensitized to the capricious demands of their customers, found it increasingly difficult to transmit the new and at times complicated orders to their employees and in turn supervise their execution. Moreover, the variegated patterns and colors to be produced and the continuous changes in taste made it no longer feasible to accumulate large inventories to be drawn upon in periods of brisk demand. Instead, orders had to be carried out individually and within given time periods. This was particularly difficult, for adherence to specific delivery schedules was incompatible with the employment of peasant-weavers and spinners whose industrial tasks were usually subordinated to the claims of their agricultural activities.¹⁴³

These were some of the reasons prompting the Montjoie clothiers, notably Bernard Scheibler, to set up production on their own premises.¹⁴⁴ Paradoxically, here as elsewhere, high-quality and not mass produced articles were the first to be manufactured in the employer's shop.¹⁴⁵ The craftsmen for these early "factories" were recruited from among the sons of the rural population

already working for the Montjoie clothiers. These young men were attracted to Montjoie and full-time industrial employment by the prospects of higher earnings. This, in itself, hastened the concentration of the production process. For these newly arrived weavers had in most instances no home within which to work and it became imperative that the merchant-manufacturers provide them with such a place.¹⁴⁶

Such major technical and social changes, compressed into a relatively short time span, led to social tension. Set apart by their religion and their wealth, closely knit by marriage and commercial ties, the Protestant clothiers roused the envy of their fellow citizens.¹⁴⁷ Commercial jealousies and anti-Protestant sentiments proved to be, as so often happens in cases of racial and religious intolerance, interdependent and reinforced each other. The Catholic coarse-cloth manufacturers, who as property owners alone had the right to be members of the ruling city council, resented the intrusion and challenge of the aggressive minority. By virtue of their position as city councilors, they usually opposed and granted only under protest any additional land the Protestant clothiers wished to purchase for the extension of their manufacturing plants or for workers' homes.¹⁴⁸

In most other instances, the Catholic ruling group showed itself equally unfriendly. Nor was the Jülich court and its officials favorably disposed toward these immigrants. However, of all these groups, Montjoie's petty craftsmen and workers expressed the greatest hostility. Their time-honored existence was being undermined by the various industrial innovations.¹⁴⁹ They particularly resented the importation of foreign workmen by the Protestant clothiers, because the influx of this additional labor was considered the cause of Montjoie's housing shortage and of the rise in the price of local foodstuffs.¹⁵⁰

The Protestant clothiers, under the leadership of Scheibler, resolutely set themselves against all opposition. To defend their interests, they banded together in a corporation of fine-cloth manufacturers, the so-called *Feine Gewandschaft*.¹⁵¹ They pressed for the right to expand their plants, for better roads to facilitate commerce, for assistance in the recovery of stolen wool and, above all, for protection in the case of industrial disputes.¹⁵²

In all these struggles, their wealth and economic superiority were the clothiers' most effective allies. In petitions to the duke, they emphasized the employment their industry provided for the local population and the tax revenues which accrued to the state from their activities. Under extreme provocation, the Protestant clothiers even threatened departure from the area, along with their assets and industry. Furthermore, Scheibler usually kept his Düsseldorf lawyers generously supplied with funds to be distributed among the relevant court officials whenever necessary.¹⁵³

The Protestant clothiers were exclusively guided by business motives in the conduct of industrial relations. Paternalism, which was the dominant employer attitude, no longer had a place within their particular framework. One of the principal reasons for establishing the *Feine Gewandschaft* was to combat the emergence of a craft guild, which the foreign shearmen, accustomed to the protection of a corporation in their native town, wished to introduce in

Montjoie. This is why in 1742 the clothiers agreed among themselves to resist, with all the means at their disposal, the introduction of the "malicious" guild system with its "dire consequences."¹⁵⁴ The accord also stated that they would continue to hire any worker whatever his origins, as was the custom in Verviers and in the duchies of Jülich and Berg where guilds were unknown. Besides, any employee misbehaving was to be dismissed. Furthermore, a clothier infringing upon the terms of the agreement would be subject to penalties. Finally, the employers reserved for themselves the right to pay the wage they deemed fit.¹⁵⁵

In the face of this monopolistic power, the shearmen were compelled to accept the employers' terms.¹⁵⁶ However, discontent and social tensions were not allayed. Twenty years later, in 1762, strife and violence erupted. The violence was the result of mounting friction between native shearmen and foreigners, who at the time constituted two-thirds of the men working in this particular craft of the city. The clothiers, in need of qualified men, had been gradually bringing into Montjoie Protestant shearmen from central and southern Germany, areas in which the guild system was unknown. They had done this deliberately in order to avoid reliance upon the artisans of the Aachen region, who continued to believe in corporate restrictions and with whom (because of their attitudes) the clothiers had previously experienced some difficulties.¹⁵⁷

Given such differences in origin and outlook, harmonious co-existence between the various groups of craftsmen would have been difficult at best. In this instance, discontent was aggravated by the social problems created by rapid industrial expansion. Increasingly, the native population considered these immigrants the cause of low wages and high prices. During the summer of 1762, riots occurred. The native shearmen laid down their tools and forced some of the foreigners to do likewise.¹⁵⁸

As expected, the demands of the striking shearmen reflected the pains they suffered as victims of social change. They demanded limitations on the number of apprentices to be used in each workshop, employment of exclusively native workers, a rise in wages to offset a rise in food prices, and a reduction in working hours. Finally, they demanded abolition of the agreement among manufacturers to hire only workers who possessed a leaving certificate from their last employer.¹⁵⁹

At first, the manufacturers reacted to these demands by contending that wages had been rising and that the workers could earn even more by working overtime—that is, by starting to work before four o'clock in the morning.¹⁶⁰ Subsequently, they countered the strikes with a lockout in order to starve the shearmen into submitting to lower wages.¹⁶¹

The Düsseldorf government did not manifest any greater sympathy for the workmen and their grievances. The ducal authorities viewed this dispute and the prolonged cessation of industrial activity as a threat to the going order and therefore warned the shearmen to return to work immediately or face arrest. However, the government also promised to investigate the causes of this strife. This it did and in 1763 published a decree pertaining to Montjoie's industrial

relations. Except for advising the manufacturers to raise wages in line with rising prices, the government refused all the shearmen's demands and confirmed the free and unincorporated framework of Montjoie's industry.¹⁶²

Neither side was satisfied with the government's decision. Though the shearmen bore their discontent in silence, they expressed their ill will by soiling or cutting holes into cloth or spoiling the dye.¹⁶³ Sabotage, as Hobsbawm has shown, is the usual reaction of wage earners too weak to face employers' refusal to bargain collectively.¹⁶⁴

In the autumn of that year, 1763, violence once again erupted. A Catholic holiday, on which the Protestants had gone to work, served as the pretext for the native shearmen to attack their foreign competitors. The foreigners were forced to seek refuge in the nearby castle. What seemed most interesting during these riots was the hostile posture taken by the Catholic mayor and the local authorities toward the Protestant clothiers. These Catholics were envious of the successes and the wealth of the Protestant fine-cloth manufacturers and therefore refused to act resolutely against the rioting craftsmen.¹⁶⁵

The Düsseldorf government was equally slow in coming to the rescue of the Protestant clothiers who were willing to pay for such assistance. Subsequently, the government appointed a commission to investigate matters. On the basis of its findings, the government reiterated the 1763 decree, though this time the manufacturers were ordered to raise wages because of rising prices. Finally, the strike leaders were arrested and order was restored.¹⁶⁶

During the next decade, the 1770s, the weavers, rather than the shearmen, became the element disruptive of industrial peace. The tendency of the clothiers to distribute increasing amounts of raw wool for spinning and weaving in the Limburg district exasperated the weavers. In 1769 their ire erupted in violence. Their anger was primarily vented on the foreign factors, the so-called *Baasen*, who collected the raw wool in Montjoie and subsequently returned the raw cloth to be dyed and finished in the local workshops. The clothiers countered the weavers' demands by emphasizing the superior workmanship of the Limburg district. They also stressed that the good work done in the Limburg area was indispensable for Montjoie's industry, despite the higher costs involved, if it wished to maintain its reputation in foreign markets.¹⁶⁷ The government equally refused the weavers' pleas, even though an official investigation in Montjoie established that, at the time, out of a total of 150 looms, more than fifty were idle.¹⁶⁸

The Montjoie weavers remained unconvinced by all these arguments, for heavy unemployment among them coincided with increasing shipments of raw wool into the Limburg district.¹⁶⁹ In 1774 they once more resorted to violence, unloading the factors' carts and barring their road to Eupen. At this stage, the shearmen, depending upon an uninterrupted flow of raw cloth and participating in the benefits of Montjoie's expansion, assisted the local authorities in restoring order. The government also acted more resolutely, imposing severe penalties upon those who led the riot.¹⁷⁰

Following these disorders, the Protestant clothiers reiterated their complaints about the behavior of the smaller Catholic manufacturers who consti-

tuted the majority of the local city council. The Catholics were accused of having enjoined the weavers to riot, and were further suspected of being the recipients of the Spanish wool stolen from the fine-cloth manufacturing plants. Because of the latter reason, charged the Protestants in their petition to the government, Montjoie's Catholic authorities were unwilling to enforce the existing laws against theft or see to it that new legislation, combating the growing evil, be promulgated. Eventually, in 1775, the government satisfied the Protestant clothiers by passing a new edict.¹⁷¹ From then on, the imposition of severe penalties upon those guilty of stealing wool led to a speedy reduction of this particular abuse.¹⁷²

This measure was part of the "Düsseldorf Mandate," a ducal declaration that spelled out the rights of unfettered enterprise within Montjoie.¹⁷³ Yet judging by the various clauses of this charter (stiff prison terms for thieves of wool and detailed regulations of the apprenticeship system), economic freedom, as understood here, was a euphemism for what in the case of Verviers has been so aptly referred to as *liberté patronale*.¹⁷⁴ By implication, E. Barkhausen corroborates this view. He extolled the mandate as a milestone which gave the fine-cloth manufacturers the necessary freedom of action and thus a head start over their competitors in the region.¹⁷⁵

The artisan-workers felt cheated and disadvantaged by the course of events and accordingly resisted, at times violently, encroachments upon their time-honored privileges. This is not surprising, for at the time such defiance was quite characteristic of their fate. As Lebrun points out, in Montjoie, Verviers, and all the other important woolen centers of France and England,¹⁷⁶ the weavers, shearmen, and wool combers reacted in the same manner. Their struggle was not for improvements, but in defense of their status, which was threatened by the transformation of the industry's mode of production.¹⁷⁷

However, such disturbances in the sphere of industrial relations did not hamper the speedy growth of Montjoie's fine-cloth manufacture. In fact, such strife was part of the rapid industrial progress that marked the post-Seven Years' War period. Especially during the 1780s this industry was to reach a peak never achieved before or after.¹⁷⁸ By then, some two-thirds of the local population, in town and in the countryside, were engaged in the various branches of this manufacture.¹⁷⁹

Production rose from 2,236 *Kümpfen* of fine cloth in 1773 to 3,821 in 1779. It soared to 4,325 *Kümpfen* in 1787, valued at one and a half million talers. Thus, Montjoie's output was larger than the sum total of all production in the other cloth manufacturing centers of the duchies of Jülich and Berg.¹⁸⁰

The Scheiblers continued to highlight Montjoie's material successes. As the leading local industrialists, they were reputed to possess assets worth 380,000 talers,¹⁸¹ an immense fortune at that time. In the Lower Rhine region, only the von der Leyens at Krefeld were wealthier. Yet even the other, lesser members of the *Feine Gewandschaft* were, by contemporaneous standards, substantial citizens, a phenomenon which suggests that entry into this business presupposed command over substantial amounts of capital.¹⁸²

Such a qualification, in turn, explains why the Catholic coarse-cloth manu-

facturers could not deploy their efforts toward this new and profitable sector expanding before their eyes. For these petty traders had no chance to accumulate, within the narrow framework of their commercial dealings, the large funds required. Nor did they have any hope of tapping the only other potential source of finance, Protestant money, which as yet was being exclusively channeled into an imperfect and very rudimentary "capital market" where kinship, apart from all other considerations, was viewed as the safest collateral for a loan.¹⁸³

Initially, the fine-cloth manufacturers utilized a significant portion of their funds to purchase Spanish wool in the Amsterdam market.¹⁸⁴ But once they had proven themselves as sound entrepreneurs, the Dutch dealers, always intent on enticing new customers to their financial domination,¹⁸⁵ accorded them the same liberal credit terms they traditionally extended to most of the woolen cloth producers in northwestern Europe. This, in turn, permitted the members of the *Feine Gewandschaft* to mobilize all their resources in order to develop long-term financing for their own customers.

During the eighteenth century, the provision of such lending facilities was an indispensable part of a flourishing export trade. It was by no means unusual, at the time, for the final payment of a commercial transaction to occur one and a half to two years after the original shipment of goods. Quite naturally, the asset structure of the various enterprises reflected the slow turnover of capital. According to Barkhausen, the firm of J. H. Scheibler deployed only one-fourth of its total operating capital (about 800,000 talers in 1789) in actual manufacturing. The rest was held in the form of inventories, and above all, in credits outstanding.¹⁸⁶

The total amount of capital at their disposal suggests that the Scheiblers were indebted to the extent of about one-half of their net worth. This seems to have been equally true of Montjoie industry as a whole. Fully one-half, as estimated by Barkhausen, was borrowed either from Amsterdam wool merchants or from bankers in Frankfurt. That the local industry should have found such ready creditors is some indication of its standing within the European business community on the eve of the French Revolution.¹⁸⁷

Nevertheless, the resilience which Montjoie industry exhibited during this period proved insufficient in overcoming the difficulties that were to lie ahead. The disturbances caused by the revolutionary wars impaired its ramified trade relations and its strained credit structure. Furthermore, its isolated location subsequently hindered Montjoie from partaking of the benefits provided by the industrial revolution. While the cloth industry of the city of Aachen was being mechanized and thus enabled to advance, Montjoie was condemned to stagnation.

But as long as Montjoie's industry prospered, it was, as mentioned earlier, typical of the social and economic development of those districts in the Aachen region where freedom from guild interference prevailed.¹⁸⁸ More important, the dynamic of this growth was to have a leavening effect even upon those parts of the area still burdened by outdated corporate restrictions.

When, in 1790, Lennep's clothiers mounted an attack against the rules and

regulations of their shearmen's guild, they referred to "the more flourishing, more developed, and more profitable state of the cloth manufactories in Verviers, Eupen, Burtscheid, Montjoie . . . and several other places . . . solely due to the absence of a corporation and its compulsion."¹⁸⁹

Montjoie's *Feine Gewandschaft*, whom the Lennep merchants had asked to prepare a supporting memorandum, but reechoed these laissez-faire sentiments and stressed that freedom from guild regulations, as the mainspring of local progress, was "so definitely proven and generally recognized that we find it in no way necessary to say anything more about it."¹⁹⁰ Yet the *Feine Gewandschaft* added that at this stage of development the quality of the cloth's finish was much too important an activity to be left, for its determination, to a guild primarily concerned with safeguarding the status of its members. Decisions, the *Feine Gewandschaft* insisted, with respect to such strategic tasks as the fulling, dyeing, shearing, and dressing of cloth had to be the prerogative of the clothier who was attuned to the exacting requirements of his international clientele.

However, these paeans to freedom must be taken with a grain of salt. At the same time the clothiers exalted the superiority of unfettered competition, they themselves were busy reforming the *Feine Gewandschaft* in such a way as to limit its membership to their descendants. Other newcomers could be admitted only upon payment of a very high fee and with the express permission of the existing membership.¹⁹¹ "To widen the market and to narrow the competition," observed no other than Adam Smith, "is always the interest of the dealers."¹⁹²

It appears that these "monopolistic" devices did not impair the entrepreneurial climate. But if they did, they were more than offset by the advantages of location, as labor and capital flowed freely between the Jülich-Berg-Aachen textile centers and those of the adjacent Verviers-Vesdre valley. Such interregional factor mobility injected into the industries of both districts a vitality that reflected the successful integration of two competitive regions. And in no locality were these particular benefits more conspicuous than in Montjoie and in Eupen, the woolen center in the duchy of Limburg.¹⁹³

Cloth making in Eupen (and for that matter in the whole Verviers area) was supposedly started in the fourteenth century by Flemish journeymen who had fled the bloody riots that plagued their native cities, notably Bruges and Ghent.¹⁹⁴ Within this free and unencumbered environment, the newcomers proved successful from the start. Prompted by the opportunities offered to them by the expanding Dutch market, they passed quickly out of the stage of coarse to higher quality production. Very soon the nonagricultural activities had become indispensable pillars of this pastoral economy. As early as 1429 the duke prohibited the importation of English cloth into his principality. This points to the importance of local production and to the willingness of the authorities to assist and promote the development of native manufacturing.¹⁹⁵ Immigrants were particularly welcome—at first the refugees from Verviers and subsequently, during the seventeenth century, those from the imperial city.¹⁹⁶

The appearance of the Aachen Calvinists on the Limburg scene marks the beginning of a new era for Eupen's woolen trade. As in the case of Montjoie and Burtscheid, the rich merchants who settled here brought with them their traditional business, the manufacture of fine cloth. These men faced no greater difficulties than their co-religionists entering the neighboring countryside in developing this industry within a new environment.¹⁹⁷ Utilizing most adroitly native talent and the "external economies" of indigenous cloth making in general, the "innovators" also called upon the specialized skills of the Aachen area whenever these were needed. In fact, certain stages of production, requiring considerable experience, continued to be carried on in the immediate vicinity of the imperial city.¹⁹⁸

Within a short time, the new industry had become the dominant local activity. Eupen was then absorbed into the Jülich-Berg textile economy and fully shared in the area's remarkable progress. As mentioned earlier, throughout the eighteenth century fine-cloth production was a "growth sector" with outlets not only in Western Europe but also in the expanding markets of northern Europe, the Levant, and Russia. It was in these spheres that the challenge of English competition was successfully met.¹⁹⁹

The importance of these economic changes and the benefits to be derived from them, both by the population at-large as well as by the state, were not lost upon the authorities. Of these, the exemption from import duties on Spanish wool was the most significant, for the cheap and plentiful supply of this raw material was indispensable to the progress of the industry.²⁰⁰

The government's evaluation of the potential of these developments was more than justified. Indeed, the concern of the rulers for the expansion of local industry was to be handsomely rewarded. Between 1700 and 1760, the value of the ducal forests, because of rapid industrialization, rose sixfold.²⁰¹

By 1764 Eupen's total output reached about 20,000 pieces of cloth (each piece 40 *Ellen* in length.)²⁰² Employment was provided for some five thousand persons in and around the township and for an additional undetermined number living in more distant parts.²⁰³ Eupen claimed 350 looms supervised by 50 masters, 10 fulling mills, and several dye shops worked by 14 master dyers and 56 ancillary workers.²⁰⁴ By then, because of the Vesdre's soft water and the craftsmen's skill, Eupen had become the regional center for the dyeing of expensive fabrics. Raw cloth was brought here from Verviers and, as mentioned earlier, from Aachen, to be given its brilliant colors.²⁰⁵

Throughout the following period, from about the end of the Seven Years' War to the beginning of the French Revolution, industrial progress continued unabated. A book published anonymously in 1796, *Die feine Tuchmanufaktur zu Eupen, ihre sämmtliche Geheimnisse, Vortheile und Preise nebst Tabellen* (Gotha: Ettingersche Buchhandlung), provides valuable insights into the techniques, the organization, and the social aspects of local manufacturing during this era. According to this account, in 1770 total annual output within the "Eupen region" (i.e., including the production of Aachen, Burtscheid, Vaels, Verviers, Hodimont, Montjoie, Ingembroich, Eupen, and Dison) reached 45,000 pieces of cloth (each piece 130 *Ellen* in length) valued at 18,675,000

florins. Half of this amount was "value added" locally, the other 9,000,000 florins having been spent on the purchase of Spanish wool.²⁰⁶ The Eupen dyers produced about 10,000 pieces annually.

A fraction of this raw wool was imported directly from Bilbao (reference to it is made only because it is one of the few instances where, in connection with a transaction, mention is made of the methods of international finance): "Conditions of sale being as follows: one-third payable in cash, one-third within four months, and one-third within eight months. Payment usually occurs by means of bills of exchange that are dated accordingly and which have to be met thirty of forty days after being due."²⁰⁷

Most of the Spanish wool, came, of course, via Amsterdam, where "it is merely the extended credit granted by Holland that attracts the German merchant. For he knows only too well that he can get the raw wool much cheaper by buying it in Spain rather than in Amsterdam."²⁰⁸

Turning to the mode of production and to the attendant social relations, the anonymous author has this to say:

The merchant or the manufacturer is the mainspring and the soul of the whole. He provides employment and income for many. . . . This determines the position of the merchant within the state. He imports raw materials from distant lands; wool out of Spain, oil, soap and hair . . . Not one piece of cloth is woven in the manufacturers' houses. This saves them much and facilitates their business. For they do not have to invest their capital in large buildings, in numerous tools, and in their maintenance. Nor are they required to supervise those people who are adept in defrauding them and who would embezzle even more if they were not entrusted with these products according to a certain plan. Here the cloth makers are referred to as *Baasen*. They are not incorporated; many are rural folk who besides raising cattle keep several looms in order to eke out an existence.²⁰⁹

Eupen's merchant-manufacturers did not, according to this contemporaneous observer, own fulling mills or dye shops, though they carefully specified to the fullers and dyers to whom raw cloth was distributed how these tasks were to be done. "Only the dressers, shearmen, pressers, and scourers work on the *Verleger's* premises and under his immediate supervision. They receive a daily wage. They are unable to embezzle anything and if they are lazy or perform shoddy work, they are immediately fired."²¹⁰

Given the context of this fully developed "distribution system," it is not surprising that Eupen's cloth manufacture should have had its share of industrial strife. During the early 1760s social tension was to reach a high pitch. Here, as in Montjoie, the shearmen stood in the vanguard of this battle, opposing the employment of foreigners and apprentices, and demanding a rise in wages to offset rising prices.²¹¹ When the authorities reminded them of the 1724 edict, granting their masters freedom of hire,²¹² the craftsmen replied by joining forces with their comrades in neighboring towns to establish a guild that had all the characteristics of an early trade union. The authorities, in turn, reiterated existing legislation prohibiting such coalitions.²¹³

By 1765 discontent had spread from the shearmen to weavers, spinners, and all the other workers of the Limburg woolen industry, exasperated by the arbitrary and cruel treatment meted out to them by their employers. But to understand fully the nature of the social conflict, it is well worth noting that the manufacturers of coarse cloth—*les quenés et pennes* made of woolen waste—sided with the wage earners and confirmed the brutality of the large merchants.²¹⁴ These humble producers had good reason to hate the rich clothiers. For the latter were continuously petitioning the Limburg government to prohibit the making of this cheap material, on the grounds that it provided a profitable outlet for the wool stolen from them. However, Dechesne points out that it was not the theft of wool that bestirred the fine-cloth manufacturers into opposition against small-scale industry. Their position could be better explained as the result of being concerned about the rise of a new industry that could possibly threaten their labor market monopoly.²¹⁵

Despite these difficulties, the woolen trades in Eupen continued to make progress, with their wealth being highly visible. According to an anonymous report, about sixty residing merchants owned their own castles and were leading lives that even a count would not have been able to afford.²¹⁶ There is no doubt that these remarks are exaggerated, for the lives of the working classes were very poor. Even among merchants, luxury and wealth seem to have been exceptional, keeping in mind the size of the settlements and the proportion of industrial activity. In 1780 there were at most two thousand persons living in Eupen—only slightly more than the number of shearmen employed at that time by the local cloth manufacturers.²¹⁷

But even putting aside these exaggerations, the rise of the industry during the eighteenth century was very impressive.²¹⁸ Moreover, due to the dynamic force that resulted from the woolen trades' activities, social and economic progress began to take place in these rural areas. Mechanical innovations, precursors of the industrial revolution, were introduced at a rather early stage.²¹⁹

Capitalism Comes to Town

During the eighteenth century, the Aachen area woolen trades could no longer resist the force of the secular rise that so rapidly had changed the surrounding areas. Even the imperial city now had to somehow take account of the forces induced by the international economic changes. "The traditional structure of society," according to Thun, "could slow down the pace of growth, but could not inhibit it."²²⁰ The town's leading clothiers, aware of the exacting demands being made by the expanding markets, became the pioneers of progress. They eagerly applied some of the local inventions in dyeing. They also sought to improve shearing techniques as well as finishing and marketing methods in general.²²¹ To achieve these ends, the merchants increasingly concentrated these operations on their premises—thereby enhancing their already powerful position within the local trade.²²²

These innovations seriously weakened the existing corporate order. Yet the rich clothiers continued to be impatient with whatever barriers remained to complete commercial freedom. Among other things, they tried to buy their way into the *Wollenambacht*, thus hoping to shape its framework to their needs. This scheme proved quite successful. Though all members of the guild were ostensibly equal in status, the merchant-manufacturers soon gained pre-eminence by virtue of their wealth, employing on an ever-larger scale scores of less prosperous guild members. Eventually, these merchants provided the hard pressed craftsmen with some of the imported raw materials, and occasionally even lent them the requisite tools. At the same time, these capitalist producers disregarded, in the most flagrant manner, the city's corporate regulations limiting the number of journeymen to be employed in an individual plant.²²³

By its very nature, the tempo of rural industrialization led to closer interdependence of the cloth manufacturing activities in town and country. The aforementioned tendency, on the part of Aachen's merchants, to have some of their industrial operations performed outside the city was thus accentuated. The proportion of Aachen cloth woven, dyed, or dressed in neighboring territory was on the increase.²²⁴ In return, several of the former Aachen merchant-producers, now residing outside the city, continued to have certain tasks done by Aachen artisans.²²⁵ This meant that the medieval tradition of limiting industrial activity to the incorporated city was doomed. Finally, the extent to which foreign merchants, through their resident factors, gave direct orders to local masters, provides some evidence of the importance capitalist forms and relationships had assumed within this town.²²⁶

In view of the world's rather steady economic progress, eighteenth-century Aachen had no basic difficulties in marketing cloth, except for years of war and periods of harvest failure. As in the case of the aforementioned woolen centers of the region, Aachen's trade was oriented, via the fairs of Frankfurt and Leipzig, toward the Levant and, above all, toward Russia.²²⁷ By then, the czarist lands had become a seemingly insatiable outlet for Western textile products. Consequently, many of the area's principal clothiers engaged almost exclusively in that commerce.²²⁸

Extant accounts of extended business trips to Russia, undertaken by two such leading merchant-manufacturers, Christian Friedrich Claus in 1768-69 and his son Ernest Conrad Claus twenty-five years later, offer some insights into certain aspects of this export trade. Aachen's clothiers established direct contacts with the main Russian trading centers, including Riga, Dorpat, and, most importantly, Moscow and St. Petersburg, by consigning goods on commission to the various German and English merchant houses there specializing in the disposal of these wares to Russian drapers.²²⁹ Payment was made on the basis of a twelve-month credit.²³⁰ And it appears that in these transactions, bills drawn on Amsterdam served as the most convenient exchange.²³¹

The report of the senior Claus gives no details regarding the volume or the value of that trade. Yet by the standards of that period, it appears to have been substantial. Within Russia, Aachen's producers and their fabrics en-

joyed a considerable reputation. When Peter the Great visited the imperial city in 1717, he stayed with the Clermonts, whose sizable manufacturing plant was considered to be an exceptional sight. At that time, the czar, impressed by what he saw about him, promised his hosts that in the future he would dress his soldiers in uniforms made exclusively of their cloth. Nothing seems to have come of this plan, but it suggests something about the scale of business these merchants contemplated.²³²

The observations recorded by the younger Claus on his tour of Russia in 1794–95 are much more specific. They bring to light interesting information concerning the magnitude and general nature of individual transactions within this particular trade. In one instance, the merchant house of Mollwo and Son was debited, during the quinquennium 1790–94, by C. Claus and his partners of Hoffstadt and Claus to the amount of 200,000 in talers.²³³ In another case, twenty-four bales of cloth, valued at 32,461 talers, were consigned between June and October 1792 to the St. Petersburg firm of Hill, Cazalet, and Company.²³⁴ According to Claus, the fabrics shipped were of all colors and types, though usually limited to higher quality material. The price ranged from 177 to 2,879 talers per bale. Most of the cloth was quoted above 400 talers a bale.²³⁵

Throughout his journey, Conrad Claus tried to strengthen old bonds of commercial friendship, cement new ones and, where necessary, expedite payments by laggard debtors. Claus was also eager to ascertain local mores and particularly the reputation and credit standing of his customers—that is, of the brokerage houses as well as of the Russian drapers who were the ultimate buyers.²³⁶ Finally, he was concerned to evaluate the competitiveness of his wares against those of his fellow Rhineland producers and therefore carefully examined, whenever the opportunity arose, the validity of various complaints concerning shortcomings of his fabrics. The entries into his diary, while staying in St. Petersburg, reveal that these matters were uppermost on his mind.²³⁷

In Moscow, similar charges about defects in the material were being voiced by customers. One of the local drapers even expressed his willingness “to pay a few Stüber more per *Elle* if only he could get fabrics of better quality.” Despite such adverse comments, Claus was generally satisfied with the reputation his firm enjoyed in this metropolis. Nevertheless, judging from entries in his diary, he remained at all times conscious that by comparison with his competitors, there was considerable room left for improvements of his products.²³⁸

Finally, Claus turned his entrepreneurial gaze at the dissolute ways in which many of the rich Russian drapers were aping their feudal lords. His deadpan account of their carefree habits, and above all his businesslike exploration of their illicit liaisons tied to dubious credit operations, serve to highlight the prevalence of low standards of commercial morality. This in turn points to the unavoidable problems encountered by those engaged in trade with more backward regions. Indeed, Aachen’s manufacturers experienced difficulties in recovering payments due them. Frequently, debts outstanding

were met (if acknowledged at all) seven or eight years after they had become due. Strange methods of financing trade bedeviled relationships still further. It was not unusual for a Russian broker to await the arrival of several shipments from various manufacturers before drawing a collective bill on their behalf on himself. This meant that he could pay them according to his wishes, and that in case of bankruptcy, the Aachen merchants had no grounds to claim any part of the frozen assets.²³⁹

Precarious though the Russian trade was, the high profits to be derived from it more than compensated for the risks. In fact, this particular commerce, more than any other, had been the basis of the wealth that the large clothiers in and around Aachen had accumulated during the eighteenth century.²⁴⁰ The magnificent rococo residences they erected, as much as the precious art collections they amassed and the seignorial hospitality they lavished upon foreign dignitaries, became the outward symbols of their mercantile success.²⁴¹

Yet, throughout the eighteenth century, the extent of these capitalist triumphs must not be exaggerated. The incorporated master cloth makers remained dominant in Aachen's woolen trades and resisted the local penetration of market forces with a ferocity characteristic of groups threatened in their existence. These craftsmen sought the preservation of the *Wollenambacht* as the arbiter of industrial control, because in doing so they hoped to perpetuate the outdated guild rules that assured them their privileged status within this polity.²⁴² To what lengths the masters would go in their blind opposition against progress is luridly reflected in their refusal to accept, during the boom of 1699, work offered them by the Burtscheid producers who were unable to meet all their orders.²⁴³

Thus the abuses, which in previous centuries had already stifled quality output and general improvements of production, were compounded during this era. Of these, the monopolistic practices affecting this particular labor market were the most conspicuous. Whereas children of masters were granted, without cost or examination, full rights of guild membership and eventually master status, outsiders wishing to enter the trade were subjected to stiff examinations, high admission fees, long years of apprenticeship, and scores of other chicaneries.²⁴⁴ The consequences of such discrimination were obvious. On the one hand they led to a deterioration of skills among the privileged even worse than in the seventeenth century. On the other hand, they deterred many able individuals from seeking admission to the craft, and thus drove them to find their fortune elsewhere.²⁴⁵

Moreover, the perversities of the economic structure accentuated the centrifugal tendencies of local industry. Dissatisfaction with the artisans' shoddy work and negative attitudes prompted many merchant-manufacturers to have an ever-larger share of the various production processes performed outside the city gates. During the eighteenth century, about half of Aachen cloth was woven in the neighboring countryside.²⁴⁶ At the same time, several entrepreneurs despaired of the environment altogether and left Aachen to continue their profitable business in one of the nearby townships. In 1700 the

Loevenichs settled in Burtscheid; in 1764 the Clermonts established their plant at Vaels and soon employed about 160 weavers throughout the region.²⁴⁷

Such entrepreneurial mobility gave the city's capitalist sphere added vitality while simultaneously condemning the guild sector to further stagnation. Violent fluctuations, both in the number of craftsmen working in Aachen as well as in the volume of cloth produced, underscored, in contrast to the prospering *Verleger*, the precarious position of guild production. Barring a few exceptional years, Aachen's hapless artisans suffered from serious underemployment. Consequently, they were unable to provide for themselves the necessary margin with which to withstand the famine prices and crises years that periodically plagued the local economy.²⁴⁸

Moreover, the extent to which the wealthy clothiers were able to subject most craftsmen to a subordinate and marginal role within this trade suggests that the demand for craft services became increasingly cycle sensitive. The craftsmen enjoyed brief spells of full employment during a boom—this happened to be the case in the prosperous decades from 1680 to 1700, from 1716 to 1720, and again in the 1760s—only to be plunged into almost total idleness in a depression.²⁴⁹ During the crisis years of 1700–05 and again in the 1740s and 1770s, one-third of all masters were jobless and some contemporaneous accounts go as far as to indicate a complete standstill in local manufacturing activity.²⁵⁰

The misery of the unskilled labor force was to round out this dismal scene. Because of the complementary nature of their ancillary services, these men and women suffered the full impact of craft stagnation. Living at all times close to subsistence, death stalked through their midst during famine periods.²⁵¹ Accordingly demoralized and prey to every vice, they swelled the swarming ranks of beggars whose very numbers astounded every visitor to the imperial city.²⁵²

Social tension within the *Wollenambacht* caused further difficulties as the steady decline of the woolen crafts eroded the traditional master-journeyman relationship. The reasons why such dissensions developed are not far to seek. Unable to command sufficient funds to pay the initial fee that would accord him master status, let alone accumulate the necessary capital to purchase the equipment needed for a craft shop, many journeymen became, to all intents and purposes, proletarian wage earners. Thus it was only natural that, given such social degradation, the journeymen increasingly found their interests divergent from and in opposition to those of the master employers.²⁵³

By 1746 the journeymen-shearmen had banded together in an attempt to enforce, by use of the boycott, their rules upon masters and government. The authorities promptly issued an edict prohibiting such coalitions. Yet the exhortation went unheeded as the journeymen continued, according to Jansen, "to insult their superiors . . . and to do generally as they please."²⁵⁴

Within the next few years social cleavages widened, and in 1753 the same journeymen rose up against the rich clothier Heupgens. Enraged by Heupgens's arbitrary behavior, they called upon their comrades throughout Aachen and Burtscheid to boycott his establishment. Heupgens retaliated by having his men

locked out and by having them blacklisted among all other masters in town. But his efforts proved fruitless. The conflict soon assumed major proportions and even the local military could not reestablish order until the council had declared Heupgens's shop out of bounds and had forbidden Heupgens's journeymen from working for other masters.²⁵⁵

Soon afterward the shearmen struck for higher wages and better working conditions. Their demands were quickly satisfied, for at this stage, the masters feared that a work stoppage would cause them to lose orders from the clothiers, and they were ready to make concessions. "It is hard," was Jansen's comment, "when masters must allow their journeymen to lay down the law for them." At the same time, the journeymen, emboldened by their successes, marched into Burtscheid where they destroyed the shop of a Protestant master sheerman.²⁵⁶

Clearly, such combativeness is an expression of resentments felt by desperate men unable to comprehend the painful changes to which they were being subjected. Their outbursts of violence were as sporadic and spontaneous in nature as they were confused with respect to purpose. Almost simultaneously, the journeymen fought both for the reestablishment of the old patriarchal order as well as in defense of their position as hard pressed wage earners dealing with employers whose views on industrial relations were as crude as one might expect at this early stage of capitalist development.²⁵⁷

The master-craftsmen struggling for the preservation of their rights were weakened by the same kind of disunity and lack of focus. Thus, what in the long run was in any event a basically hopeless opposition to inexorable forces, was rendered ineffective, even in the short run, by tactical errors. How far, therefore, by the middle of the eighteenth century, the attrition of the corporation and the disintegration of the old order had already progressed, is well brought out by some of the circumstances surrounding a conflict which in 1732 had erupted between the guild and the aforementioned Heupgens. In that year, a few master-craftsmen brought suit against Heupgens for having tried to buy his way into the shearmen's guild in a supposedly illegal manner.²⁵⁸ However, most of the master shearmen, the men most directly affected, assumed a noncommittal position. They declared themselves ready to await the outcome of the trial and in the meantime gave Heupgens permission to continue operation of his manufacturing plant with forty journeymen, which was four times the number of employees permitted by the guild.²⁵⁹

A few years later, the support extended by these masters to Heupgens, in a conflict with his journeymen, is, in many respects, even more revealing of the social realignments that had occurred in this city. That the masters were ready to stand by Heupgens was evidence of their dependence upon the large employer. Such assistance was also an expression of their approval as petty employers, glad to see a man like Heupgens try to limit the seemingly ever-increasing power of combative journeymen.²⁶⁰

The attitude of the Aachen city council, in the face of these difficulties, was one of indecision. The aldermen, many of them craftsmen elected by the guilds, were naturally desirous of maintaining the corporate order. However,

they equally realized that any action against such wealthy clothiers as Heupgens, even if supported by large numbers of the population, was fraught with dangers. The merchant-manufacturers were too integrated into the local economy to be dismissed outright. Closure of their plants would have spelled difficulties and hardship for the entire city. Finally, some of the aldermen were already working as craftsmen for large employers and therefore could no longer oppose them with impunity.²⁶¹

Despite their growing strength within Aachen's economy, the merchant-manufacturers remained discontented. They were, as mentioned earlier, annoyed at the harassments to which they were being subjected by the guild. They were equally impatient that their political influence and opportunities for holding city office were not commensurate with their economic importance. Their resentment was particularly intense because the reality of prevailing conditions contrasted so radically with the emerging ideas of economic freedom and political representation to which the clothiers had become increasingly exposed. Close commercial ties with the West, especially the Netherlands, had made the merchants readily accept the message of the Enlightenment, not unlike the rising business classes elsewhere, as a guide for and a rationalization of their position.²⁶²

This then was the material and ideological background for the power struggle which was to shake the foundations of eighteenth-century Aachen: on one side, the rich and self-confident clothiers making a bid for the supreme positions within the city; on the other, the patricians resisting with a verve and dexterity aristocracies usually display when challenged by new groups clamoring for office. Inasmuch as on this occasion the religious issue was in abeyance, material interests came unashamedly to the fore. The capitalists sought power in order to shape city affairs to their needs. Specifically, they wished to ease their entry into the guilds and eliminate all barriers to their ambitious activities. The oligarchs in turn knew that as beneficiaries of the various city privileges, as major office holders dispensing patronage, and as wholesale merchants in nonindustrial vital products, they had everything to lose and nothing to gain from capitalist supremacy.²⁶³

Historically, the patricians had proven themselves most adept in riding out storms of opposition. Toward the end of the Middle Ages, they were able to placate the malcontented artisans by issuing the *Gaffelbrief*. Two hundred years later they roused the craftsmen to join them under the Catholic banner to fight the twin threats of capitalism and Protestantism. Yet the very success of this power play was to set the pattern for a *modus vivendi* in which the guilds were given free rein on economic matters in return for surrendering the substance of political power to the existing oligarchy. This largely explains the resilience of Aachen's corporate system long after it had outlived its vitality.²⁶⁴

The guilds' apparent importance on the political scene derived from their strategic position within the constitutional framework. According to law, the guild representatives elected the members of the *Rat*, who in turn chose the various city officials including the all-powerful mayor.²⁶⁵ However, the steady decay of some guilds and their exiguous membership made a mockery of the

democratic processes as they opened the way to electoral malpractices characteristic of a pocket borough.²⁶⁶ Consequently, bribery and corruption—the so-called *Mäkelei*—became endemic in Aachen government, which in turn made the maximization of profits from patronage and office—to defray election expenses—a prerequisite of political survival.²⁶⁷

It almost became a “convention of the constitution” for rival candidates to distribute cash among the populace and to entertain, before every annual election, their followers with lavish feasts. Thus for days on end, a drunken mob was left in control of the streets, endangering life and property. Reports of damage done to houses and shops and of bodily injuries and even deaths were usual on such occasions.²⁶⁸ Thus by comparison, to judge from these accounts of violence, the antics that preceded parliamentary elections in John-sonian England seem like innocuous frolics of an elementary school outing.

The consequences of such leniency toward disorder proved disastrous for social life in general and industrial activity in particular. It is amazing that the volume of cloth production remained as high as it did, for everywhere signs of demoralization presaging the eventual breakdown of sound organizations were in evidence.²⁶⁹ Roving bands were assaulting persons in the city and its vicinity with impunity; trade in raw wool stolen from the clothiers was assuming ever-larger proportions without serious interference.²⁷⁰ Above all, the high rate of mendicancy continued to increase, making some parts of town almost impassable for the ordinary pedestrian.²⁷¹

At first glance, it may seem somewhat strange that the local *optimates* should have condoned with such equanimity the temporary yet recurrent outrages perpetrated by the plebs. But the apparent enigma is resolved by Eric Hobsbawm’s masterly account of the preindustrial mob. The imperial city’s difficulties can be placed in the context of a general malaise afflicting those “towns with a continuous existence dating back to beyond the high Middle Ages . . . [where] the mob was of particular importance and developed a peculiar subpolitical complexion of its own. . . . In such cities the *popolino* lived in an odd relationship with its rulers, equally compounded of parasitism and riot . . . the rulers and the parasitic poor thus lived in a sort of symbiosis.”²⁷²

Given such a corrupt environment, it is easy to understand how a few patricians, aided and abetted by their friends, were able to perpetuate themselves at the helm of state. History has clearly recognized the unlimited authority wielded by those men, and the lasting impact they made upon the city’s development, by identifying the whole eighteenth century in terms of their administration.²⁷³ This is why, looking back upon this age, Aachen citizens invariably referred to the eras as Lonneux (1725–55), Wespien-Strauch (1759–63), Kahr (1763–76), and Dauven (1776–86), respectively.²⁷⁴

These protracted periods of office were punctuated by violence and by increasingly acrimonious charges regarding the embezzlement of funds and the misuse of public property by those in power.²⁷⁵ Particularly after the middle of the eighteenth century, a change in government was not effectuated without a major scandal and without the use of some force. This was

true in 1756 and again in 1763. The revolt of 1786 assumed even larger proportions as a riotous mob, incited by the opposition party, rushed the town hall.²⁷⁶ The *Rat* and the mayor were forced to flee into neighboring Burtscheid; the duke of Jülich—always eager to fish in troubled waters in order to extend his rights in the city—marched his troops into Aachen under the pretext of reestablishing law and order.²⁷⁷ Eventually the imperial authorities intervened. Having restored the status quo, they appointed a commission with a mandate to investigate the causes of Aachen's troubles and to recommend necessary reforms.²⁷⁸

The commission never bothered to probe into the underlying causes of these disturbances, thereby leaving the issue to be resolved by subsequent history. Ever since then, generations of scholars have investigated and debated this matter with characteristic dissonance. Among students of the *Mäkelei*, essentially three viewpoints predominate. There is first of all the view that justifies the activities of the men in the "New Party" (those out of office), as a struggle in defense of a democratic constitution against the usurpation of an oligarchy intent upon solidifying its power and enriching itself in the process. This is why historians representative of this approach dwell at length on the various charges leveled at the mayor and his friends regarding irregularities in the leasing of the gambling casino, in the sale of lands confiscated from the Jesuits and, above all, in the administration of the city treasurers. Besides these, historians emphasize that eventually some of the leaders of the "New Party" emerged as sympathizers of the French Revolution.²⁷⁹

However, it is most doubtful whether the above analysis of the situation will bear closer scrutiny. Aachen's constitution was, even in its heyday, a far cry from a liberal document. Besides, ideology was as yet of little significance (whatever the influence of the Enlightenment on the local scene might have been at the time) in shaping the course of political events. Consequently, the critic has a point when considering this "Whig version" to be unhistorical inasmuch as it attempts to read into the eighteenth century motives and forces operative only in much later eras.²⁸⁰

An alternative explanation of the *Mäkelei* stresses that Dauven and his predecessors were for the most part good administrators and that generally the competence and probity of those in office were not at issue. Rather, the trouble was inherent in the defects of the constitution, which invited feuds between rival factions of the *beati possedentes* claiming monopoly of power.²⁸¹ There is surely considerable merit to such a "Namierite interpretation" of this period in Aachen history. Yet by itself, emphasis on the power play does not quite explain why only in the eighteenth century tensions within the body politic reach a breaking point.²⁸²

An additional hypothesis, to complement rather than supplant the "Namier approach" is required, and Philomene Becker's thesis provides that missing link. Her theme is most relevant to this study. She argues that the capitalist transformation of the woolen trades and the subsequent drive, on the part of the rich clothiers, for a share in the city's power structure were decisive as regards the timing and the extent of the *Mäkelei*.²⁸³ Mayor Lonneux himself

seems to have subscribed to this particular view when he suggested that the opposition against him consisted primarily of capitalists anxious to displace him. He cannot have been too wrong in his suspicions. For in 1755 the aforementioned Heupgens tried to win election to the highest office in the city and a year later, when the "New Party" did achieve power, two merchant-manufacturers, Wespien and Strauch, actually became mayors.²⁸⁴

However, when in 1762 the "Old Party" was returned to office, another clothier, J. L. Kahr, became mayor.²⁸⁵ This, of course, makes it easy for critics of Becker's economic interpretation to point out that despite the major changes that had occurred in Aachen's social stratification, distinctions between the two parties on the basis of interest groupings are not feasible. But even if this critique is in part valid, it still remains a fact that these new men of money were eager to achieve social and political prominence. They accordingly participated, by joining either party, in all the political maneuverings that promised them greater influence or even dominance within the city. Without the clothiers' total involvement in these struggles—and more significantly, without the merchants' willingness to use their ample resources in fanning the fires of sordid intrigue—the *Mäkelei* could never have reached such incredible proportions.²⁸⁶

The imperial commission, as has already been pointed out, never quite came to grips with the basic issues underlying this malaise. However, the very deliberations of this august body did manage to stir up an intense public debate. In quick succession, several pamphlets appeared on the local scene. In their effort to lay bare some of the forces responsible for this sad state of affairs, these literary efforts reflect the uneasiness and agitation that had gripped this city at the time.

Of all these publications, the aforementioned *Frey müthige Betrachtungen* are the best known. Published anonymously, they are, according to all indications, the work of the Vaels clothier J. A. von Clermont.²⁸⁷ In clear and concise language, this writer pillories the most glaring abuses considered to have been strategic as regards the dismal conditions of the urban economy in general and the woolen cloth trade in particular:

All around, in Burtscheid, Montjoie, Verviers, Vaels, and in the whole Limburg district, which is studded with factories, freedom prevails. The clothier can use as many looms in his own building as he wishes. He can employ on his premises as many shearmen as his business requires. In short, he has free reign in his endeavors and selects his workers and their numbers as he alone sees fit. However, this imperial city is dominated by most disadvantageous guild regulations that paralyze the wings of industry. Even the will of the best to raise himself is stifled because he is never able to enjoy the relatively larger fruits of his diligence, compelled as he is to keep the same pace with the lazy and the ignorant.²⁸⁸

Specifically, as the author goes on to show, the guilds continued to insist upon the untenable rule which permitted craftsmen and masters, irrespective of

their competence or reputation, to employ four hands or journeymen and the individual weaver to ply only four looms.

Clermont (in this anonymous guise) then extolled the virtues of economic freedom. Above all, he praised the *Verlag* as the institution exemplifying most thoroughly the benefits to be derived from the practice of commercial liberty. Turning to a discussion of his principal demands, they included: reform of the guild system, stricter bankruptcy laws, and tougher penalties against wool thieves and their fences. Last but not least, he made a plea for religious tolerance as an important ingredient of economic progress.²⁸⁹

A few months later, these views were to be reiterated in the pamphlet, *Beytrag zu den Verbesserungs-Vorschlägen*. Published anonymously, it too is the work of Clermont who, on this occasion, tries to underscore the wisdom of his recommendations by elaborating on the advantages occurring to English and French industry from a policy of laissez-faire. Besides, it is rather revealing that in some ways the *Beytrag* is prepared to admit, if only by implication, that, at least in part, the pilfering of wool, shoddy workmanship, and general depravity are but the outward manifestations of a desperate and hungry population at odds with a mean and cruel world.²⁹⁰ This recognition in turn might suggest that a few employers had come to realize that even where circumstances might allow them to lower wages, to do so would not prove to be a profitable proposition.²⁹¹ Indeed, at this point one might be even permitted to speculate that Clermont and several other entrepreneurs had discovered the advantages of a "high wage economy," an insight which was very gradually making headway among members of the business community during the late eighteenth century.²⁹²

However, "A Tentative Plan for the Establishment of a Workhouse in the Imperial City of Aachen" strikes a quite different note. To appear in 1791 under the name of the philosopher J. F. L. Jacobi,²⁹³ this pamphlet is supposedly another effort by Clermont who, in this particular context, offers few suggestions and even less hope regarding the ameliorative possibilities of the work force. Calling upon the local clothiers and other wealthy citizens to support the building of such an institution, the proposal advocates that the ablebodied among the paupers be usefully employed. They should be taught to spin woolen yarn, which could be accumulated as inventory to be used in boom periods.²⁹⁴ The proposal then goes on to spell out the house and work rules that should govern life in such an institution. The extent to which withdrawal of food and corporal punishment were assigned a key role in the maintenance of a rigid discipline indicates that, at least for this group of workers, Clermont did not as yet trust a policy of generosity and leniency.²⁹⁵

Finally, it is worth noting that during this period, most proposals regarding the reform of Aachen's constitution were conspicuously moderate. This was true of Clermont's suggestions as well as of those made by the Royal Prussian Councillor C.W. von Dohm, who as a member of the imperial commission drafted the outline of an improved constitution which subsequently was adopted by the authorities. Both men accepted the guilds as a datum in Aachen life and accordingly but wished to see the guilds transformed into politi-

cal constituencies without economic significance. In this way they hoped to put a stop to the horrors of the *Mäkelei* and to some of the most noxious fetters limiting industrial activity.²⁹⁶

At the time, only one proposal, the work of the local journalist P. J. F. Dautzenberg, demanded radical change that would bring about representative government.²⁹⁷ But such a plea remained a cry in the wilderness. For the time being, Rousseauite and democratic sentiments in general had made very little headway in this town. This is why, when eventually the high court at Wetzlar wished to implement the new constitution, the guild members protested violently even these modest alterations.²⁹⁸

But the wrangling over a new form of government was to prove purely academic. By then the Paris citizenry had rushed the Bastille. Soon afterward, the *sans culottes* were on the march, routing one mercenary army after another. And when they eventually entered Aachen, they dispatched, by occupier's edict, into the limbo of history all of those vestiges of *l'ancien régime* which at home they had already abolished by revolution.²⁹⁹

5

The Impact of the French Revolution on the Lower Rhine Textile Districts: Some Comments on Economic Development and Social Change

The Setting

On the eve of the French Revolution, the nations of Western Europe could look back upon seventy years of almost uninterrupted industrial progress. Conditioned by the shift in its center of gravity toward the Americas, world commerce experienced an expansion that was part cause and part effect of this dynamic. The scale of old industries was enlarged and new products were easily introduced. Most important of all, the environment, as dominated by a rising merchant class bent on profits, was propitious for the absorption of novel techniques of production.¹

The Lower Rhineland textile districts had become an integral part of the emerging Atlantic economy. By virtue of their position within the international division of labor, they shared fully the benefits of this secular buoyancy.² Capital and industrial skills flowed freely, to and from this region, across the Rhine. Where at the end of the seventeenth century had been hamlets and isolated peasant holdings, there stood, a hundred years later, densely populated towns that were hives of industrial endeavor. "Shacks and dilapidated houses were torn down," reported contemporaries, "and palaces were erected in their place."³ In the twenty-five years following the Seven Years' War, some localities in this area experienced no less than a 50 percent increase in the volume of their manufacture.⁴

The social consequences of this prolonged boom were equally significant. In the new localities the drive toward industrial expansion had subjected the old social order to unrelenting pressures. Paternalism in the sphere of indus-

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trial relations was no longer compatible with the competitive and unstable nature of world trade. Traditional craft relationships were eroded and at times swept away as journeymen were increasingly turned into wage earners, working at home or in an enlarged workshop, for a merchant-manufacturer.

For the most part, even the master-craftsman remained independent in name only. In his new position as subcontractor or supervisor, he was already caught in the web of capitalist relationships, subservient to the *Verleger* who coordinated the process of manufacture, applied the finishing touches of production in his own plant, and eventually effected the product's final sale. In turn, the manufacturer's stores and workshops constituted, as much as the long rows of workers' homes, the outward symbols of this new world.⁵ "Indeed, both of these," said the historian Kuske, "brought clearly into prominence the new forms of social stratification of the modern town where entrepreneurs and workers predominate."⁶

The molding of the social structure to fit the requirements of industrialization was eventually completed during the revolutionary upheaval of the next twenty years.⁷ Here the revolutionary impact was more direct and more immediate than anywhere else in Europe, excepting France itself. The unique and distinct lines of Rhineland development, in contrast to those of other German lands, were further accentuated as the different areas of this region were incorporated, directly or indirectly, into France and thereby brought under its reformed system of government with its novel legislation.

Throughout the years of occupation, French policy toward the Rhineland was not always in the best interests of this region. Neither was it consistent in its aims or uniform in its effect upon the various districts. Before the establishment of the consulate, such policy shifts as occurred were inevitably by-products of general instability on the French political scene.⁸ The convolutions of successive revolutionary commissars, in their task of absorbing new territories according to new methods, compounded the difficulties.⁹ Above all, the exigencies of war required deviations from enlightened principles and implementation of harsh measures.¹⁰ These were to affect the regional economy adversely, and at times led to serious though temporary setbacks.

It would be quite wrong, however, to judge the record of the French administration solely on the basis of its worst policies. Rather, it is important to evaluate the impact of the French era in its entirety. For once such an overall view is taken and necessary qualifications are made, it can safely be stated that French domination proved, in its long-run effect, a true blessing.¹¹ A local historian expressed a generally held view when he wrote that "modern Rhineland history . . . began when revolutionary troops, after a brief encounter, established French rule on the Rhine. This foreign occupation brought to the people of the Rhineland not only the end of the old world but also the beginnings that portended future developments."¹² Friedrich Engels, a native of the area, once remarked that "the Rhineland was ahead of the remaining German lands, revolutionized by the French because of its industry, and

ahead of the other German industrial districts (Saxony and Silesia) because of its French revolution."¹³

The edicts of revolutionary reform, as implemented by the French, swept away those vestiges of feudalism which the developments of the eighteenth century had not been able to erode.¹⁴ All feudal services arising out of the master-servant relationship were abolished without compensation to the lord. Tithes were declared null and void. Payments in kind, by tenants to the landlord, were commuted into money rents. Hereafter the sales of land were unrestricted and the rights of inheritance were freed from all restrictions. Land taxes became mandatory for all, irrespective of rank and title.¹⁵ Finally, as mentioned earlier, the breakup of monastic lands and their sale at reasonable prices to local Kulaks created a group of prosperous husbandmen who were subsequently to prove effective agents of agricultural as well as industrial progress.¹⁶

The same spirit of equality was brought to the reform of the judicial process. The jury system was established and the old patrimonial courts as well as the judicial powers of the bureaucracy were declared invalid.¹⁷ *Conseils de prud'hommes*, predecessors to commercial and industrial courts, were set up to settle disputes arising in the course of trade and in employer-employee relationships. Legislation dealing with joint stock companies and business associations were far in advance of its time.¹⁸ Above all, restrictive guild regulations of any kind were abolished without delay.¹⁹

Besides sweeping away the last remnants of feudalism and reforming the judicial process in the spirit of the revolution, French commercial policy encouraged entrepreneurial activity by opening up new markets. This was particularly true of the districts of the left bank of the Rhine which became a part of France and were incorporated into the French market. Finally, chambers of commerce and industry, as established by the French authorities, gave the local merchants and manufacturers means for more effective participation and representation in public affairs commensurate with their economic importance.²⁰ The power of capital within society was thereby strengthened.²¹ However, its pressures upon the craftsmen, who as domestic wage earners became increasingly dependent upon the capitalist *Verleger*, were attenuated by the prosperity throughout most of this period. This largely explains the absence of any vigorous social protest on the part of the craftsmen during these years.²²

Economic activities during the revolutionary period were not drastically altered. Some decades were to pass before the momentous innovations known and utilized in England were to take root here.²³ As late as 1816, State Secretary Kunth noted, after an official visit to the Aachen district, that some manufacturers were still in the process of installing techniques of production initially introduced into the area at the beginning of the century.²⁴

Napoleon's governing imperial commissar in the duchy of Berg, Count Beugnot, was even more specific regarding the sluggishness of local industry vis-à-vis new methods of production, though he was generally impressed with the overall state of the duchy's industrial development. While on an inspec-

tion tour of the Berg area industry, Beugnot, in 1810, visited a Wupper valley woolen spinning mill. He observed:

Although this enterprise is only two years old, it avails itself of a method of production that is already outdated and which since that time has been very considerably improved. The cards must be completely replaced; they are installed very low on double rollers and suffer from all the inconveniences of this type. The throttle frames are without the wire brush which since that time have been fitted to the base. Nor do they have the spring catch which stops the bobbin at will. The carriages of the mule jennies are heavy; they move with difficulty because the wheels, besides being of fairly crude manufacture, slide on a band made of iron instead of one that should be made of leather. In general, this mill is most backward when compared to those of France and England, and it would not be used, as presently set up, in the valley of Maromme, Daville, or Manchester.²⁵

Beugnot was equally surprised to find that in the Wupper valley no weaving loom as yet had the double shuttle and that even the flying shuttle was still a rarity.²⁶

To have stressed the existence of a technical time lag is in no way meant to deprecate or doubt the importance of revolutionary legislation. Rather, such emphasis purports to demonstrate that only in the long run can a major transformation of social institutions fulfill its role for the economic process, as far as it provides the social framework within which economic progress becomes feasible. In the short run, however, the "inevitability of gradualness," because of the impossibility of overcoming basic scarcities rapidly, severely limits any spectacular achievements of economic change, whatever the measures of social reform.²⁷

Furthermore, considerations of this nature bear upon general evaluation of this period. This is particularly the case inasmuch as some of the leading authorities maintain that the importance of the French revolution in this region has been grossly exaggerated. These historians argue, if only by implication, that, in view of its buoyancy and progress throughout the eighteenth century, the Rhineland economy would have subsequently prospered, perhaps even more so, without outside interference.²⁸ It is, of course, impossible to prove or disprove such an "iffy" question of history ("history does not conjugate in the conditional"), though the issue of the revolutionary impact has been debated at length and in a larger context in France itself.

This study tends to side with those who regard the legislation of the French era as a milestone from which the Rhineland economy was to benefit for many decades to come. Nevertheless, those who oppose this view seem to have a point insofar as they emphasize that the achievements of French reforming zeal were feasible only because of the already advanced state of Rhineland society.²⁹ Contact, these historians maintain, between a backward society and French revolutionary legislation would have only led to chaos.³⁰ Indeed, given the low degree of the arts prevailing at the end of the eighteenth century and the consequently limited possibilities for social planning, the radical transfor-

mation of feudal and backward regions into progressive societies was not yet within the realm of the possible.³¹

War, Occupation, and Inflation

With the beginning of the revolutionary war in 1792, the Rhineland textile trades came to enjoy great prosperity.³² With minor exceptions, most of the manufacturers in the various districts expanded their sales and penetrated markets from which the traditional suppliers had disappeared.³³ The French industries had ground to a halt because of the *levée en masse* that had denuded them of their work force. Likewise, the English manufacturers were adversely affected by the hostilities, as they experienced some difficulties in marketing their fabrics in Western Europe.

Elberfeld and Barmen, the twin cities of the Wupper valley, benefited most from the opening of new markets. Their exports gained at the expense of the more advanced industries of Western Europe. Their export staples, lace, ribbons, half-cottons, and bed linen, were in a rather fortunate position. They not only enjoyed a reputation abroad, but they also had been patterned after those French fabrics they were now trying to displace. In quality, the products of the Wupper valley merchants, particularly silks, were as yet no match for the fabrics of their "masters." However, they were more than able to compete pricewise, even against the English, in the French and Italian markets.³⁴

Such success provided the basis for a boom that appeared to be an enhancement of a long-run expansion dating back to the early 1780s. As new entrepreneurs and new firms crowded into the area, employment figures and wage rates reached unprecedented heights. Innovations, whatever the opposition against them, became both more feasible and increasingly necessary. The first red dye plants (for which the Wupper valley was subsequently to be famous), were introduced during this period. They successfully challenged, almost immediately, the Turkish industry which had so far enjoyed virtual monopoly in the local market.

This last decade of the eighteenth century also witnessed the introduction of English spinning machinery.³⁵ As mentioned earlier, the merchant Johann Brügelmann established near Ratingen in 1794 Germany's first power-driven spinning mill, with water generating the necessary power.³⁶ He had smuggled the relevant machinery out of England and he named the new plant and locality, in honor of Arkwright's works in Derbyshire, Cromford.³⁷

By the 1790s, the transference of the cotton and linen manufacture into areas outside the Wupper valley had become a broad movement. Wages in Elberfeld and Barmen had reached a level at which it became virtually impossible to produce anything but the highest quality of silk and cotton products. Some observers believed that these high labor costs were by-products of an unnatural industrial concentration which in turn had been caused by the continuance of the monopoly power vested in the local *Garnnahrung*.³⁸ Convinced of the inevitability and permanence of this industrial relocation, a

contemporary noted, "though since the revolution several branches of Berg industry have sunk very low and will probably never regain their former splendor, silk manufacture and speculative trade have enjoyed a very considerable increase, particularly in Elberfeld, Mülheim, and Düsseldorf."³⁹

In view of these developments, cotton production in the as yet rural Gladbach-Rheydt area expanded rapidly. Furthermore, whereas in Wermelskirchen, Wipperfürth, Steinbach, and Muth, villages adjacent to the Wupper valley, industry had been almost unknown in the mid-eighteenth century, by 1792 a total of 7,244 local inhabitants (mostly older persons and children) were employed in the preparation and spinning of cotton yarn. On average they used 1,950 bales of cotton (300–350 pounds = 1 bale) per year. At the same time, 6,800 persons plied 3,400 looms in the manufacture of striped materials, the so-called *Siamosen*.⁴⁰ Impressive though this growth rate was, it was to be surpassed in the next decade (up to about 1806). The centrifugal forces, pushing low-wage industries out of the Wupper valley and into the countryside, gathered further momentum.⁴¹

Even Aachen, which had been so slow in its adjustment to modern developments, was at last caught up in the industrial expansion of this era. Initially, the principal benefit of French domination was the introduction of a purposive and uniform administration able to provide order and justice out of the chaos of fifty years of inept and corrupt government.⁴² Moreover, despite the disturbances of war, the French promised additional imports of wheat and wool, and thus bolstered entrepreneurial confidence.⁴³ Above all, Aachen's cloth manufacture was spurred by the demand of the nearby armies. At the same time, the introduction of new types of cloth was facilitated by the low wages of the available underemployed labor and the empty houses that were a relic of the town's past greatness.⁴⁴

Nevertheless, it would be quite misleading to suggest that the social scene was one of either unmitigated serenity or universal prosperity. In 1794 the revolutionary battlefield had shifted to the Rhineland. Local prosperity was thus brought to a temporary halt.⁴⁵ Some of the merchants and manufacturers closed their plants and attempted to save their inventory from possible French sequestration. In Krefeld, the leading manufacturers, the von der Leyens, were in particularly difficult straits. Having moved their stores across the Rhine, they found it increasingly difficult, in view of the chaos of war and the poor state of the roads, to supply their manufacturing establishments from a distance with the necessary raw materials. By 1797 the von der Leyens even contemplated transferring their plants into the Prussian provinces east of the Weser.⁴⁶

Other Krefeld inhabitants were faced with similar and more burdensome tribulations. The occupying armies subjected them to forced deliveries, forced loans, compulsory labor services on the construction of fortifications, and the acceptance of assignats that were rapidly declining in value.⁴⁷ Almost the same conditions prevailed in Elberfeld and Barmen, where local manufacturers were seriously affected because of the large holdings of this depreciated paper money.⁴⁸

But it was in the Aachen district, probably because the potential to be tapped there was larger than elsewhere in the region, that the French authorities acted in the most grasping manner.⁴⁹ Carnot's exhortations in 1796, "l'Armée doit vivre avant tout," had become, by force of circumstances, the maxim for prevailing policy as French officials expropriated local inventories, requisitioned foodstuffs and clothing, ordered forced deliveries of one kind or another, and commandeered many dwellings for military use. Above all, they imposed upon the various towns in the area burdensome cash tributes.⁵⁰ On one occasion when Aachen's payment of such a forced loan fell behind the required time schedule, the French resorted to taking of hostages among the city's notables, in order to expedite their willingness to pay.⁵¹ Though these policies were harsh, it is unlikely that the local French officials could have acted differently. Even if they had not wished to implement in toto the spirit of this Paris order, there was in their midst the starved and battered Sambre-Maas army of 180,000 men who saw to it that these officials carried out their duties.

The cloth industry of the Aachen district was in dire straits. The merchants were forced to sell their cloth to the armies stationed in the vicinity at fixed prices that were lower than the prevailing raw material costs.⁵² Besides, the export embargo on cloth, imposed by the directory, threatened the existence of this manufacture in Aachen as well as in Burtscheid, Montjoie, Ingelbroich, and Stolberg. The embargo severed all trade with the Leipzig and Frankfurt fairs, which so far had been its principal outlets. After much pleading by the local merchants and supported by the resident French officials, the directory finally lifted the embargo toward the end of 1796. Thus, commerce with enemy territories, paradoxical as it was, was resumed.⁵³ Considering these pressures and disturbances, it was not surprising that the revolutionary fervor, which had initially animated at least some sections of the Rhineland population, waned rapidly.⁵⁴

Of all groups in society, the craftsmen and workers of the textile trades were the hardest hit by these wartime disturbances. They were so poorly paid at the best of times as to afford no margin for additional calamities. Consequently, a price rise caused by a series of bad harvests and the war brought great misery to the large industrial population of this region.⁵⁵ When the French reoccupied the left bank of the Rhine in October 1794, the price of bread was 18 marks a loaf. By the following June, it had risen to 27 marks.⁵⁶ To alleviate these dire conditions and halt the further decline in the value of assignats, the French occupation authorities extended price controls, already in force in metropolitan France, to the territories on the left bank of the Rhine. In Aachen, the senior French official established a supervisory committee to maintain the reputation of the Republican currency, otherwise "the working class would no longer be able to provide for its subsistence." The parity of the assignat against cash was to be preserved, and businessmen were to be compelled to sell their goods against paper money.⁵⁷ The city fathers of the various towns in the area actively supported these measures. To make Aachen merchants more willing to sell to local wage earners for assignats, the

municipal administration promised them a continuous supply of raw materials and goods at costs in accord with official sale prices.⁵⁸

However, all these measures were as ineffective as they were in France. A sliding scale for wages to be adjusted to rising prices proved equally unfeasible. In spite of exhortations, threats, and ordinances, bakers and butchers were reluctant to be paid in paper money, which the peasants eventually would not accept.⁵⁹ By 1795 the value of the assignats had declined to one-eighth the value of cash.⁶⁰ The workers, whose wages were being paid in paper money, suffered famine, but the black markets, in which hard cash was demanded, thrived, with all foods plentifully available.⁶¹

In view of these developments, several spokesmen of the Krefeld citizenry believed they might be able to persuade the French senior official to permit the bakers to sell against hard cash. This of course also meant that wage earners would have had to be paid in cash. Not only the French administrator, but also the local industrialists opposed this change, for it ran counter to their interests. Though they had doubled their workers' wages in terms of assignats, the manufacturers, according to a contemporary writer, were able to raise the sales price of finished products even higher.⁶²

Eventually, it was realized that these maximum price regulations were unfavorable to trade, creating the very difficulties they were supposed to avoid. Accordingly, they were promptly abolished, at first in metropolitan France and subsequently in the Rhineland territories occupied by the French.⁶³ Prices then soared even higher and local misery reached its peak. By July, bakers in Aachen were charging 40 marks and more for a loaf of bread, as compared to 27 and 30 marks a loaf the previous month.⁶⁴

"We have seen to our horror several hundreds of citizens in our Fatherland die of hunger and misery while our husbandmen have been forced to deliver their seeds of corn to the military," reported two prominent Aachen citizens (both members of the Aachen central administration) to the Paris directory in protest against the continued requisitioning of materials by the army.⁶⁵ To alleviate this distress and to help those in difficulties, the local authorities organized centers for the distribution of corn and food, at cost price or free of charge. In Aachen, approximately fourteen thousand persons were eligible for such aid, and six thousand others were partially helped.⁶⁶ Because of the discontent, the military had to maintain order while the distributions were in progress.⁶⁷

These ambitious relief measures soon proved to be beyond the capacity of the various city treasuries. In Krefeld, the food center was closed for lack of money. Instead, a more limited scheme of assistance, based on voluntary subscriptions, had to be devised. But when the city council approached the wealthier citizens for donations, the local industrialists refused to cooperate. The usury with assignats, bitterly complained the above-mentioned contemporary, was more to their liking. Indeed, the industrialists von der Leyens and von Beckeraths, in line with their traditional outlook upon social problems, supplied their own workers with bread but "would do nothing for all the others in need."⁶⁸

The heavy burdens imposed upon the civilian population by the occupation authorities proved quite inadequate.⁶⁹ During the severe winter of 1794–95, starving soldiers roamed the countryside seeking food wherever they could find it.⁷⁰ “Conditions were so deplorable,” records the diary of one member of the Sambre-Maas army, “that soldiers were forced to cut grass and kill cats in order to subsist.”⁷¹ Moreover, no one was willing to accept the assignats, which had declined to 5 percent of their nominal value by 1795 and depreciated still further the following year. Not surprisingly, a mutiny broke out among the military garrisons in Aachen as some of the officers were manhandled by a desperate rank and file.⁷²

Eventually the famine and misery were at least partially though temporarily alleviated when the French, having occupied the Netherlands, opened the Rhine for shipping. Food imports became once more possible. In Aachen, the price of bread had been subject to extreme fluctuations. Between the spring and autumn of 1795, the range was between 20 and 44 marks a loaf.⁷³

The Profits of Collaboration

Having occupied the Rhineland, the French proceeded to divide it.⁷⁴ They incorporated the western parts into France, and they made the Rhine a political as well as an economic frontier by imposing a high protective tariff, characteristic of republican commercial policy. The Rhineland as an economic unit was thereby torn asunder, and major adjustments on the part of merchants and manufacturers on their side of the Rhine, became necessary.⁷⁵

This process of adaptation, however, was facilitated by some of the institutional innovations following the changes in the political environment. Made part of the large and protected French market, the Rhineland industries on the left bank experienced a prompt expansion in output and sales.⁷⁶ Because of their prosperity, these industries easily absorbed the higher raw material costs caused by the imposition of the tariff upon imports from the other side of the Rhine. At the same time, road and river tolls and other internal duties that had interfered with the movement of goods were eliminated. Most important, the *laissez-faire* measures enacted by the French administration abolished the last vestiges of feudalism. In towns, the guild system was abolished.⁷⁷ On the land, peasants’ property rights and their general condition were significantly improved. These rural reforms were to be a gain for industry as well. They contributed to a rise in agricultural productivity, thus augmenting the supply of foodstuffs as well as the flow of labor for the growing industrial sector.⁷⁸

Aachen was particularly fortunate. As the capital of the Rôer department (the largest of the four into which the Rhineland had been divided for administrative purposes), it became the site of the prefect’s residence and the seat of other governmental offices. Moreover, Napoleon extended his favors to this imperial town, in part because of its historical links with Charles the Great in whose footsteps he imagined himself to be following.⁷⁹ The woolen trades, the

area's principal manufacturing activity, were the chief beneficiaries of imperial generosity. Enlargement of this already growing sector of Rhineland industry was part of Napoleon's general plan to satisfy the rising military and civilian demand for cloth. The expanded output within the empire offset shortages and attendant price increases following the prohibition of English imports.⁸⁰

Napoleon provided the Aachen woolen cloth manufacturers with handsome subsidies and rewarded their innovations and accomplishments with special prizes. A few of their best workmen were awarded pensions and other gratuities.⁸¹ To lessen Aachen's dependence on the importation of raw wool from Spain, Saxony, and Bohemia, Napoleon tried to promote local sheep rearing by bringing three hundred merinos into the area.⁸² Above all, for industrial purposes, he sold to local manufacturers, at well below market prices, the buildings and estates of secularized monasteries, convents, and other religious institutions. This was to be of strategic significance considering the capital intensity of a building program and the relative scarcity of capital prevailing at that time. In the absence of this type of adequate and cheap factory space, the subsequent mechanization and increased concentration of production would have been much more gradual than it was.⁸³

These propitious circumstances expedited the pace of Aachen's development. Between 1786 and 1806, the value of total output in the woolen manufacturing sector rose from 5.5 to 9 million francs, reaching 11 million francs in 1811.⁸⁴ Employment figures reflected the same buoyancy. An expanded industry absorbed the large pool of unemployed labor accumulated by stagnation and a corrupt administration which had turned this town into a breeding ground for a pauper population. By 1812 more than three thousand persons out of a total population of thirty thousand worked in the textile industry. Of these, 1,378 were weavers (plying 1,358 looms), 1,672 spinners, 635 ancillary women workers, 53 master shearers, 645 shearers, 18 master dyers, and 84 workers in dye establishments. Their dependents numbered six thousand.⁸⁵

During the same period, empty buildings, evidence of previous stagnation, were quickly taken up as capital and enterprises were attracted to the city. New establishments mushroomed. In 1800 Aachen's municipal council could report only nine woolen manufacturing establishments in operation;⁸⁶ by 1804 a French official noted sixteen firms.⁸⁷ Three years later another Frenchman counted 41 plants,⁸⁸ and in 1811 Golbery listed by name 26 major manufacturers whose activities provided the basis for the "glory and renown" of Aachen cloth. In addition, he named ten of the most distinguished medium-sized producers. Golbery also observed an increase in the number of petty entrepreneurs operating "with no more than five weaving looms." At the time Aachen was supposed to have had approximately ninety woolen cloth factories.⁸⁹

In view of this prolonged prosperity, new types of woolen and cotton fabrics were easily introduced. Initially, in 1794, cashmere of the highest quality was introduced. Subsequently Kalmuck, coating, cotton "Bombassin," and wool-coat cloth designed for the French, particularly the Paris market, were manufac-

tured.⁹⁰ Sales in markets outside the empire, though less spectacular in their expansion, were nevertheless brisk. The standard black Aachen cloth as well as new fabrics, such as the red Berry cloth, Serail, and blue Vignon, found eager customers in German lands, in the Middle East, in Spain and, before prohibitive duties were enacted there, in Russia.⁹¹ These fabrics, including cashmeres, were distinguished by the high degree of their finish and their brilliant colors.⁹² Because of these qualities, Aachen goods, if the French official Dorsch and some of his fellow bureaucrats are to be believed, could compete with the best products of French and English industry.⁹³

A transformation in the structure of the Aachen woolen industry was part of the major upheaval experienced by the city during this era. Once the corporations had been declared null and void, the competitive forces of the marketplace replaced the regulations of the guild as the final arbiter of control. These new, yet dominant, pressures were in turn to be transmitted to the industry at-large through the merchant-manufacturers who stood at the center of production. Because of their knowledge, which was commercial rather than technical, and by virtue of their capital resources, they alone were able to coordinate the various branches of manufacture from the preparation and cleansing of the raw wool or cotton to finishing and ultimate sale of the completed fabric.⁹⁴ The individual *Verleger* did not deal directly with his domestic wage earners. Instead, he availed himself of the various master-craftsmen, each employing between twenty and thirty journeymen inside as well as outside his home. These master-craftsmen (about a hundred of them in Aachen by 1811), performed the dual functions of subcontractor and foreman. As had been the case in Krefeld and the Rhineland countryside for some time, the master-craftsman was recompensed for his services by the piece, and like other craftsmen had become completely dependent upon the merchant-manufacturer.⁹⁵

A. P. Nemnich, who was intimately acquainted with the local scene, emphasized the predominance of the domestic system:

There are but few cloth factories in Aachen where the whole business is being carried on from beginning to end. Usually the trade is divided among several factors or managers, of whom the one takes care of the spinning and weaving, the other of shearing, etc. Each supervises his personnel accordingly. The dyeing establishments too, are, as mentioned, for the most part outside [the manufacturer's] home. The completion and finishing of the cloth is done on the manufacturer's premises.⁹⁶

Aside from their exceptional position within the regional economy, the integrated plants attracted widespread attention because they were believed to be the forerunners of what was eventually to become the general pattern of industrial organization. Foreign observers, aware of economic development elsewhere, were particularly conscious of this aspect. When Golbery described, in most glowing terms, "the spacious layout of their [the mill's] handsome and solid buildings, properly fitted to meet all the requirements and needs for which they have been designated . . . and the workings of ingeniously invented machines," he clearly grasped the significance of these innovations.⁹⁷

The machines mentioned by Golbery were the various types of English textile machinery whose introduction into the woolen industry marked the beginnings of the industrial revolution in the Aachen area. Wartime conditions hastened this transformation as the expanded activities of Napoleon's recruiting authorities denuded the woolen industry of its traditional adult male work force. Thus it became increasingly advantageous to install machines known to utilize most effectively the cheap and plentiful supply of female and child labor.⁹⁸ It is in this latter sense that Nemnich is to be understood when he commented that "the labor shortage due to conscription will make the use of English machines most necessary."⁹⁹

The first English spinning machine, which consisted of two bobbins of 60 and 90 spindles, respectively, a devil, a carding engine, and a scribbler, was installed in 1807.¹⁰⁰ It was probably some version of the mule jenny and by all accounts found ready acceptance in a booming industry. Two years later, shearing machines were brought into the district, thereby mechanizing at least that branch of the finishing trade carried on in the more substantial mills.¹⁰¹ At the same time, the already known but as yet sparsely used flying shuttle, fitted to a large loom and operated by one man alone, was being more generally adopted. Though Aachen's first power loom was introduced in 1812, several decades were to pass before this innovation became a common feature of local manufacturing. Similarly, steam engines remained virtually unknown during the French period. For the time being, horses and water provided the necessary motive power.¹⁰²

Most of these early machines were supplied by the Cockerill works at Seraing near Liège. Cockerill, an English machine maker, resident since 1794 on the continent, had already gained a reputation in Western Europe for pioneering the mechanization of the neighboring Verviers woolen industry.¹⁰³ It was therefore only natural that the Aachen woolen manufacturers would have sought Cockerill's services when they, too, wanted to improve their productive efficiency by emulating the achievement of Verviers. Aachen industry soon became Cockerill's principal market and eventually he settled in the imperial city to become the father of local machine building.

The way the new technology spread from the Verviers district, prompted largely by unfettered interregional factor movements, pointed once more to the locational advantages the Aachen area enjoyed by bordering upon a more advanced industrial territory.¹⁰⁴ Cockerill not only supplied the first English-type spinning mills, but he also brought with him a number of skilled men, including fitters, machinists, and competent operatives. These men were able to install and maintain these new machines as well as instruct the local work force in their uses. With the exception of a few Englishmen, most of these mechanics hailed from Verviers or Liège.¹⁰⁵ Their services were crucial to Aachen's industrialization, for "in the department," according to Golbery, "the number of craftsmen able to construct these machines properly remains very small. The town of Aachen has no one of this kind."¹⁰⁶ Indeed, contemporaries agreed, apart from capital scarcity and the shortage of factory space, the lack of the requisite industrial skills was one of the principal reasons why

TABLE 4 Growth of Woolen Textile Centers, Jülich Area

| <i>Population</i> | <i>1804</i> | <i>1811</i> |
|-------------------|-------------|-----------------------|
| Düren | 3,700 | 4,500 (5,000 in 1813) |
| Eupen | 6,700 | 10,000 |
| Montjoie | 3,000 | 5,000 |
| Malmedy | 4,700 | 5,000 |

Aachen's mechanization, despite brisk sales and boom conditions, did not advance as rapidly as might have been expected.¹⁰⁷

Even more spectacular rates of growth were in evidence in the vicinity of Aachen.¹⁰⁸ Between 1800 and 1811, several woolen textile centers of the Jülich area almost doubled their population (see Table 4).¹⁰⁹

In Eupen, the cloth industry continued upon its expansionary path. War-time disturbances were easily overcome as the loss of overseas markets was offset by sales in metropolitan France. Adjustment to the use of Bohemian and Saxon instead of Spanish wool, once Eupen had been cut off from its traditional source of raw material supplies, was equally smooth. Moreover, because of the boom, local industry was able to make the most of its proximity to the Cockerill works at Seraing by adopting the English-type textile machinery. Thus, at least in some branches of Eupen's cloth manufacture, the factory system came to predominate.¹¹⁰

Similarly, Montjoie seems to have prospered. "Famous for its industry," wrote Ladoucette, then prefect of the department, "Montjoie counts in its midst fifty-nine manufacturers of cloth and cashmere,¹¹¹ whose products, often mistaken for those of Verviers, are sold in France, Italy, Spain, Poland, Turkey, Africa, and the new world."¹¹² Golbery, who was equally impressed, added that Montjoie was "the center of considerable industrial activity and the source of livelihood for a large number of adjacent villages and hamlets inhabited by cloth weavers, wool spinners, and ancillary workers,"¹¹³ whose total number was supposed to have been over seven thousand. Nemnich also noted industrial progress when the largest local firm of Bernard Scheibler introduced various machines for the spinning, hickling, and shearing of wool. "These machines," reported Nemnich, "were driven partly by water, partly by hand, and they were built by Cockerill, an English mechanic now established at Liège." The same writer observed that "the shearing machines were constructed by Le Blanc in Rheims. In Montjoie itself, the brothers Derberger built the same machines . . . whose quality is being praised."¹¹⁴ Closer investigation of Montjoie's industry during the French period, however, revealed that all was not well. Mechanization was limited to a few large firms. Furthermore, unlike Eupen, Montjoie's woolen trades never quite adjusted to the use of non-Spanish wool and they could no longer sell their *drap fin* overseas.¹¹⁵ Indeed, some historians have argued that the beginnings of the decline that plagued Montjoie industry throughout the nineteenth century date back to this era.¹¹⁶

Burtscheid and its industry fitted into the general pattern of Rhineland expansion. Separated by only a few hundred yards from Aachen, it specialized in the production of the same types of cashmere and broadcloth destined for the French market. By 1809, forty-six cloth manufacturers (of whom Loevenich and Clermont at Vaels were the largest) coordinated the work of more than four thousand hands, many of them residing in the villages of the surrounding countryside.¹¹⁷ In Burtscheid proper, there were 79 master clothiers, 519 weavers (working 483 looms), 731 spinners, 9 master shearers, 196 shearers, 3 master dyers, 13 dyers, and almost three hundred women doing ancillary labor. Five English-type spinning machines were in operation.¹¹⁸

The same growth was evident in Krefeld's silk and velvet trades. Their high-quality and relatively low-priced fabrics, including ribbons and scarves, found wide acclaim in the discriminating Paris market. Between 1798 and 1813 Krefeld's population, spurred by the boom, doubled in size and reached the ten thousand mark (i.e., including the rural districts), despite temporary disturbances during the early years of the new century. By 1809 eleven manufacturers in Krefeld boasted an annual turnover of 5.5 million francs. They employed six thousand silk weavers, ribbon weavers, and ancillary laborers who plied more than three thousand looms. With most of these workers spread over the countryside, Krefeld began increasingly to specialize in the manufacture of the more expensive products and in the finishing branches of the trade.¹¹⁹

The increase in the number of manufacturing plants brought to a close the von der Leyen monopoly in the local silk industry and their monopsonistic position in the labor market. This change in the market structure raised the demand for labor and somewhat improved the position of the local silk weavers. They were no longer compelled to submit to the quasi-feudal paternalism which the von der Leyens, for almost half a century, had imposed upon them.¹²⁰ However, this unqualified freedom enjoyed by the craftsmen and workers of Krefeld did not last long. As early as 1809, the newly established Krefeld Chamber of Commerce submitted a memorandum to the French authorities pleading that the peculiar position of the local silk industry be recognized and its time-honored institutions preserved. They particularly requested the reenactment of those traditional measures for countering the "demoralization of the workers" and the difficulties of holding them together.¹²¹

Napoleon's response to this petition was prompt. In 1811 he decreed the creation of a *Conseil prud'hommes* in Krefeld to deal specifically with the difficulties arising in the sphere of industrial relations.¹²² This institution, patterned after the tribunal of the Lyonese silk industry, had been set up by the legislation of 1806. It was already in operation in most of the manufacturing towns of France, Aachen included.¹²³ One of its unique features was the absence of a professional jurist, as the membership was solely composed of representatives from the local manufacturers, foremen, and master-craftsmen. Apart from some administrative duties, its principal function was to mediate disputes between employers and employees. Litigations, however, involving less than a hundred francs were subject to the *Conseil's* power of compulsory arbitration.¹²⁴

Generally, Napoleon and his officials were favorably disposed toward the employers and thus entertained even their most exaggerated claims with sympathy. These leanings emerged quite clearly in the law of 1803, concerning the formation of chambers of industry, and the Commercial Code of 1808, which set the pattern for the conduct of industrial relations in the imperial era. Though the legislation was couched in the language of impartiality, its implementation gave a decided advantage to employers.¹²⁵ Neither of the social partners was to be permitted a coalition to enforce claims, but the prohibitions of strikes and boycotts in practice only weakened employees. Whatever the workers had gained by the *laissez-faire* legislation of the revolution was in part taken away by these subsequent edicts.

One of the most overt imperial acts of partiality toward employers was the introduction of work books, the so-called *livret ouvrier*, as part of the 1803 law. Henceforth, every worker was to be furnished with such a document. Without it he could not be legally hired, and without it, if apprehended on the road, he was charged with vagrancy.¹²⁶ The effect of such a measure was quite obvious. It enhanced the position of the Rhineland manufacturers in the labor market and it robbed the workers of the most potent weapon they had so far enjoyed in the new era: to resist the power of employers by striking with their feet while the going was good.¹²⁷ Because their mobility was thus curtailed, this legislation in part accounted for the fact that wage earners did not share, in a commensurate way, the benefits of the expansion occurring in the Lower Rhine region textile trades during this period.¹²⁸

Boom conditions also prevailed in the Gladbach-Rheydt area. The tariffs imposed by the French upon the textiles of the Wupper valley after 1807 weighed most heavily upon the coarser cotton products. Consequently, the earlier tendency, to transfer the manufacture of cheaper materials into the Gladbach-Rheydt district, was intensified. According to Nemnich, Gladbach manufactured plain and colored cottons and half-cottons of all kinds. Domestic industry predominated and the few spinning units were as yet "not significant." "Besides these establishments," wrote Nemnich, "there are in Gladbach several factors who arrange for the weaving of cotton pieces on behalf of merchants residing elsewhere."¹²⁹ The quality of output appeared to have improved with expansion. During the annual prize distribution of 1807 (an institution set up by Napoleon to promote local industry), Gladbach's principal cotton firm, Schlickum and Boelling, was awarded the silver medal for its excellent production.¹³⁰ On a smaller scale, the same developments were to be observed in Rheydt. In 1809 Gladbach had a population of eleven hundred to twelve hundred persons and produced ten thousand cotton pieces per year. Rheydt produced about seven thousand pieces.¹³¹ In view of Napoleon's commercial policy after 1807, France and Italy were their best customers.¹³²

Some historians have argued that the prosperity and consequent rapid economic development in the western parts of the Rhineland during the French occupation had been achieved at the expense of industry on the other side of the Rhine, particularly the duchy of Berg.¹³³ The facts, until 1808–9, however, do not corroborate such an unqualified assertion. From the late

1780s to approximately 1809, economic growth in the duchy of Berg was as buoyant as anywhere else in the Rhineland. With reference to the Wupper valley, Nemnich observed that the period 1790–1800 “marks the peak of the local cotton industry.”¹³⁴

Initially, the adjustments that had to be made by the Wupper valley merchants and manufacturers, following the incorporation of the left bank territories into France, loomed larger than elsewhere. But the negative aspects deterrent to industrial development were more than offset by the positive inducements of French economic policy. Republican protectionist policies were promptly amended to allow closer commercial ties with the Berg area. Specifically, in 1796, French import duties were lowered in order to permit the easing of Wupper valley textile fabrics into France. Above all, preferential treatment accorded to the area by the French (because of the virtual exclusion of English goods), gave the exports of Elberfeld and Barmen an almost exclusive position in the Italian market.¹³⁵ Indeed, the Elberfeld-Barmen manufacturers had a decided edge over their competitors on the left side of the Rhine, of which the Krefeld silk manufacturers complained bitterly. The Berg area manufacturers, unlike those of the French Economic Union, were not subject to import duties on raw materials, yet they sold their goods almost duty free in the French market.¹³⁶

Napoleon was eager to grant the Elberfeld-Barmen industrialists special privileges both in the markets of France and in its occupied territories. In this way he hoped to strengthen their industries as potential competitors of the British.¹³⁷ Moreover, in addition to their legitimate business, the duchy of Berg merchants and manufacturers smuggled some of their wares across the Rhine, where their newly established branch firms served the express purpose of masking their illicit activities.¹³⁸ Fabrics so disposed were mainly cheap cotton, unable to scale even the modest tariff, and special silk fabrics hard pressed by French competition. A French law of 1803 against smuggling was evidence of its widespread practice. That it was most profitable for those engaged in it seems beyond doubt. A contemporaneous observer noted how the merchants in the silk center of Langenburg, prosperous from the illegal trade, made “music, dancing, idle frivolities, and luxurious living a daily routine.”¹³⁹ While profits soared, even wages (i.e., real wages) increased slightly, despite the immigration of labor into the area and rise in the price of food.¹⁴⁰

Such an array of propitious circumstances contributed to the continued extension of industrial development in the Berg area. “This is why, during the years 1798–1806, Berg industry,” wrote Redlich, “had surged forward very considerably.”¹⁴¹ This was particularly evident in the Wupper valley where industrialization had progressed, almost uninterrupted, since its beginnings in the seventeenth and early eighteenth centuries.

According to Nemnich, by 1809 Berg area industry had reached an impressive stage of development.¹⁴² In Elberfeld, fourteen factories manufactured silken fabrics, thirteen plants made woolen and linen ribbons, fifty establishments produced cotton, one factory made corduroy material, and four plants

produced accessories for these textile wares. Together, these firms employed six thousand workers. In neighboring Barmen, sixty plants manufactured linen and woolen ribbons, sewing yarn, and cord, providing work for 3,750 persons. Lace and braids were manufactured in ten plants employing eight thousand workers; sixteen manufacturing establishments with 1,052 workers were engaged in the production of silk and velvet fabrics.¹⁴³ Many of these workers resided in adjacent localities.

Within the orbit of the old duchy of Berg (i.e., Elberfeld, Barmen, and both towns of Mülheim), 7,000 to 8,000 wage earners worked in the manufacture of silken and velvet fabrics. These products were destined for export to Russia, Poland, Italy, France, and other parts of Germany. Their total value was 10 million francs.¹⁴⁴ At the same time, the annual value of ribbons exported from Elberfeld and Barmen to America, France, and Italy totaled 9 million francs. The value of cottons shipped was between 8 and 9 million francs. The number of workers engaged in the two latter branches of manufacture was fifteen thousand and ten thousand respectively.¹⁴⁵ The Berg woolen cloth industry reflected the same buoyancy. Writing about Lennep, Berg's center for the manufacture of woolen cloth, one contemporary commented that it had reached "so high a level [of quality] as to be able to compete with the products of Eupen, Montjoie, and Aachen."¹⁴⁶ Nearby Hückeswagen was equally prosperous. According to an 1809 report, some thousand persons in and around the town annually produced 24,000 pieces of cloth valued at 324,000 talers.¹⁴⁷

The twin cities of the Wupper valley, with a population totaling thirty-eight thousand, were able to employ more than thirty thousand persons in the textile trades. An additional thirty-five thousand from the vicinity of Lennep, Ronsdorf, Rade, and Wipperfürth also worked for the merchants and manufacturers of Elberfeld and Barmen.¹⁴⁸ It was therefore not surprising that outsiders were most impressed by what they saw. This was particularly true of the French officials and dignitaries, who in 1806 replaced the local dukes as the rulers of the land.¹⁴⁹ Having visited an exhibition of local industry, Napoleon exclaimed, "L'exposition a l'air d'un grand pays." His brother-in-law, Joachim Murat, whom Napoleon had made grand duke of the duchy of Berg, boasted of his new principality: "L'industrie dans mon petit pays est semblable à celle de l'Angleterre."¹⁵⁰

Subsequently, the various French reforms imposed upon the Berg area strengthened still further an environment that was already favorable for continued industrial advance. Internal barriers to trade were eliminated and the restrictive practices of guilds, including the monopoly of the *Garnnahrung*, were abolished.¹⁵¹ Still extant feudal institutions were declared null and void as church lands were sold in the open market and tithes commuted. Finally, administrative changes improved the system of government. Even a historian clearly hostile to the French admitted that "although this transformation violated to a large extent historical continuity . . . it nevertheless proved to be a true blessing in later years, in as far as it constituted the basis for an improved administrative reapportionment of the country."¹⁵² Finally, the antiquated

judicial system was radically reformed following the introduction of the Code Civil.¹⁵³

The End of an Era

After 1808, the Berg economy was hard hit by the Continental System. That its export trade should have been one of the principal victims of the new mercantilism is in many respects characteristic of this era. It points on the one hand to the envy and fear that the advanced state of the duchy's industry had engendered among its Continental rivals, while on the other hand, to use Heckscher's phrase, "it is indicative of the dualism" and the contradictions that undermined this narrowly conceived commercial policy.¹⁵⁴

Had Napoleon been really serious about implementing an effective Continental blockade against the British, he would have had to harness, more than ever before, the manufacturing activity of the duchy, "a miniature England," for this purpose. But this was not to happen. The possibilities for a uniform and consistent commercial policy were subordinated to the French manufacturing interests whose pressures for protection and privilege were as important in shaping the Continental System as the strategic considerations of economic warfare.¹⁵⁵ Thus Napoleon's policies, as embodied in the motto "la France avant tout," aimed at the destruction not only of English but of all manufacturing activity outside the empire. To this end, French products were to be accorded absolute protection both at home and in the newly conquered territories, where the supposed backwardness was to offer promising vistas for French commercial penetration, provided competitors could be kept out.¹⁵⁶

Though highly industrialized and completely dependent upon exports, the duchy of Berg was to be treated like any other occupied territory. Worse, in view of its economic structure and location, "it fell," to quote Heckscher, "between two stools, being inexorably excluded from the French market, but no less inexorably bound to French policy."¹⁵⁷ Napoleon struck his first blow against Wupper valley exports in 1806 by enacting a prohibitive tariff which was to eliminate its linen and cotton products from the imperial market. A year later, in December 1807, he extended this ban to Italy and subsequently (when they were incorporated into the empire) to the Dutch and Hanseatic ports. At the same time, the outbreak of war on the Iberian peninsula ended all hopes of selling in the Spanish and Portuguese markets. In 1810 Napoleon finally imposed prohibitive tariff duties on Berg textiles and severed all connections with their traditional overseas customers, particularly those in America.¹⁵⁸

Having lost their principal outlets, the Berg textile trades found that neither the markets of the enlarged Grand Duchy of Berg nor those of northern Germany offered adequate compensation. This was true even in the absence of English competition. To avert the crisis about to set in, local merchants and manufacturers appealed to Murat to plead their cause before the emperor.¹⁵⁹ Despite determined attempts, Murat was unable to persuade the emperor to change his commercial policy toward the duchy. In this respect, his efforts

were as fruitless as were subsequently those of the aforementioned Imperial Commissar Beugnot and State Secretary Comte Roederer who governed the land in the name of Napoleon.¹⁶⁰

Despairing of all hope that the emperor would alter his stand on prohibitive tariffs, the Berg manufacturers, in 1810, finally demanded outright re-union with the empire.¹⁶¹ Napoleon refused to countenance the proposal and he was vigorously supported in his opposition by the French industrialists. He was particularly supported by the textile interests of the Röer department who feared the competition that incorporation of the Berg area would entail.¹⁶² But even if Napoleon had wished to help Berg industries (and judging by some of his comments, he was not totally indifferent to their fate), he was hardly in a position to do so at that time and thereby expose French industrialists to increased competitive pressures while they were in the grip of a serious commercial crisis.¹⁶³

Beset by depression and stagnation, the Berg merchants and manufacturers had no alternative but to increase smuggling, despite stricter surveillance and severe penalties.¹⁶⁴ Otherwise they were faced with leaving the area altogether. Between 1809 and 1813, some three hundred merchants, manufacturers, clothiers, cotton spinners, and others moved to the other side of the Rhine, with a high proportion settling in the Gladbach-Rheydt area. As late as 1813, three hundred workmen from the Berg area followed suit. Indeed, one of the supposedly telling points to be made by the Cologne Chamber of Commerce against the incorporation of the duchy was that the continued inflow of capital and skills into the Röer department depended on the maintenance of existing tariff arrangements.¹⁶⁵

But most Berg entrepreneurs and workmen could not leave the area and thus were condemned to suffer the adversities of their unfortunate position within the Continental System. By 1810 total Berg exports had shrunk from the pre-1806 annual average by about a third—that is, from 55 million to 39 million francs. Textile sales, accounting for about three-fourths of this total, declined even more sharply.¹⁶⁶ As a result, some Wupper valley textile firms closed their doors altogether; others reduced operations to a three-day or four-day workweek. This in turn caused widespread distress among the duchy's eighty thousand industrially employed. Because of heavy unemployment, the fifty thousand textile workers were in particularly serious straits. The twenty thousand who were dependent upon the cotton trade were the hardest hit.¹⁶⁷

According to contemporaneous petitions, the closure of the French and Italian markets to Berg products affected twelve thousand and ten thousand operatives, respectively. In Hückeswagen, the number of those employed in the woolen cloth manufacture had declined from one thousand in 1806 to about two hundred in 1813.¹⁶⁸ At the time Roederer also reported that the loss of Berg's commerce had caused half of the workers "to go on charity." According to Schmidt, "the goods whose export sales were repulsed were precisely those that employed the most hands."¹⁶⁹ Such a bias toward labor intensity by the export branches of the textile industry is not surprising, for

Berg's comparative advantage (continuously stressed by its competitors) was based upon a relatively cheap and plentiful supply of industrial labor.

Of all the towns in the duchy, Barmen's lot was the most unfortunate. Its export staples—ribbons, tapes, lace, braids, and other fancy goods—were excluded from the French market, their principal outlet since the seventeenth century.¹⁷⁰ Conditions were further aggravated by the ban on sales in Italy, for some local firms had come to devote themselves almost exclusively to satisfying this newly developing market. When visiting the Wupper valley, on his aforementioned 1810 inspection tour, Beugnot also noted that Barmen's industry was languishing and that conditions were deteriorating. Beugnot commented that "although in Barmen one observes no traces of new constructions, one continuously comes across new buildings in Elberfeld." He indicated that Elberfeld's industrial structure, because it was more diversified than Barmen's, was also more capable of adapting to the stresses and strains of the Continental System.¹⁷¹ As might be expected, the larger firms, with more ample resources and lower production costs, withstood the difficulties of this era more easily than did the smaller producers.¹⁷²

Denuded of their raw materials and cut off from their customers, it was not surprising that Berg's industrial population became increasingly restive. Social tension was intensified after 1810, when Napoleon's customs officials resorted to the burning of confiscated contraband raw materials and colonial wares, thereby raising still further the already exorbitant prices of these products.¹⁷³ Finally, it was the increased activity of the imperial recruiting officers that sparked this discontent into violence.¹⁷⁴ Rioting originally erupted in Ronsdorf among recruits brought together from many localities. A few days later, toward the end of January 1813, the tumult spread to the Solingen and Remscheid area and from there to the Wupper valley and the adjacent textile districts. In these industrial centers the insurgent recruits were promptly joined by the unemployed, who, by their very numbers, gave the uprising its unmistakably social significance. Some seven thousand to eight thousand men, promptly nicknamed *Knüppelrussen* (Russians with sticks), were reported roaming the duchy, ransacking public buildings, destroying official insignia, and threatening the leading citizens in town and village.¹⁷⁵

Beugnot and his officials were quite aware that Napoleon's oppressive commercial policies were the cause of this social malaise. For the moment, however, the imperial authorities were primarily concerned about maintaining law and order. Troops were quickly brought into the region and they promptly subdued the rioters by force. In this connection, it is interesting to note, as indicative of existing class relations and prevailing patriotic sentiments, that during the disorders, the duchy's worthies and notables aided the French military. They were as horrified and scornful as the imperial commissar vis-à-vis the violence perpetrated by "l'espèce de canaille."¹⁷⁶

However, extant documents do not support the contention that the so-called *Knüppelrussen* constituted the dregs of society.¹⁷⁷ Instead, the evidence shows that those in the forefront of the rebellion were either craftsmen or workers employed in the local industries. A tavern keeper was among the ring

leaders.¹⁷⁸ And even a scion of one of the area's leading families participated in the revolt.¹⁷⁹

To be sure, in the course of these disturbances, less desirable elements inevitably joined in the fray and tried to take advantage of the temporary disorder.¹⁸⁰ But these rabble types were not representative of the *menu peuple* whose patience had been tried for too long and who, after months of suffering, took to the streets to express their discontent.

The grievances underlying the eruption are quite obvious. At the time, rising food prices (intensified by the recent sequestration of colonial products)¹⁸¹ aggravated the high rate of unemployment that in turn was the result of the Berg economy's unfortunate position within the Continental System. But it was, above all, conscription (as practiced by Bonaparte's minions) that prompted these young men to resort to violence. More than anything else, these unwilling recruits resented the injustice of a draft that allowed the affluent to escape military service, buying their way out of it.¹⁸²

One cannot help wonder why the Berg worthies assumed, as mentioned earlier, so hostile a stance toward this "local revolution." E. Mohrmann argues that as men of property the Wupper valley burghers behaved as one would have expected them to when they vehemently opposed, as a matter of principle, this spontaneous popular movement irrespective of its motives or purposes.¹⁸³ And G. Werner makes the point that "hatred toward the French was much more intense among the lower orders"—because they suffered more directly the pains of inflation and unemployment—"than among the *haute bourgeoisie* who, at times, were better disposed toward Napoleon."¹⁸⁴

Having profitably collaborated with the French over the years, the region's established entrepreneurs probably viewed the difficulties they had to face during the last years of the occupation in a broader context. Even more important, they could, it seems, easily afford to be so tolerant about these temporary setbacks because many of the leading Elberfeld and Barmen merchant-manufacturers had in good time transferred a large part of their operations across the Rhine.¹⁸⁵ In these new locations they managed to recoup (and frequently more than recoup) the losses they had sustained at home.¹⁸⁶

Concluding his comments on Berg industry within the Continental System, Heckscher remarked that it would be quite wrong to generalize about Berg's social scene at that time, solely on the basis of the various petitions and *doléances*. These, Heckscher stressed, must not be taken at their face value.¹⁸⁷ He then advanced the view (in part by implication), that Berg's condition was perhaps not nearly as bad as had often been suggested, for the market forces, in the form of a flourishing smuggling trade, attenuated the rigors of the prohibitive tariff system.¹⁸⁸

In this respect, it seems that Heckscher underestimated local suffering in the same way that some Berg historians exaggerated the noxious impact of the imperial era when they maintained that Berg industry was virtually destroyed and had to be reconstructed *de novo* after 1815.¹⁸⁹ For if one is to judge from accumulated evidence, it appears quite clear that the plight of the duchy was

serious and that the Continental System manifested itself in this region at its worst.¹⁹⁰ At the same time it is important to remember that despite their magnitude, Berg's difficulties during the 1807-14 period constituted but an episodic setback within a setting of economic advance.¹⁹¹

In marked contrast to the conditions prevailing in the duchy of Berg, the Rhineland's left bank districts continued their economic advance after 1809. These districts enjoyed in full measure the protection and support of Napoleon's commercial and industrial policies.¹⁹² In view of these divergent developments between the eastern and western parts respectively, it is only at this stage that one may say that the industries on the left bank of the Rhine expanded at the expense of their counterparts in the duchy of Berg. Subsequently, even the official organ of the Prussian occupation authorities grudgingly admitted that the extension of markets, though secured "by force and power politics," had been of greatest benefit to the textile industry in the districts incorporated into metropolitan France. The various textile trades had been prompted "at an unprecedented rate" to mechanize and grow.¹⁹³

The 1811 census of the Röer department reflected this prosperity. It recorded no less than twenty-five hundred industrial establishments employing sixty-five thousand workers and a total annual output valued at 75 million francs.¹⁹⁴ A few years later, the prefect of the department reported from a tour that the textile industry claimed some thirteen hundred firms and almost seventy thousand hands. Of these workers, forty thousand were engaged in the thriving Aachen area woolen cloth and cashmere manufacture. In addition, twenty thousand were employed in the silk and velvet establishments of the rapidly growing Krefeld district.¹⁹⁵

Protected from the pressures of English competition, which in previous decades had undermined their position, the regional linen trades enjoyed a similarly "massive" expansion. The manufacture of the Gladbach-Viersen district was particularly fortunate. By 1807 it had reached a peak never achieved before or after.¹⁹⁶ Generally, the Rhineland linen industry, though no longer a growth sector, was able, between 1807 and 1811, to experience a temporary revival and increase the value of its production from 1.4 million to 2 million francs.¹⁹⁷ This suggests that most of the other textile trades did as well, if not better.

This was especially true of the cotton trades during the period of the Continental System. The expansion of this trade was most dramatic, despite rising raw material costs and the increasing shortage of labor due to conscription. According to contemporaries, cotton spinning mills mushroomed in virtually every locality on the left bank of the Rhine. Lured by the hope of quick gain, following the prohibition of all imports, all kinds of persons (many of them without any previous experience in the textile business) ventured into this new sphere.¹⁹⁸ Because of this expansion, the Gladbach-Rheydt district, by then the cotton center of the region, experienced a population upsurge and lost some of its rural character.¹⁹⁹

By 1811 Gladbach and its immediate vicinity had thirty establishments engaged in the manufacture of cotton products; three thousand handloom-

weavers and 1,125 workers in the ancillary trades were thus employed.²⁰⁰ In Rheydt, 750 persons worked on looms producing various types of cottons and half-cottons; three hundred others earned their living spinning cotton yarn. Some of them worked on mule jennies.²⁰¹ Even in the township of Neuss, about six hundred to seven hundred persons, out of the total population of 6,400, were active in cotton spinning.²⁰²

Outlook

The prolonged prosperity which the western Rhineland enjoyed during the revolutionary period strengthened its industry and provided a firm basis for further development. The comment by the historian of the Verviers woolen industry, that this was “l’age d’or du régime français”²⁰³ applies mutatis mutandis to the left bank region of the Rhineland as well. Some German historians have acknowledged, at times reluctantly, the benefits that accrued to the Rhineland during the French occupation.²⁰⁴ However, steeped as they were in protectionist doctrine, many of these German historians have sought the mainsprings of this expansion in the Continental System with its large and protected market.²⁰⁵

On the face of it, empirical evidence corroborates the protectionist viewpoint. Within the buoyant environment, the various branches of the Rhineland textile industry come to concentrate, most successfully, on serving the apparently insatiable imperial market. Thus the trade-creating tendencies of the Continental System seemed to swamp, by far, the diversionary effects caused by this upheaval in traditional trading relations.²⁰⁶

But on probing further and after taking a more dynamic view of this period, the Continental System does not appear in quite so favorable a light. Already, the 1810–11 financial and industrial crisis bared the basic defects of Napoleon’s grandiose commercial arrangements and ominously portended their breakdown, even without military defeat. More specifically, the crisis revealed that the French economic union was by no means the kind of insatiable market the sanguine textile manufacturers of the Rôer department imagined it to be, when they gladly shifted their attention from traditional customers in the world at-large to the sheltered outlets of the Napoleonic empire.²⁰⁷

The withdrawal of the Rhineland textile industry from competition in overseas markets was to turn these regions into undisputed trading spheres of their British counterparts, who eagerly sought compensation in the West for the export losses sustained on the European continent.²⁰⁸ From a long-run point of view, this is why the diversionary effects of the Continental System were much more serious than the statistics might indicate. The difficulties became most apparent after the war when the Rhineland textile industries were once more compelled to cultivate an overseas clientele. Because of the virtually exclusive reliance upon the French market during the pre-1814 period, the subsequent adjustment of production to the requirements of the transatlantic customer was not easy. In the case of the Aachen woolen trades,

it was not until the 1830s that they were able to challenge, in an effective way, English fabrics in the United States market.²⁰⁹

Moreover, the demise of the cotton yarn spinning mills was as sudden as their emergence. This is quite characteristic, for the almost total collapse of this manufacture after the war epitomizes the misallocation of resources that invariably occurs whenever a prohibitive tariff scheme fosters the growth of an industry for which the regional preconditions of development are as yet not given.²¹⁰ Finally, because of the breakdown in communication between England and the Continent during the Napoleonic wars, Rhineland industry did not enjoy, as it had before, the steady flow of most up-to-date technical information emanating from the English textile districts.²¹¹ This interruption partly explains why, after 1815, the mechanical installations of many Rhineland textile mills were found to be antiquated, even when compared with some of the factories in the eastern parts of the Prussian monarchy.²¹²

But for the time being, the inhabitants on the left bank of the Rhine remained blissfully ignorant of the Continental System's eventually harmful consequences. Instead, they enjoyed the boom and were grateful for the favors extended to them and proved loyal to the French after the occupation armies and their administration had left the area. Unlike some of the hapless citizens in the Wupper valley who tried to rebel against the French masters and who joyfully acknowledged their departure, the industrialists and merchants on the left bank of the Rhine viewed with apprehension the end of the French era and the annexation of this territory to the kingdom of Prussia.²¹³ If at first the Rhineland bourgeoisie had been fearful of and hostile to the foreign occupant, they soon learned to appreciate the advantages of republican and then imperial government.²¹⁴ Indeed, never before, nor for that matter ever again, were the Rhineland capitalists to enjoy a regime as favorably disposed toward entrepreneurial initiative.²¹⁵

This is why the prospect of being reincorporated into an agricultural and as backward a country as Prussia seemed to the merchants on the left bank, and later even to those of the other side of the Rhine, like "marriage into an impecunious family."²¹⁶ It was indeed an alliance with a socially inferior partner, as the very gap that had separated the Rhineland from the rest of Germany in the eighteenth century was widened by two decades of foreign rule. Many German areas suffered the dislocations of war and were thus condemned to economic stagnation, but the Rhineland continued to prosper. Its industry boomed, prompted in large part by French laissez-faire policy.

Social trends reflecting industrialization and already to be observed in the second half of the eighteenth century were accelerated by the various revolutionary edicts. When the many strands of revolutionary legislation were subsequently consolidated in the Code Napoléon, the Rhineland (on the left bank) was not only given a most up-to-date legal framework, but also a system of government in close harmony with the needs of a buoyantly industrializing society. This is why the Prussian officials, following in the wake of the allied armies to set up the new administration in the recently acquired as well as previously owned territories, were faced with an almost impossible task. They

were no more able to dismantle the achievements of French legislation than they were able to impose upon the Rhineland their own brand of feudal laws, which, as Friedrich Engels so aptly phrased it, "were already out of date, even in the backwoods of Pommerania."²¹⁷

Eventually Rhineland merchants and manufacturers had to accept unreservedly Prussian tutelage. They even felt themselves in due course compelled to make rather unfortunate concessions to Junker power and learn to live by laws which in some instances were clearly hostile to their interests. But in spite of these pressures, the Rhinelanders were able to maintain a unique position within the Prussian kingdom. They continued on the path of economic advance and rounded out some of the social gains initially developed in the sixty years or so preceding 1814.²¹⁸

That they should have been subsequently able to manifest such resilience, in the face of most determined efforts to undermine the basis of their regional institutions, was in no small way due to the training that Rhineland society had received while serving its time in the school of the French republic and empire. Its revolutionary impact was never quite eradicated, notwithstanding the attempts of the Prussian authorities to attenuate its influence and denigrate its historical role.²¹⁹

6

Concluding Reflections

Only a specialist in the field (a historian of Germany or of economics) could be expected to muster the requisite energy to wade through the preceding chapters. However, having done so, the patient scholar may well wish to raise certain questions concerning the overall theme of this monograph. Specifically, the historian may want to know why traditional interpretations by historians of the above topic differ so markedly from the conclusions reached in these pages.

At times, with tiresome regularity, the focus of this study has been on buoyancy, dynamism, and overall economic success. To be sure, the evolution of the textile trades in the Rhenish districts was not unilinear. In each century there were major setbacks and they have been duly recorded in this narrative. Nevertheless, in general this has been a chronicle of long-run progress, of secular advance dating from the initial stirrings of primitive accumulation to that stage, reached by the late eighteenth century, when sophisticated capitalist arrangements and sustained protoindustrial growth became the order of the day. This development is as true of Krefeld as it is of the Wupper valley cities of Elberfeld and Barmen, and of Aachen and its environs. By the close of the eighteenth century, the story to be told is one of rapid urbanization and sizable accumulations of commercial wealth in the wake of impressive successes registered by the Rhenish textile wares throughout world markets.

Strange as it may seem, standard texts of German economic history, until quite recently, failed to appreciate the achievements of these enclaves of prospering protoindustrialization. To be fair, there was occasional mention about the bustle in such centers as Elberfeld, Chemnitz, and Plauen in the extensive literature dealing with *Hausindustrie* as a social problem.¹ But for all their awareness of the existence of the rural trades, the older generation of historians, as a whole, did not glimpse the historical significance of an expanding domestic manufacture as the pioneer of capitalist advance, nor did they feel the need to integrate this particular form of industrial activity into their respective accounts of German development.²

From the standpoint of this investigation, this omission must be regarded as a basic flaw in historical perspective. It is a blind spot. Because of this lacuna, the manner in which the rural trades were originally implanted into an unencumbered countryside—by entrepreneurial elements turning their backs

on the restrictive atmosphere of a medieval city—has not been given its proper due. In turn, this explains why economic historians of Germany—at least up to the late 1950s—did not grasp the import of the mediating function of domestic manufacture, its transitional role that spanned the centuries between feudal and guild forms of economic organization, and a full-blown capitalist economy. To put it bluntly, this “teutonic” version of capitalist development ignores what classical economists call the preparatory stage and what Marxists refer to as the process of primitive accumulation, which (as this study tries to show), to a very large extent, evolved within the framework of expanding domestic trades.

The idiosyncrasy of this historical perspective has already been the subject of discussion (see part 6 of chap. 2) in connection with an elucidation of Prussian views on mercantilism. As elaborated earlier, economists and economic historians of the so-called Historical School rejected the propositions of classic, let alone Marxist, political economy. This, at times, emotional repudiation of Smith and Ricardo was very much part of broad intellectual currents that were to dominate the German middle-class scene since the last quarter of the nineteenth century and that were to isolate the majority of German scholars from their French and Anglo-Saxon colleagues who were steeped in the liberal and rationalist tradition of historiography.³

Having refused to avail themselves of the insights of the classic model, Prussian social scientists set out to create their own brand of analysis in order to make some sense out of the past. In due course, they developed hypotheses that have become the standby of the Historical School. Specifically, they elaborated different versions of the stage theory; they also identified the capitalist spirit and drive toward state-making as elemental forces that supposedly shaped the course of material and social progress. But however hard they tried, the underpinnings of their vision of capitalist evolution (at least by the standards of this project), never quite jelled into a coherent system. It is one of the congenital weaknesses and apparent paradoxes of their perspective that these patriots consistently underestimated the past achievements of the German economy.⁴

As S. B. Kan, a perceptive student of the domestic trades has pointed out, the economists and economic historians of the Historical School, in their surveys of German history, systematically ignored the eighteenth-century centers of rural industrialization in Silesia, Saxony, and the Rhineland. Consequently, they were never able to appreciate the extent of commercial and financial sophistication that had already been achieved in the manufacturing towns of those industrial regions.⁵ In many ways, as Kan goes on to show, the opening chapter, “A Journey Through Germany One Hundred Years Ago,” in Werner Sombart’s once well-known text, *Die deutsche Volkswirtschaft im neunzehnten Jahrhundert*, is symptomatic of that Prussian viewpoint. In that chapter, Sombart depicts the Germany of 1800 as a scene of unrelieved stagnation. Journeying by stage coach on virtually impassable roads that were a danger to life and limb, Sombart’s imaginary traveler passes through one territory after another of poorly tilled fields (the hallmark of a backward

agriculture), impoverished hamlets, and sleepy towns that had been in decline since medieval days.⁶

This dismal picture is by no means a caricature. Nor is its emphasis on decay totally misplaced. Nevertheless, this Sombartian *tour d'horizon* is characteristically incomplete. For it leaves out of account the rural industries which, because of their dynamic and the nature of their activities, should have been viewed, at least from the hindsight of the early twentieth century, as growing points around which industrialization and capitalism spread and eventually triumphed throughout the land.

Why did Sombart and his colleagues omit from their surveys any consideration of the bustle in the Vogtland, the Wupper valley, and the Solingen area? In this respect, again Kan seems to have been on the right track; he points out that because the adherents of the Historical School had no growth theory (one has the distinct impression they did not feel they needed one), they never acquired—as already alluded to earlier—an understanding of the role of the domestic trades either as the pacesetters of modernization or as the crucial link that paved the way for the industrial revolution.⁷

To have overlooked on empirical grounds the protoindustries because they were not as yet the representative mode of production involved these economists and historians in underestimating the German economy throughout most of the eighteenth century and throughout the post-1815 era. A cursory glance at various German economic history texts published in the pre-1914 era and during the 1920s confirms Kan's view that the few German scholars who confronted the issues of the nineteenth century focused much too exclusively on the state of the once great medieval cities by then in decline (Nuremberg, Augsburg, Cologne). Consequently, these historians overemphasized the predominance of craft production and guild activity during the post-Napoleonic period. If they had had a conception of economic evolution, they would have instinctively structured their respective accounts in such a manner as to accord pride of place to the Rhenish and Saxon manufacturing districts and to those commercial centers (notably the major seaports) where, as a sign of things to come, the New Age was already triumphant. In so doing, they would have been able to assess, much more judiciously than they actually did, the extent to which by 1800, let alone by the 1820s and 1830s, capitalism had penetrated important segments of the German economy.

By contrast, Jean Jaurés, in his *Histoire socialiste de la révolution française* (1904), was explicitly conscious of the degree to which capitalism, in the form of rural industries, had already taken root in Germany on the eve of the French Revolution. As an avid reader of eighteenth-century writers, the French socialist leader had an unerring sense for what were the dominant trends in society. This is why he was able to diagnose so perceptively the pressures and episodic setbacks afflicting the domestic trades, not as symptoms of supposedly congenital weakness and decay, but, at least in some districts, as the teething problems of a lusty infant. Unfortunately, not all foreign historians were as insightful or as well informed as Jaurés. Many English and French scholars accepted uncritically and, at times, somewhat

naïvely, the standard version regarding the state of the German economy during the late eighteenth and early nineteenth century.

These historians persisted in deprecating the performance of the German economy in the decades immediately before and after 1800. Thus, they inevitably misread the sequence of German economic development. As a group, they almost unanimously identified the genesis of the German industrial revolution as occurring sometime in the 1830s or even later. The timing of the actual mechanization and the appearance of power-driven factories determined their choice of these dates. This suggests that these scholars simply focused on the most obvious aspects of this historic change. They seemed, as it were, only concerned with the tip of the iceberg and thus, in a most superficial manner, ignored the decades of prior development that had been crucial in setting the stage for a breakthrough to factory production and in shaping the contours of German industrialization. A crude view, to be sure, and a measure of the unbelievably *simpliste* approach to economic phenomena of the past on the part of the adherents of the Historical School who espoused this perspective.⁸

Only in recent years has a change in attitude been witnessed. Increasingly, economic historians of Germany (and to some extent economic historians in general), have become aware that the industrial revolution should be viewed as the culmination of a long-drawn-out process of maturation. Specifically, based on the findings of a postwar literature interested in protoindustrialization and economic growth patterns, these scholars have come to realize (as has this investigation)⁹ that the economic and social changes that transformed Germany in the nineteenth century are linked to developments that began much earlier. Indeed, since the early 1960s, some of the most knowledgeable students of the scene have been at pains to point out that the decades following the Seven Years' War constitute a watershed in German economic history. As they see it, the expansion of the 1770s and 1780s unleashed an era of self-sustaining growth that must be considered the base period, the opening act in the unfolding drama of German industrialization.¹⁰

To emphasize the evolutionary character of the economic process comes naturally to a student of the textile trades. Consequently, the reader should be warned about the kind of bias that entered into a historical model that is based—however loosely constructed (as in the case of this study)—on the experiences of a single industry. But for all its limitations, the “textile model” still remains a classic that offers insights into the workings of gradual economic and social change not nearly as effectively supplied by hypotheses derived from the sequence of other economic sectors. And this is why, over the years, some of the more sophisticated economic historians and some of the more distinguished economists have turned to the histories of the various branches of the textile trades for evidence and for examples with which to corroborate their particular vision of the capitalistic dynamic.

Certain implications follow from a perspective that underscores the evolutionary nature of the *longue durée*. For one, such an approach tends to overstate the levels of economic achievement because the focus is always on the

progressive elements of the historical scene that are viewed as points of departure for the next period of advance. Second, emphasis on continuous and uninterrupted links to the distant past tend to exaggerate (if only by implication) the ease and automaticness with which the leap forward into the era of the industrial revolution is accomplished. If this investigation is, by its very nature, guilty of such tendencies, let the reader be warned.

By the late eighteenth century and most certainly by 1815, the textile districts of Elberfeld-Barmen, Krefeld, and the Aachen area were in the grip of a sophisticated, dynamic capitalism and therefore poised for the next gigantic step forward into the nineteenth century. Indeed the industrialization and mechanization of the Lower Rhine textile districts is a fascinating saga. To elucidate that story calls for another book.

Epilogue

Richard Tilly

In the following section an attempt is made to draw conclusions from the previous chapters in a way which harmonizes with Herbert Kisch's "view of the world." However, as readers of this volume must realize, these are not a faithful copy of the conclusions he would have drawn, for the obvious reason that (a) their author is not Herbert Kisch and (b) the literature to which his work was oriented has evolved in the decade or so since his death. My own point of view is part of this concluding essay, which may give it a somewhat detached, mildly critical, and tentative tone. Questions are raised to which, alas, there can no longer be any authentic answers. Readers must take comfort in the belief that in our field it is possible to see the hallmark of good work in the production of fruitful questions, rather than in answers. In this former respect, Kisch's work is rich indeed.

This concluding essay combines, then, interpretations and facts taken from Kisch's studies with my own perspective, as partly shaped by work published since Kisch wrote. It discusses the implications of his work for three historiographical questions: the history of "protoindustrialization," the modern economic history of Germany, and the general methodological approach to economic history.

Protoindustrialization

Herbert Kisch's work served as an important input to the now well-known book of the "Göttingen Three," *Industrialization Before Industrialization*.¹ And it forms, in a way few of the contributions to the literature have done, a rich set of empirical, historical materials on the development of rural industry against which the theoretical and methodological generalizations of the protoindustrial debate can be tested. Given the acknowledged importance of that concept, it makes sense to link Kisch's studies to it.

The "fit," however, is far from perfect. If we follow D. C. Coleman's recent survey of the concept, and distinguish between a "Mendels version" and a "Neo-Marxist version,"² we have difficulty assigning the Kisch studies to either category. They contain elements present in each of the two versions, but also exclude several issues seen as central to both, such as demographic behavior and family structure. Of the five hypotheses which Coleman sees as

derivative of the concept's "standard definition," Kisch's work seriously treats just two: those referring to the accumulation of capital and to the development of mercantile skills.³ That is, Kisch and protoindustrialization are by no means the same thing. But because my task, fortunately, is not a review of the protoindustrialization debate, let me proceed positively, with Kisch's work in the foreground and protoindustrialization in the background.

The development of rural textile industries in the Rhineland from the sixteenth to the nineteenth century generated, according to Kisch, concentrations of wealth, skills, habits, and patterns of social behavior which paved the way for the "full" industrialization in the Rhineland of the nineteenth century. In this sense, his work corresponds to the "Mendels version" of "protoindustrialization," as a prior stage of industrialization history which pushes the latter's beginnings at least two centuries further back than conventional dating, which stresses the 1780–1850 period. However, he also saw this piece of history as a significant part of the transition from feudalism to capitalism which Marx sought to explain with the help of the concept of "primitive accumulation." Kisch was no Marxologist and made no attempts to compare his findings on the experience of the merchant-capitalist entrepreneurs and rural industrial workers with passages from the works of Marx and Engels. Nevertheless, he strongly suggests that an increasing dichotomous structuring of social relationships between powerful merchant-capitalist entrepreneurs and subordinate workers in these textile regions was the main story, one at once associated with economic progress, exploitation, and class conflict.⁴ It is almost axiomatic in Kisch's studies that this progress was furthered by the capitalist entrepreneurs and braked by the craft guilds of the towns, so far as the latter were able to secure and hold the support of the political authorities for their restrictive practices. The emergence of a state which no longer supported such practices and promoted instead capitalist aims is seen as one of the preconditions of the industrial capitalism of the nineteenth century, and a result of "protoindustrialization." These are Marxist views, and in this sense, the Kisch studies are also a Marxist version of protoindustrialization, though not a "neo-Marxist" one.

An important question in the protoindustrialization debate is why rural industry developed in some regions but not in others. In Kisch's Rhineland studies, the answer is a combination of proximity to mercantile centers—initially Cologne and Aachen, but eventually, and more importantly, the towns of the Low Countries—and a loose, relatively open social structure, with small landholding predominating, reflecting a weakening of feudal controls. In such a "propitious" environment of relative freedom, Kisch repeatedly tells us, individual peasants could seize opportunities to supplement their agricultural incomes by producing textiles for the market, thus becoming local agents of those mercantile centers in the process, and driving development still further. These upwardly mobile Kulaks, as he called them, were the keys to the Rhineland's cases of successful protoindustrialization. Geographical factors such as soils or topography that discouraged specialization in grain production or access to

good transportation facilities are also cited, as are elastic labor supplies. The former, however—favorable geographical factors—are more prevalent than are successful cases of protoindustrialization, whereas the latter are, in Kisch's view, more a *result* of protoindustrial development than its cause, especially because of the importance of migration as a source of labor. His Rhenish regions thus follow the "truly revolutionary" way from feudalism to industrial capitalism that Maurice Dobb suggested had characterized English development in the early modern period.⁵ The interpretation itself has problems, of course, for not only are Kisch's Kulaks hard to identify in the historical sources: his own concrete sketches, after all, depict only persons who had already become substantial merchants, but the social structure which produced them is also difficult to ascertain. Nevertheless, the interpretation which conforms with the results of a number of studies of other protoindustrial regions of Europe—in England, Switzerland, or Saxony⁶—deserves serious consideration.

However, that consideration should include two further points. First, Kisch emphatically rejected all attempts to explain the development of Rhenish rural industry—or, indeed, *any* rural industry—in terms of relative prices or the supplies of productive factors such as land and labor. He acknowledges that low rural wages attracted merchant capital from the towns and frequently noted that relatively low wages derived from relatively low subsistence costs. But he contends that for long-run development it is the continuing willingness and ability to respond to wage differentials that is significant, this being explainable in terms of power relationships. This is why he rejected Franklin Mendels's neo-Malthusian model of protoindustrialization as a general explanation.⁷

His own interpretation, however, is not necessarily inconsistent with the demographic models of protoindustrialization. His protoindustrial regions, after all, experience relatively high rates of population growth concentrated in the lower echelons of the social structure. By the end of the eighteenth century, a proletariat was clearly in the making here. He stressed net migration gains as the source of this growth, but it is not unlikely that this reflected local, short-distance movements. It could indeed reflect earlier marriage in nearby villages in response to protoindustrial employment opportunities. That, at least, is a useful hypothesis whose confirmation need not imply repudiation of the "social structure" notion that Kisch favored.

A second important question concerns the contribution of protoindustrialization to "full" industrialization, nineteenth-century style. According to D.C. Coleman, the concept of protoindustrialization implies a significant positive contribution.⁸ In Coleman's brief application of the "theory" of protoindustrialization to British history—employing the comparative method to regions—the protoindustrialization scoreboard registers a 4:6 ratio of successful to unsuccessful cases, and strengthens his skepticism about the concept's worth.⁹ A full review of the German history would probably turn out at least as negative as the British, though much would depend on how broadly protoindustrial regions are defined.¹⁰ Kisch's Rhenish studies of success and failure were admittedly a

selected sample for which their author claimed no general validity. He felt that the question of the transition to industrialization lay outside the scope of his studies. He did discuss the question in his earlier comparison of Silesia and the Rhineland, there concluding that social structure and particularly the social status and power of entrepreneurs relative to landed aristocrats or high civil servants were decisive—and wished to return to it in subsequent investigations.¹¹ But the most in the way of generalization that one can coax out of the present studies is the relative one that (a) there *were* important industrial regions with long histories of protoindustry and that (b) there were “good” cases where industrialization followed protoindustrialization. These were in districts where entrepreneurial control over labor and thus over its product became strong, and where nonindustrial activities did not become competitively attractive for owners of capital and labor. Kisch’s studies provide three good examples; no doubt there are more.

Kisch realized that a defect of this comparative regional approach is that some regions are more important than others and that, in some national cases of development, certain dynamic regions powerfully influence others. An alternative approach takes countries or large regions as the units of observation and focuses not merely on results but also on their protoindustrial causes. David Landes’s piece on “What Do Bosses Really Do,” is an instructive example, for it stresses West European rural industries as contexts within which capitalist entrepreneurs force a division of labor of production and reap the gains of specialization.¹² In the premachine age, Landes argues, the essential task of the capitalist was “to break down production into a number of simple tasks and assign them to workers of different degrees of skill and experience, hence working for different wages.”¹³ Subsequently, it was only because protoindustrial expansion had gone so far that capitalist entrepreneurs became aware of its limits; these limits then provoked the organizational experiments that led to the factory system. Landes’s star witness here is of course Lancashire and the English industrial revolution,¹⁴ but Kisch’s Rhineland studies are consistent with this view—particularly his stress on the strategic role of merchants and their marketing skills in guiding the process forward.

It is interesting to reflect on the lessons of protoindustrial history for developing countries in our age, a question Kisch’s work implicitly raises many times. What we have in Western Europe since the sixteenth century is a sequence of changes in which protoindustry spreads, generating proliferation of modest craft skills and of commercial relationships, which lead, in *some* cases, to considerable concentration and, eventually, to mechanized factories. Is this in some sense a rational and efficient sequence of development? Is it a path worth imitating? Are there countries outside Western or Central Europe which have followed this path in the twentieth century?¹⁵ This is not the place for detailed discussion of such questions, but they are worth mentioning here, if only because Kisch’s studies strongly suggest that West European industrialization—often taken, more or less explicitly, as a model for the poorer countries of the world—had been long in the making when the age of the factory—of steam and

steel—arrived. There is at least a strong presumption that meaningful imitation cannot limit itself to the latter age.

German Industrialization

In his own "Concluding Reflections" Herbert Kisch stressed the difference between his view of modern economic development and that of what he called "the standard texts of German economic history." The novelty of his studies, however, lies neither in their regional perspective nor in their focus on rural industry per se, but in combining those two perspectives with the grand theme of economic development.¹⁶ That synthesis deserves emphasis here, for the whole is more than the sum of its parts, as critics tend to overlook. In what follows, two aspects, which the main text treats as a unity, are discussed successively. They are: the regional character of German development and its periodization.

Regional consciousness has always been strong in German economic history and in recent years, thanks in part to the stimulus of work on a European-wide scale (done for example by Sidney Pollard), it has been linked to questions of economic development and industrialization.¹⁷ Recognition of the spatial unevenness of development has become an accepted part of the picture of national industrialization, particularly in the German case. According to Kisch, much of the explanation for this unevenness is to be found in the protoindustrial development of the early modern period. His success stories on Krefeld, Wuppertal (Elberfeld and Barmen), and the Aachen area are in themselves convincing. What one knows of certain other regions—for example, in the nearby Westphalian Mark, or in the Chemnitz-Zwickau-Glauchau areas of Saxony—strongly suggests a similar pattern.¹⁸ Recent work on the regional structure of German development in the seventeenth and eighteenth centuries by Helga Schultz is interesting in this connection because it shows that the commercialization of economic activity—implying division of labor and trade between agricultural and nonagricultural (handicraft) producers—conformed closely in its regional distribution to the subsequent pattern of German industrialization.¹⁹ Commercialization, it seems, was more widespread than protoindustrialization, but, like the latter, related to an early weakening of feudal controls over land and labor and to a more individualist agrarian social structure. This confirms Kisch's stress on the importance of the agrarian structure as a regional factor that conditioned protoindustrial development.²⁰

But what about those commercializing regions or centers which failed to develop? Kisch's studies were not designed to deal systematically with this question, but they do bear on it. Apart from the weight of feudal agrarian influences, already mentioned, they repeatedly return to two relevant themes: the role of the craft guilds and the role of the state. The guilds are seen to play a negative role which explains, for example, the failure of the imperial cities of Cologne and Aachen to develop dynamic industries before the nineteenth century. Guilds hampered innovation through measures believed to protect

craft workers and by diverting entrepreneurial energies and resources into political infighting. More recent research also tends to support Kisch's views in these matters, except in some minor points.²¹ Kisch explicitly treats the role of the Prussian state in his essay on Krefeld, but the negative assessment developed there is present in the rest of the book as well—often implicitly. The Krefeld essay, which compares that city to Berlin, acknowledges that Frederick the Great sincerely wished (within certain limits) to promote the economic development of his territories and especially Berlin, by means of subsidies and other measures aimed at attracting foreign entrepreneurs and skilled craftsmen (e.g., the toleration of religious minorities such as the Huguenots). However, it points out—taking the silk industry as its example—that the approach of Frederick and his advisers was at best technocratic and superficial, focusing on given products or production methods, and neglecting problems of international competition, of the social ambitions of merchants and craftsmen, and of the inevitable dependence of the latter upon the government's favor. The limited success of the “hothouse industry” of Berlin, despite much state activity directed to its promotion, is contrasted with the remarkable dynamism of Krefeld—to whose development the Prussian monarchy contributed but little. This result is then generalized: the Rhineland's industrial development—by the beginning of the nineteenth century undoubtedly the Prussian and German pacesetter—owed its considerable success largely to the achievements of its own entrepreneurs and its labor force. Perhaps one should view as positive the unwillingness or inability of local political authorities to intervene effectively in business affairs—though probably no more than one would want to attribute Lancashire's or Yorkshire's economic success to actions taken by the British government during the same period.²² This theme, and particularly this parallel to English industrial history with its *laissez-faire* corollary, is interesting because it is not what one is accustomed to hear in connection with German industrial history—in which the long-dominant view has been strong government intervention as a substitute for inadequate reserves of capital and entrepreneurship, especially in relation to those available to the threatening British economy in the early stages of its industrialization.²³

This takes us to the question of the periodization of German industrialization. Most German economic historians would probably agree roughly to the following schema:

1. 1780s to 1830s: slow economic growth, development of the “preconditions” of modern economic growth (MEG) through such changes as agrarian reforms;
2. 1830s to 1870s: acceleration of economic growth (or “industrial revolution” or “take-off”) marked by increasing mechanization of textiles and by railroad building and the expansion of heavy industry;
3. 1870s to 1914: ongoing industrialization (*Hochindustrialisierung*), with MEG spreading.²⁴

According to the standard story, period 1 is characterized by growing national recognition of German (or Prussian) backwardness relative to Great

Britain and by the need for “modern” institutions and infrastructures, leading to state measures to promote industrialization (through financial reform, protective tariffs, agrarian reforms, recruitment of foreign technicians, organization of pilot enterprises, etc.).²⁵ Period 2 sees the great “breakthrough” or “take-off,” with heavy industrial investments, especially in railroads, calling for much government spending and also engendering the rise of the big German investment banks.²⁶ In period 3, MEG becomes general, the German economy begins to grow even faster than most other European economies, and new problems emerge (such as the socialist labor movement), which call for more government intervention.

Kisch’s story covers the textile industries of the Prussian Rhineland and ends with the close of the Napoleonic wars. It is an important story, but its overlap with the standard scenarios of German industrialization outlined above is not great. Where, then, are the connections between these two stories to be found? Two, or possibly three, interpretive bridges are suggested. The first is purely economic and analogous to the “backward and forward and lateral linkages” of development theory à la Hirschman and Rostow.²⁷ The German textile sector was relatively large during the first half of the nineteenth century, by far the largest nonagricultural sector in Prussia or Germany in terms of output or employment.²⁸ Because Kisch’s regional industries were extraordinarily successful ones, they were likely to be disproportionately involved in stimulating such dynamic linkages as textiles might have promoted. We have linkages within the sector itself: mechanization and factory production in the textile industries came largely from the merchants engaged in the sector’s protoindustrial form.²⁹ Though its shape altered, the sector itself continued to grow through the nineteenth century, largely along the regional lines already established by the beginning of the century.³⁰ This growing sector made large demands on other parts of the economy: on machinery skills, trading skills, capital, transportation capacity, fuel supplies, and agricultural supplies—raw materials and foodstuffs. There are numerous seventeenth- and eighteenth-century examples of road-building and other improvements cited in Kisch’s studies. Such improvements become more compelling in the nineteenth century. Most of those undertaken in the first half of the century, including the railroad building which commenced in the 1830s, were responses to existing needs of trade, of which, the historians of trade and transport in this period assure us, the requirements of the textile industries were important.³¹

Closely related to the linkages just discussed is the commercialization of economic activity. Although commercialization did not confine itself to those regions in which rural textile industries engaged in export were located, the stimulus of the latter must have been disproportionately large, particularly as regards the commercialization of agriculture and the expansion of intersectoral trade in foodstuffs and fibers. Recent research, for example, is stressing that modernization of agriculture was well underway in several regions of Russia by the second half of the eighteenth century, and it seems likely that this reflected not only the export possibilities for the grain growing regions of

eastern Prussia, but also rising internal demands stemming in significant measure from populations engaged in textile production for the market.³²

In short, the development of an internal market and the modernization of Prussian and German agriculture, so often attributed to state-initiated reforms of the early nineteenth century, may have been much more an autonomous market process than historians had believed—one closely related to the growth of rural industry. For other times and places corroborative evidence exists;³³ and Kisch's studies present materials from the eighteenth century which support the hypothesis. Nevertheless, it must be admitted that the quantitative significance of the relationship for German industrialization as a whole is as yet far from established. It is more a hypothesis—deriving from Kisch's work—which deserves further attention.

A third way in which the protoindustrial experience described by Kisch may have served as a point of departure for German development in the nineteenth century concerns the social and political place to be occupied by business entrepreneurs within the political system that was hitherto dominated almost exclusively by landed aristocrats. We are given a taste of what one might expect in the essays on Krefeld, on the Wuppertal, and on the French revolutionary period. Here we find Rhenish entrepreneurs such as the von der Leyens discovering the pleasures of aristocratic living and the advantages of closer ties to those who wield power at the top. We see them securing laws and privileges favorable to their business interests, though these fall short of their demands. We see signs of aristocratic-bureaucratic governments opening up regular lines of communication and—especially in the French era—of participation with businessmen. This growing rapprochement is related to the numerically expanding working class, against whose demands Rhenish entrepreneurs sought government assistance from time to time, but whose potential danger as a destabilizing political force those same entrepreneurs were not above exaggerating as a means of obtaining aristocratic-bureaucratic concessions.³⁴ Thus the social and political *modus vivendi* worked out between Junker and bourgeoisie on a national scale in the nineteenth century—historians with the political model of parliamentary democracy in mind have spoken of a political culture which had been “crippled at birth”—had already been rehearsed at the local, Rhenish level in the eighteenth century.³⁵

A close look at the development of the Rhineland's dynamic textile centers in the seventeenth and eighteenth centuries provides us with a new perspective on Germany's industrialization in the nineteenth—one for which older historical studies (such as Sombart's) have ill prepared us.³⁶ However, there is one problem in this perspective which deserves mention here; one also acknowledged by Kisch in his short concluding statement. A large part of the textile sector “inherited” by the nineteenth century represented an increasingly stagnating line of economic activity which employed resources at low levels of productivity. It is difficult to see the regions for which this applies—for example, lower Silesia or eastern Westphalia—as foundations for ongoing industrialization. Within the framework just discussed, this remains an un-

solved problem.³⁷ It is part of a story requiring, as Kisch himself noted, another book.

Methodology

Herbert Kisch's method was one of descriptive narration. He had a sound grasp of economics but did not take to model-building and testing of the cliometric kind. He did not feel that economic history should be "applied economics" and was fond of quoting J. R. Hicks, who wrote:

One of the standard ways of writing economic history . . . is to survey the state of the economy under consideration as it was in various historical periods, comparing one state with another. This is comparative statics. It is when the economic historian tries to throw his work into the form of a narrative that it becomes, in our sense, dynamic. And any examination of the work of economic historians will show what a difficult threshold has to be crossed at that point.³⁸

It is not my intention to assess the position of Kisch's work with reference to that threshold. The point is, his interest and effort went into describing verbally and emphasizing the sequential character of change. He was a historical determinist in that he saw history as a learning process, albeit one with setbacks, in which the development of one period evolved from the changes of a previous one. This implies, among other things, that he was no friend of "counterfactual economic history"; indeed, one of his favorite aphorisms was the statement that "history could not be conjugated in the conditional."³⁹ He eschewed the explicit creation of "counterfactuals" and stuck to what one counterfactual historian has called "the descriptive approach" to observed behavior,⁴⁰ more interested, for example, in depicting rural industry as a historical forerunner of urban factory production than in speculating whether urban craft guilds could have done the job (of preparation) as well.

Methodologically, Kisch was, paradoxically, much like the Historical School he criticized: mainly interested in the social structure connected with the economic reality being investigated; a historicist, like Schmoller, but with a broadly Marxist *weltanschauung*. This was explicitly asserted as a positive methodological judgment on occasion, but its fullest expression was in his treatment of certain concrete, historical examples. Several examples have already been mentioned in this conclusion, but some repetition may be useful to make the point.

Take, for example, the key significance Kisch attached to social structure. Reference to the historically evolving social framework (particularly of class relations), within which economic activity unfolded, was frequently introduced to criticize the shallowness of purely economic explanations of some behavior pattern based on supplies of productive factors, relative prices, or aggregate demand. Thus, as mentioned earlier, he criticized the view which sought to explain the protoindustrialization of a given region with the growth

of its exports. A close causal connection between exports and economic growth could apply only to the short run, he thought. Of much greater importance was (a) the response of the productive organization to export chances and (b) the ability over the long run to *create* export markets or to deepen penetration of existing ones. In these Rhenish success stories one observes a discontinuous pattern of adjustments by traders and producers to shifts in foreign markets and in foreign competition. In the case of Krefeld and environs, for example, the external stimulus in the sixteenth century emanates from the Low Countries and focuses upon flax production, but:

As elsewhere, the flourishing state of the export staple soon spurred the growth of a "processing industry." Women and children turned to the spinning of yarn and its ancillary services on a commercial basis which in turn led to the weaving by men on a full time basis.⁴¹

At this stage of development, it is the looseness of the agrarian social structure that matters: the possibility of subdividing land and attracting immigrant cottagers, the social mobility permitting the emergence of petty dealers offering those cottagers employment; and not least of all, a local policy of religious toleration. In the seventeenth century, then, there is a shift away from Antwerp and Flanders to Amsterdam and Holland, but Krefeld suffers little. And in the eighteenth century, the response to the meteoric rise of the Irish linen industry is to shift into silks. The ability of Krefeld's great merchants to make this shift depended not only on commercial acumen but also on their considerable wealth (the manufacturing and marketing operations in silk required more capital than did linen) and power—which enabled the great merchants to restrict entry into the trade. By now, that is, the accumulation of wealth and power in the hands of the few merchant princes and their ability to command the talents of skilled workers appear to be decisive; more significant than their ability to extract monopoly privileges from government, though these were also part of their aims. It is true, however, that the monopolistic power stemming from political influence, though good for a monopolist such as von der Leyen, may have eventually contributed to the overall slowdown of Krefeld's protoindustrial growth in the late eighteenth century until the French era began in 1794;⁴² that is, monopoly power did not play an exclusively dynamic role in the development process.

From Kisch's discussion of Berlin and his earlier work comparing the Rhineland with Silesia, we have a rough idea of differences in social structure he would find crucial for explaining differential economic development; but it is only a rough one and certainly not susceptible to ready quantification or weighting. What comes across is a description of successful entrepreneurs, their wealth, their marketing skills, their political ambitions, their religious and cultural activities and, equally important, their conflicts with both representatives of the aristocracy and monarchy on the one side, and with their workers on the other. These descriptions of the social ambience of the Rhenish textile districts and of the protest and conflicts related to it, in part intended as explanations for the economic dynamism of those regions, turn out

to be virtually identical with descriptions of *results* of economic development. With Kisch's methodology, there is no clear possibility of using "social structure" to explain economic development or to distinguish between the two. Indeed, with Kisch's methodology, there is no need to do so. The two are intertwined, two parts of the same story. Certain historical circumstances, mainly economic in nature, produced in these Rhenish regions social structures conducive to economic development. These structures, however, can be described only in dynamic terms, as they developed over a long period of time, a period long enough to include economic development and the changes which—by Kisch's admission—most decisively shaped that social structure.

Kisch had no problem here, for insofar as he hoped to generalize his studies he saw them as historical cases demonstrating the interdependence of economic and social development, as cases which could be utilized to show what was missing from interpretations of development which focused on purely economic variables and on shorter stretches of time. Nevertheless, some readers will perceive a problem in this approach. Seen as a causal model of economic development, after all, Kisch's "social structure" argument had the drawback of being dangerously tautological.⁴³ Unfortunately, Herbert Kisch died too soon to offer such readers a satisfactory answer. It is clear from his earlier work, however, that his answer would have been formulated in terms of comparative history. For in the present volume, two important stories are missing from Kisch's analysis of German industrial development: (1) the story of the Rhenish textile districts in the age of industrialization, 1815–1914; and (2) a discussion of those protoindustrial textile regions which did not make a successful transition to the world of the nineteenth century. This is not the place to correct the deficiency. Here it may suffice to note that they still represent important gaps in the history of German industrialization which should be filled. Were they to be filled with studies using the Kisch methodology, his own work would doubtlessly take on additional meaning.

NOTES

PROLOGUE

1. Ronald Meek, "The Scottish Contribution to Marxist Sociology," in Ronald Meek, *Economics and Ideology and Other Essays* (London, 1976), pp. 34ff. See also A. Skinner, "Economics and History: The Scottish Enlightenment," *Scottish Journal of Political Economy*, 12 (1965), 1ff.; and A. Swingewood, "Origins of Sociology: The Case of the Scottish Enlightenment," *British Journal of Sociology*, 21 (1970), 164ff.

2. Kisch frequently voiced the belief that Tawney was the greatest of contemporary economic historians.

3. David Felix of Washington University, St. Louis, a lifelong friend of Herbert Kisch, calls Kisch a "Marshallian Marxist with a Burkean twist," a very apt expression for the anglicization of his Marxism.

4 To be sure, Kisch was favorably impressed by the openness, informality, and material generosity of middle-class American life. Despite his anglophilia, he probably felt more comfortable in the United States than in Britain. He lived through a phase of history in which the "American Way of Life" must have appeared highly attractive when compared to conditions in other countries, particularly for an economic historian. American society in those years had its negative side, of course—for example, its discriminatory treatment of nonwhites and those who were economically weak. In the 1960s I knew few individuals who were more sensitive to, or critical of, these aspects of American life.

5. Kisch was no dogmatic Marxist. Indeed, for many, he was hardly recognizable as a Marxist. For example, he was highly differentiating in his judgments on "institutional Marxism" (as preached by the East Bloc countries of Europe). He had extensive contacts with economic historians in East Germany and Czechoslovakia. He greatly respected their work without becoming an admirer of the general quality of Marxist thought there. Kisch was even less an admirer of the economic planning efficiency and political institutions of the communist countries.

6. There were other factors, however. As mentioned above, he taught courses in economics (principles, money and banking, history of thought), far from his field of research. Perhaps his strong skepticism toward the "New Economic History" contributed to his outsider position.

7. This view came across more strongly in personal conversations than it does in his published work. See chap. 1.

8. His doctoral dissertation was begun within the context of a large research problem which involved scholars at the University of California, Berkeley: *The Inter-University Study in Labor Problems in Economic Development*. On this, see Herbert Kisch, "Postskriptum," in P. Kriedte, H. Medick, and J. Schlumbohm, *Industrialisierung vor der Industrialisierung* (Göttingen: Max-Planck-Institut für Geschichte, 1977), pp. 374ff.

9. On this, see Kisch's dissertation, "The Crafts and Their Role in the Industrial

Revolution: The Case of the German Textile Industry" (Ph. D. diss., University of Washington at Seattle, 1958).

10. He was much impressed by the work of Eric Hobsbawm, e.g., his *Labouring Men: Studies in the History of Labour* (London: Weidenfeld and Nicolson 1957). See also, E. J. Thompson's *The Making of the English Working Class* (London: Pantheon 1963) and John Foster's *Class Struggle and the Industrial Revolution* (London: Weidenfeld and Nicolson 1974). Shortly before his death, Kisch wrote an extremely interesting review article of Hobsbawm's *Age of Capital*, which is important for an understanding of his philosophy of economic history. This article was published posthumously in the *Journal of Economic Issues*, 16, no. 1 (March 1982). See also Kisch, "Postskriptum," cited in n. 8. It is worth adding that Hobsbawm contributed a brief, positive commemoration of Kisch in his obituary notice in the *London Times* of April 13, 1978.

11. See W. W. Rostow, *The Stages of Economic Growth* (Cambridge: Harvard University Press, 1960); idem, ed., *The Economics of Take-off into Sustained Growth* (London: Macmillan, 1963); A Gerschenkron, *Economic Backwardness in Historical Perspective* (Cambridge: Harvard University Press, 1962), and his contribution to Rostow, *Take-off*. These two authors differ on many points, but with respect to associating German industrialization with a "big spurt" beginning around the middle of the nineteenth century and dominated by heavy industrial investment, they largely agree.

12. This article, originally published under the title "The Textile Industries in Silesia and the Rhineland: A Comparative Study in Industrialization," *Journal of Economic History*, 9 (1959), 541-64, has been translated and reprinted as an appendix to the volume by P. Kriedte, H. Medick, and J. Schlumbohm, *Industrialisierung vor der Industrialisierung*, cited in n.8: "Die Textilgewerbe in Schlesien und im Rheinland: eine vergleichende Studie zur Industrialisierung" (mit einem Postskriptum), pp. 350-86.

13. This is not the place for a full bibliographical report. One should at least mention the concept's true father, Franklin Mendels, "Proto-Industrialization: The First Phase of the Industrialization Process," *Journal of Economic History*, 32 (1972), 241-61. Shortly before his death, Kisch became an active participant in the proto-industrial discussion and organized an international conference on the subject: "Proto-Industrialization in Europe," December 1977 in Wilmington, Delaware. For the continuing discussion, see also the report by P. Deyon and F. Mendels, "La proto-industrialisation: théorie et réalité," in sect. A-2 of the *Eighth International Economic History Congress* in Budapest, 1982 (Budapest: Akadémiai Kiadó, 1982) pp. 69-107.

14. Kisch's studies do not discuss German industrial development in the post-take-off period (after the 1840s), nor do they attempt to sum up, quantitatively or otherwise, the protoindustrial development up to that point, so the question of the latter's contribution to the former remains open. In his dissertation, Kisch pointed to the limited ability of the textile industries to "produce" (or train) skilled workers in quantities significant enough to make a difference and to reduce Britain's lead in this respect. Though Kisch recognized a "development leap forward" in Germany in the 1840s, he attributed it to a social and political coalescence of aristocracy and bourgeoisie. He did not connect that leap with the previous development of the textile industries. See his dissertation, "The Crafts," pp. 70-71.

15. B. Moore, *Social Origins and Dictatorship and Democracy: Lord and Peasant in the Making of the Modern World* (Boston: Beacon Press, 1966), or Gerschenkron, *Economic Backwardness*, cited in n. 11.

16. Cited by Kisch in chap. 2.

17. See chap. 3.

18. The care with which Kisch sketched "his" textile entrepreneurs and their

activities, plus his positive assessment of their achievements, led some readers to regard him as a "laissez-faire liberal" with strong business history leanings. In response to one such judgment (whose author remains anonymous), he wrote: "Anyway, if I ever get landed before an UnAmerican Affairs Committee, I can show that someone who does not know me personally has declared me a 'laissez-faire liberal,' on the basis of my scribbling. Of course, what he does not know is that Franz Mehring, no 'laissez-faire liberal,' preceded me in my 'insights.'" Letter to author, February 11, 1977. See also F. Mehring, *Die Lessing-Legende: Zur Geschichte und Kritik des preussischen Despotismus und der klassischen Literatur* (Berlin: Dietz Verlag, 1975), esp. pp. 88–89, 130–31; F. Mehring, *Geschichte der deutschen Sozialdemokratie*, 3rd ed. (Stuttgart: Dietz Verlag, 1906), I, pp. 54, 56, 87.

19. Herbert Kisch presented an evaluation of Schumpeter in a paper read to the Czechoslovak Society of Arts and Sciences at its August 1976 meetings in Washington, D.C. The paper was subsequently published in the *Journal of Economic Issues*, 13, no. 1 (March 1979), 141–57.

20. Kisch believed that a supply of labor that was already accustomed to the problems of industrial work and discipline was one of the most important preconditions. He spoke of "external economies" for the economic development of a region, and felt that these had been generated in some of the Rhenish regions studies as early as the eighteenth century. He believed that the skilled workers and foremen of the early factories in these regions were recruited from protoindustrial strata, but that this was only possible in regions in which the exploitation and repression of the working class population stayed within moderate limits. For a description of this point, see Kisch's comparative treatment of Silesia and the Rhineland, cited in notes 8 and 12.

21. Kisch briefly sketched his theoretical and philosophical views in his "Postskriptum," cited in n. 8.

22. See also chap. 4. The reverse side of the coin, having progressive protoindustrial regions on its face, had stagnant urban centers dominated by restrictive guilds. In this respect, Kisch drew quite heavily on the English historical experience as interpreted by George Unwin. See G. Unwin, "Introduction" to G. W. Daniels, *The Early English Cotton Industry with Some Unpublished Letters by Samuel Crompton* (Manchester, Eng.: University Press, 1920), pp. 20–21; also G. Unwin, *Studies in Economic History*, 2nd ed. (London: Frank Cass, 1966); and G. Unwin, *Industrial Organization in the 16th and 17th Centuries* (London: Frank Cass, 1963).

23. In the regions directly affected, Kisch also placed weight on the coalition between the guilds and Catholic princes in the Counter-Reformation of the late sixteenth century as a factor that strengthened the guilds, at least for a time. This factor, he felt, belonged to their evaluation.

24. A share in expected profits possibly motivated princes to behave in this manner. Kisch was reluctant to see any simple explanation of this connection.

25. For Kisch, Great Britain was unique: the only country in which an independent bourgeois social science and bourgeois culture developed. But this view is somewhat problematical. See Eric Hobsbawm, "Public Benefits and Private Vices," in *New York Review of Books*, 27, no. 5 (1980), 35–37.

CHAPTER 1

1. See the article by Bruno Kuske, "Die Grundzüge der Wirtschaftsentwicklung am Niederrhein vom Mittelalter bis zur Gegenwart," *Annalen des historischen Vereins für den Niederrhein*, 115 (1929), 38–60.

2. J. A. van Houtte, "Die Beziehungen zwischen Köln und den Niederlanden vom Hochmittelalter bis zum Beginn des Industriezeitalters," *Kölner Vorträge zur Sozial- und Wirtschaftsgeschichte*, no. 1 (1969).

3. Bruno Kuske, "Die Handelsbeziehungen zwischen Köln und Italien im späteren Mittelalter," in *Köln, der Rhein und das Reich: Beiträge aus fünf Jahrzehnten wirtschaftsgeschichtlicher Forschung*, (Cologne and Graz: Bohlau Verlag, 1956), pp. 1–47.

4. That persons' economic activities bring about changes in their viewpoints is one of the main lessons of R. H. Tawney's classic work, *Religion and the Rise of Capitalism: A Historical Study* (London: Harcourt, Brace and World, 1926).

5. Kuske, "Grundzüge der Wirtschaftsentwicklung," pp. 42–43.

6. B. Kuske, "Die wirtschaftliche und soziale Verflechtung zwischen Deutschland und den Niederlanden bis zum 18. Jahrhundert," in *Köln, der Rhein und das Reich*, pp. 200–256.

7. "Export expansion did not serve in the nineteenth century to differentiate successful from unsuccessful countries. Growth where it occurred was mainly the consequence of favorable internal factors, and external demand represented an added stimulus which varied in importance from country to country and period to period. A more warranted metaphor that would be more generally applicable would be to describe trade expansion as handmaiden of successful growth rather than as an autonomous engine of growth" (Irving Kravis, "Trade as a Handmaiden of Growth: Similarities Between the Nineteenth and Twentieth Centuries," *Economic Journal*, 80 [Dec. 1970], 850). In a different context, Charles P. Kindleberger more or less made the same point: "One cannot really discuss the role of foreign trade in growth without indicating the underlying capacity of the economy to undertake new tasks in depth or to transform. And this economic historians have seldom done" (*Economic Growth in France and Britain, 1851–1950* [Cambridge, Mass.: Harvard Univ. Press, 1964], p. 287).

8. Bruno Kuske, "Gewerbe, Handel und Verkehr," in H. Aubin et al., *Geschichte des Rheinlandes von der ältesten Zeit bis zur Gegenwart* 2 vols. (Essen: G. D. Baedeker, 1922), II, pp. 150ff.

9. *Ibid.*, II, esp. pp. 51–54.

10. "In the Empire of Charlemagne," wrote Franz Steinbach, "the Rhineland was situated at the center" ("Geschichtliche Räume und Raumbeziehungen der deutschen Nieder- und Mittelrheinlande im Mittelalter," *Annalen des historischen Vereins für den Niederrhein*, 115–16 [1954], 14). For an account of the medieval network of roads which facilitated Rhenish contacts with Flanders and Brabant, see André Loris, "Itinéraires routiers entre Rhénanie et Pays Mosan à la fin du XII^{ème} siècle," esp. pp. 255–58, and Franz Petri, "Zur Stellung der Eifel und ihrer Nachbarräume im europäischen Nord-Süd Verkehr bis zur Wende von Mittelalter und Neuzeit," pp. 271–79. Both essays appeared in *Beiträge zur Wirtschafts- und Stadtgeschichte: Festschrift für Hector Ammann*, ed. H. Aubin et al. (Wiesbaden: Franz Steiner Verlag, 1965).

11. J. A. van Houtte, "Die Beziehungen zwischen Köln und den Niederlanden vom Hochmittelalter bis zum Beginn des Industriezeitalters," pp. 17–21.

12. For a summary account of agricultural developments in the Rhineland, see H. Aubin, "Agrargeschichte," in H. Aubin et al., *Geschichte des Rheinlandes von ältester Zeit bis zur Gegenwart*, II, esp. pp. 115–39.

13. *Ibid.*, esp. pp. 122ff.

14. For an appreciation of the broad West European context in which Rhineland agriculture evolved, see the magisterial account by B. H. Slicher van Bath, *The Agrar-*

ian *History of Western Europe* (New York: St. Martin's Press 1963), esp. pp. 15, 16, 46, and 145–48.

15. For some of the implications of the secular decline in prices, see the interesting theoretical essay by Edward J. Nell, "Economic Relationships in the Decline of Feudalism," *History and Theory*, 6/3 (1967), 318–19.

16. Aubin in "Agrargeschichte," pp. 126ff.

17. Ibid. For an excellent discussion regarding the decline of feudalism in Rhenish agriculture, see Max Weber, "Capitalism and Rural Society in Germany," in *From Max Weber: Essays in Sociology* (translated and edited with an introduction by H. H. Gerth and C. Wright Mills) (New York: Oxford University Press, 1946), pp. 363–85.

18. Aubin, "Agrargeschichte," esp. pp. 123–24.

19. Kuske, "Gewerbe, Handel und Verkehr," p. 188, and Aubin, "Agrargeschichte," p. 124.

20. Kuske, "Verflechtung," pp. 206–8, and Houtte, "Beziehungen," esp. pp. 16ff.

21. On the rise of Amsterdam and its impact upon the development of a rural textile industry in the hinterland (including parts of the Rhineland and Westphalia), see Z. W. Sneller, "La naissance de l'industrie rurale dans les Pays-Bas au XVII et XVIII siècles," *Annales d'Histoire Economique et Sociale*, 1/2 (April 1929), 193–202.

22. Ralph Davis, "English Foreign Trade 1700–1774," *Economic History Review*, 2nd series, 15/2, (December 1962), 285–98.

23. Kuske, "Gewerbe, Handel und Verkehr," pp. 152–54.

24. Houtte, "Beziehungen," p. 20.

25. Kuske, "Gewerbe, Handel und Verkehr," p. 192, and Gustav von Gülich, *Geschichtliche Darstellung des Handels der Gewerbe und des Ackerbaus der bedeutendsten handeltreibenden Staaten unserer Zeit* (Jena: Friedrich Fromann, 1830), 2, p. 183.

26. On the advantages of this balkanization, see the important article by Max Barkhausen, "Staatliche Wirtschaftslenkung und freies Unternehmertum im westdeutschen und im nord- und süd-niederländischen Raum bei der Entstehung der neuzeitlichen Industrie im 18. Jahrhundert," *Vierteljahrsschrift für Sozial- und Wirtschaftsgeschichte*, 45 (June 1958), esp. pp. 174–75.

27. Idem.

28. Gülich, *Geschichtliche Darstellung des Handels*, 2, p. 200.

29. The notion of a "seventeenth-century crisis" was originally put forth by Eric J. Hobsbawm in "The Crisis of the Seventeenth Century," *Past and Present*, nos. 5 and 6 (1945). This seminal study prompted a series of articles which appeared in *Past and Present*. Some of these essays supported, others opposed, Hobsbawm's thesis. The entire debate has since been reissued as *Crisis in Europe, 1560–1660*, Trevor Aston, ed. (London: Routledge and Kegan Paul, 1965). See especially p. 38, where Hobsbawm points to the expansion of some of the rural industries producing cheap goods. This sector does not seem to have been suffering from stagnation.

30. About the rapid accumulation of wealth in the Wupper Valley, for example, see the contemporaneous account provided by Kark Meisen, "Eine 'volkskundliche' Beschreibung von Jülich und Berg aus dem 18. Jahrhundert," *Annalen des historischen Vereins für den Niederrhein*, 126 (1935), 102.

31. François Crouzet, "Wars, Blockade and Economic Change in Europe," *Journal of Economic History*, 24/4 (Dec. 1964), 567–88.

32. For some of these difficulties in the German lands, see François Dreyfus, "Bilan économique des Allemagnes en 1815," *Revue d'Histoire Economique et Sociale*, 43/4 (1965), 433–64.

33. Gülich, *Geschichtliche Darstellung des Handels*, II, pp. 361ff.

34. Karl-Georg Faber, "Verwaltungs- und Justizbeamte auf dem linken Rheinufer während der französischen Herrschaft. Eine personengeschichtliche Studie," *Aus Geschichte und Landeskunde. Forschungen und Darstellungen. Franz Steinbach zum 65. Geburtstag* (Bonn: Ludwig Rohrscheid, 1960), pp. 384–85. For an equally favorable evaluation of the French era, see an older study by Alexander Bergengrün, *Staatsminister August Freiherr von der Heydt* (Leipzig: S. Hirzel, 1908), p. 12.

35. One Prussian officer who spent some time in this area during the 1790s, probably in 1795–96, commented as follows: "Uncontentiously, Elberfeld is one of the most important manufacturing and commercial centers of Germany and despite the present war has not only maintained but actually enhanced its prosperous state" (Wilhelm Güthling, ed., "Eine wehrkundliche Beschreibung des Bergischen Landes," *Zeitschrift des Bergischen Geschichtsvereins*, 64 [1933–37], 134).

36. See Walther von Eynern, ed., "Nachrichten aus meinem Leben von Johann Fischer aus Barmen," *Zeitschrift des Bergischen Geschichtsvereins*, 58 (1929), 52 and 65.

37. Bruno Kuske, *Die Volkswirtschaft des Rheinlandes in ihrer Eigenart und Bedeutung* (Essen: G. D. Baedeker, 1925), pp. 4–5.

38. Rudolf Morsey, "Wirtschaftliche und soziale Auswirkungen der Säkularisation in Deutschland," in *Dauer und Wandel in der Geschichte—Festschrift für Kurt von Raumer*, eds. Rudolf Vierhaus and Manfred Botzenhart (Münster: Verlag Aschendorff, 1966), pp. 365–66.

39. Aubin, "Agrargeschichte," p. 139. For a critique of Aubin, see Wilhelm Engels, "Beiträge zur Domanenverausseuerungspolitik Preussens in der Rheinprovinz," *Aus Geschichte und Landeskunde*, p. 622.

40. Richard Tilly, *Financial Institutions and Industrialization in the Rhineland 1815–1870* (Madison: University of Wisconsin Press, 1966), pp. 55–57.

41. Justus Hashagen, "Die Rheinlande beim Abschlusse der französischen Herrschaft," in *Die Rheinprovinz 1815–1915. Hundert Jahre preussischer Herrschaft am Rhein*, ed. Joseph Hansen (Bonn: A. Marcus and E. Webers, 1917), I, pp. 24–25.

42. Hashagen, "Rheinlande," pp. 6–7.

43. See Roger Dufraisse, "Les notables de la rive gauche du Rhin à l'époque napoléonienne," in "La France à l'époque napoléonienne," *Revue d'histoire moderne et contemporaine*, 17 (July–September 1970), esp. p. 764.

44. Faber, "Verwaltungs- und Justizbeamte," pp. 384–85.

45. Fritz Hartung, *Staatsbildende Kräfte der Neuzeit* (Berlin: Duncker and Humblot, 1961), p. 424.

46. Introductory chapter to George W. Daniels, *The Early English Cotton Industry with some Unpublished Letters by Samuel Crompton* (Manchester, Eng.: University Press, 1920), pp. xx–xxi.

47. The definition of this stage in economic history as "protoindustrialization" was coined by Franklin F. Mendels, "Proto-Industrialization: The First Phase of the Industrialization Process," *Journal of Economic History*, 32/1 (March 1972), 241. Mendels was probably inspired to do so by the concept of the "proto-factory" originally put forth by Fritz Redlich and Herman Freudenberger, "The Industrial Development of Europe: Reality, Symbols, Images," *Kyklos*, 25/3 (1964), 372–401, esp. 381.

48. For a somewhat similar elaboration, see the excellent discussion by Richard Caves as to why a boom of a region based on raw material exports may or may not generate sustained growth in that area: "Export Led Growth and the New Economic History," in *Trade, Balance of Payments and Growth. Papers in International Econom-*

ics in Honor of Charles P. Kindleberger, ed. Jagdish N. Bhagwati et al. (Amsterdam and London: North Holland Publishing Co., 1971), pp. 403–42.

49. A. W. Coats, "Economic Growth: The Economic and Social Historian's Dilemma," in N. B. Harte, ed., *The Study of Economic History—Collected Inaugural Essays 1893–1970* (London: Frank Cass, 1971), esp. pp. 332–33 and W. A. Cole, "Economic History as a Social Science," in Harte, *Study of Economic History*, p. 353.

50. For a fairly exhaustive summary of the literature up to 1960, see Hermann Kellenbenz, "Ländliches Gewerbe und bäuerliches Unternehmertum in Westeuropa vom Spätmittelalter bis ins 18. Jahrhundert," *Second International Conference of Economic History*, (Aix-en-Provence, 1962), pp. 377–427. See also Wolfram Fischer, "Rural Industrialization and Population Change," in *Comparative Studies in Society and History*, 15/2 (March 1973), 158–70, and Charles and Richard Tilly, "Agenda for European Economic History in the 1970's," *Journal of Economic History*, 21/7 (March 1971), 187–88.

51. "The first is the observation," as Charles and Richard Tilly see it, "that the largest effects of recent works in modern European history have been to push back in time and compress into regional contexts a number of changes in economic activity and social life once thought to be very closely tied to the national expansion and factory organization, and thus to raise doubts about theories positing a critical take-off industrialization. The second is the proposal that economic historians are now ready to examine seriously their entire analysis of the transition from the peasant economy to an industrial one. On the twin pillars we build the hope that European economic history of the seventies will contribute to a renewal of development theory" ("Agenda for European History in the 1970's," p. 184).

52. Her basic hypothesis is enunciated in the well-known article "Industries in the Countryside," in *Essays in the Economic and Social History of Tudor and Stuart England—in Honour of R.H. Tawney*, ed. F.J. Fisher (Cambridge: University Press, 1961). For a further elaboration (with a wealth of detail), see her chapter, "The Farming Regions of England" in that classic study, *The Agrarian History of England and Wales* (H. P. R. Finberg, general editor), ed. Joan Thirsk (Cambridge: University Press, 1967), IV, pp. 1–112.

53. Thirsk, "Farming Regions," p. 111.

54. *Ibid.*, pp. 8–12, 16, 18–28, and 37–39.

55. *Ibid.*, pp. 59 and 69.

56. *Ibid.*, p. 19.

57. See Alan Everitt, "The Labouring Population," in *The Agrarian History of England and Wales*, IV, p. 399.

58. See Thirsk, "Farming Regions," pp. 58–59; "People were attracted to the area by opportunities of more varied employment than those available in the open countryside of the plains. Its common grazings were more extensive than elsewhere. . . . Manorial control, moreover, was weak in the Weald, and control over immigration was negligible. Customs of inheritance also probably fostered the growth of population, for gavelkind was the common custom."

59. Thirsk, "Industries in the Countryside," p. 84.

60. Thirsk, "Farming Regions," p. 12: "Highland communities which lacked mineral resources on their doorstep frequently resorted to domestic handicraft. Cloth-making was the most important of these. . . . By contrast . . . the lowland communities were highly manorialized and manorial control had considerable effect in discouraging the immigration of outsiders and squatters on the waste. . . . These were not ideal conditions for nursing a cottage industry." This was particularly so because, as Thirsk

points out, "Farming (wheat) was a fulltime occupation, which did not leave much scope for men to engage in a cottage industry" (pp. 13–14). Of course, cattle raising and dairy farming were seasonal activities which left those engaged in it enough spare time to pursue other work.

61. I am not quoting from the above-mentioned book, but from an excerpt reprinted as "The Impact of Cottage Industry on an Agricultural Population," in D. Landes, ed., *The Rise of Capitalism* (New York: Macmillan, 1966), pp. 53–54.

62. This argument was made by Jules Sion, *Les paysans de la Normandie orientale* (Paris: Armand Colin, 1909), pp. 156–57. See also Henri Sée, *Histoire économique de la France—Le moyen âge et l'ancien régime* (Paris: Armand Colin, 1948), pp. 352–354.

63. Laurent Dechesne, *Industrie drapière de la Vesdre avant 1800* (Paris: Librairie du Recueil Sirey, 1926), pp. 16–17.

64. *Ibid.*, pp. 229–30.

65. For an early statement of this position, see the much quoted study by E. Tarlé, *L'industrie dans les Campagnes en France à la fin de l'ancien régime* (Paris: Edouard Cornely, 1910), pp. 17–20 and 79–80. In more recent times, a most ingenious and careful elaboration of the Malthusian trap as the prime mover responsible for the regional origins of a domestic industry has been presented by Franklin F. Mendels, "Industrialization and Population Pressure in Eighteenth Century Flanders" (dissertation, University of Wisconsin, 1969). I am indebted to Louise and Charles Tilly for lending me a copy of that manuscript.

Also see Henri Sée, *Les classes rurales en Bretagne XVI^e siècle à la révolution* (Paris: V. Giard and E. Briere, 1906), p. 446: "It is precisely to the inadequacy of agricultural production that one must attribute the truly remarkable development of the rural industries in the Bretagne." See also the opus by Pierre Goubert, *Beauvais et le Beauvaisis de 1600 à 1700—Contribution à l'histoire sociale de la France du XVII^e siècle* (Paris: 1960), esp. pp. 162–64. But it would be quite unfair to suggest that Goubert believes agricultural poverty to have been the only historical force responsible for the emergence of rural manufacture.

66. Eric L. Jones, "Agricultural Origins of Industry," in *Past and Present*, no. 40 (July 1968), 58–71. According to Jones, these technological improvements were initiated by a decline in the rate of population growth during the late seventeenth century.

67. *Ibid.*, p. 61.

68. "The Market Structure of Rural Industry in the Early States of the Development of Modern Capitalism," in *Second International Conference of Economic History* (Aix-en-Provence, 1962), pp. 462 and 466–67.

69. To drive home the point as to what he really means, Otsuka quotes what he calls "classical passages" (*ibid.*, p. 466, n. 2) from R. H. Tawney's *The Agrarian Problem in the Sixteenth Century* (London, 1912), pp. 83ff. and 93ff: "The rudimentary specialization of industrial employments, which can plainly be seen going on in the villages of the fourteenth century, brought into existence the man who was half peasant, half artisan or tradesman, and who could employ the money which he made in trade to carry as his husbandry on a larger scale than his neighbours."

70. Otsuka expresses my own sentiments most effectively: "From the viewpoint of comparative history I think we cannot find the prime mover of the development of capitalism (i.e., industrialism based on free wage workers) in the change of population, or in the movement of prices. For example, it is well known that while the decrease of population favored the disappearance of villeinage in England during the fourteenth century, the same phenomenon occurred in East Germany in the seventeenth century in concert with the reestablishment of severe serfdom; and while the price revolution in the

sixteenth century favored the progress of capitalism in England, the same fact on the contrary stood in the way of modern industrialism in Spain. As a matter of fact, it is also possible in the case of rural industry to point out similar inconsistencies. That is why we give special attention to the *market structure* of rural industry, and not to rural industry in general" ("Market Structure of Rural Industry," p. 459, n. 2).

71. Sion, *Les paysans*, pp. 459–62, and Sée, *Histoire économique de la France*, p. 355. On how industry spread from ancient urban centers to the countryside as city merchants put out the raw materials among the peasantry in the environs of the town, see also Goubert, *Beauvais et le Beauvaisis de 1600 à 1700*, pp. 128–29, and the interesting comments by Henri Sée, "Remarques sur le caractère de l'industrie rurale en France et les causes de son extension au XVIII^e siècle," *Revue historique*, 142 (Jan.-April 1923), 47–53.

72. For a good account of the centrifugal forces which were to prompt the transplantation of a once exclusively urban industry into the neighboring countryside, see Pierre Deyon, *Amiens capitale provinciale. Étude sur la société urbaine au 17^e siècle* (Paris: Mouton, 1967), esp. pp. 200–215.

73. J. D. Chambers, "The Rural Domestic Industries during the Period of Transition to the Factory System with Special Reference to the Midland Counties of England," *Second International Conference of Economic History* (Aix-en-Provence, 1962), pp. 431–32.

74. Chambers, "Rural Domestic Industries," p. 432. See also idem, *Nottinghamshire in the Eighteenth Century: A Study of Life and Labour under the Squirearchy*, 2nd edition (London: Frank Cass, 1966), pp. 94–95. For a similar view regarding developments in France and Belgium, see P. Leuilliot, "Les industries textiles. Problèmes généraux et orientation des recherches," in *X Congresso Internazionale di Scienze Storiche—Storia Moderna, Roma 4–11 settembre 1955* (Florence: G. C. Samsón et al., 1955), IV, pp. 287–88.

75. Robert Lévy, *Histoire économique de l'industrie cotonnière en Alsace. Étude de sociologie descriptive* (Paris: Felix Alcan, 1912), pp. 27–31.

76. Quoted by Lévy, *Histoire économique*, p. 32.

77. *Europe's Postwar Growth—The Role of Labor Supply* (Cambridge: Harvard University Press, 1967), p. 4.

78. For a simple elucidation of what Marx meant by that term, see Stephen Hymer, "Robinson Crusoe and the Secret of Primitive Accumulation," *Monthly Review*, 23/4 (Sept. 1971), 11–36.

79. "The Rural Domestic Industries during the Period of Transition to the Factory System, with Special Reference to the Midland Counties of England," p. 433.

80. Gerhard Heitz, *Die Entwicklung des ländlichen Leinenproduktion in Sachsen in der ersten Hälfte des 16. Jahrhunderts. Forschungsseminar Professor Kuczynski No. 4, Institut für Wirtschaftsgeschichte—Humboldt Universität Berlin* (1961), pp. 28 and 43. (This paper was given to me by Hildegard Hoffman of the aforementioned institute.)

81. *La propriété paysanne en France à la veille de la révolution (principalement en Limousin)* (Paris: Honore Champion, 1912), pp. 85, 96–97, and 133–34. See also Sée, "Remarques sur le caractère de l'industrie rurale en France," pp. 50–51.

82. For a quick survey of the circumstances affecting the early pattern of development in the Silesian linen trades, see S. V. Kan, *Dva vosstanija slezskich ткачей—1793–1844* (Moscow, 1948); here the Czech translation (Prague: Nakladatelství Rovnost, 1952) is used. See especially chap. I. For developments in Bohemia, see the magnum opus by Arnost Klíma, *Manufakturní Období v Čechách* (Prague: Českosl. Akademie Ved, 1955), esp. chap. 1. As far as Poland is concerned, the question has been exhaus-

tively dealt with by Witold Kula, *Szkice o manufakturach W Polsce XVIII Wieku* (Warsaw: Państwowe Wydawnictwo Naukowe, 1956), esp. I, pp. 33–64.

83. See the important study by Hermann Aubin, "Die Anfänge der grossen schlesischen Leinenweberei- und Handlung," *Vierteljahrsschrift für Social- und Wirtschaftsgeschichte*, 35/2–3 (1942), 105–78.

84. Elizabeth Zimmermann, "Der schlesische Garn- und Leinenhandel im 16. und 17. Jahrhundert," *Economisch-historisch Jaarboek-Bijdragen tot de economische geschiedenis van Nederland*, 26 (1956), 208–52.

85. Klíma, *Manufakturní Období v Čechách*, pp. 137–39, and idem, "The Domestic Industry and the Putting-Out System (Verlag System) in the Period of Transition from Feudalism to Capitalism," *Second International Conference of Economic History* (Aix-en-Provence, 1962), pp. 477–81.

86. Alfred Zimmermann, *Blüthe und Verfall des Leinengewerbes in Schlesien* (Oldenburg and Leipzig: Schulzesche Buchhandlung, 1885), p. 64.

87. Some years ago, I tried my hand at assessing the way in which the institutional arrangements of two regional societies affect the long-run vitality of their respective domestic industries: Herbert Kisch, "The Textile Industries in Silesia and the Rhineland: A Comparative Study in Industrialization," *Journal of Economic History*, 19 (Dec. 1959), 541–64. This essay was later translated as a chapter entitled "Die Textilgewerbe in Schlesien und im Rheinland: eine vergleichende Studie zur Industrialisierung (mit einem Postskriptum)" in Peter Kriedte, Hans Medick, and Jürgen Schlumbohm, *Industrialisierung vor der Industrialisierung* (Göttingen: Max Planck-Institut für Geschichte, 1977), pp. 350–86. I was subsequently taken to task for my particular approach by Ursula Lewald.

88. "Remarques sur le caractère de l'industrie rurale en France," pp. 50–52. It is interesting that in this particular essay, Sée appears to be much less emphatic about the Malthusian pressures regarding the origins of a rural industry than he was in his book about Brittany's agrarian economy.

89. *Ibid.*

90. *Zur Geschichte der Entwicklung der Produktionsverhältnisse in der ländlichen westfälischen Leinenproduktion in der Zeit von 1450 bis 1750. Forschungsseminar Professor Jürgen Kuczynski No. 2* (1952). *Institut für Wirtschaftsgeschichte—Humboldt Universität, Berlin*, pp. 15ff. (This paper was given to me by Hildegard Hoffmann.)

91. Note the quite unsatisfactory effort to provide an explanation for the decline of the Brittany linen trades. René Musset, *Le Bas Maine. Étude géographique* (Paris: Armand Colin, 1917), pp. 270–72.

92. Musset, *Le Bas Maine*, pp. 270–72.

93. See Alan Swingewood, "Origins of Sociology: The Case of the Scottish Enlightenment," *British Journal of Sociology*, 21/2 June 1970), 164–77.

94. Quoted by A. Skinner, "Economics and History—The Scottish Enlightenment," *Scottish Journal of Political Economy*, 12, (February 1965), 7. This is an excellent essay and shows very clearly how far the Scottish philosophers had proceeded in their materialistic interpretation of history.

95. Quoted by J. D. Chambers, "The Tawney Tradition," *Economic History Review*, 2nd series, 24/3 (August 1971), 356.

96. J. R. Hicks, *A Theory of Economic History* (Oxford: Clarendon Press, 1969), p. 167. In addition, Hicks has this to say:

A major function of economic history, as I see it, is to be a forum where economists, political scientists, lawyers, sociologists, and historians—historians of events and of ideas

and of technologies—can meet and talk to one another. . . . My theory of history will be quite definitely not a theory in their sense [of Toynbee or Spengler]. It will be a good deal nearer to the kind of thing that was attempted by Marx, who did take from economics some general ideas which he applied to history, so that the pattern which he saw in history had some extra-historical support. That is much more the kind of thing I want to do.

It does not seem unreasonable to suppose that we can draw from social science, not only (in view of what has just been said) from economics, some general ideas which can be used by historians as a means of ordering their material. . . . What remains an open question is whether it can only be done in a larger way, so that the general course of history, at least in some important aspects, can be fitted into place. Most of those who take the latter view would use the Marxian categories, or some alternative version that is available. It is not surprising that they should. It does, nevertheless, remain extraordinary that one hundred years after *Das Kapital*, after a century during which there have been enormous developments in social science, so little else should have emerged [pp. 2–3].

97. J. A. Schumpeter, commenting on his own formulation of an endogenous theory of economic change, made the following remarks: "It was not clear to me at the outset what to the reader will perhaps be obvious at once, namely, that his idea and this aim [i.e., to explain the cycle and the growth of a capitalist economy] are exactly the same as the idea and the aim which underly the economic teaching of Karl Marx. In fact, what distinguishes him from the economists of his own time and those who preceded him was precisely a vision of economic evolution as a distinct process generated by the economic system itself" (Preface to the Japanese edition of *Theorie der Wirtschaftlichen Entwicklung*, reprinted in *Essays of J. A. Schumpeter*, ed. Richard V. Clemence [Cambridge: Addison-Wesley Press, 1951], p. 160).

98. "On Medieval History as a Social Study," in Harte, *The Study of Economic History*, p. 118.

99. "The doctrine of the preponderance of economic factors," writes Gunnar Myrdal, "has been blamed on Karl Marx. However, it was devised before his time and, as is obvious from national and international debate, it is adhered to with few reservations by politicians in all countries" (*Asian Drama: An Inquiry into the Poverty of Nations* [New York: Pantheon, 1968], I, p. 28). And Eric Hobsbawm has commented: "We are required neither to agree with his conclusions nor his methodology [i.e., Marx's]. But we would be unwise to neglect the practice of the thinker who, more than any other, has defined or suggested the set of historical questions to which social scientists find themselves drawn today" ("From Social History to the History of Society," in "Historical Studies Today," *Daedalus* [Winter 1971], p. 29).

100. Note the basically Marxian approach applied by the last of the "classical economists," John E. Cairnes, in his remarkable anatomy of Southern society. *The Slave Power* (London, 1862). As for Adam Smith's Marxist view of the political process, see the interesting essay by Warren J. Samuels, "Adam Smith and the Economy as a System of Power," *Review of Social Economy*, 31 (October 1973), 123–37.

101. A. J. Youngson, "Progress and the Individual in Economic History," reprinted in Harte, *The Study of Economic History*, p. 223. Delivered in 1959, doctrinal scholars might want to view the above quotation as a period piece of the cold war age.

102. As, for example, recent attempts to explain the whole course of West European economic development in terms of the neoclassical model.

103. For a defense of local history, see Paul Leuilliot's Foreword, "Defense et illustration de l'histoire locale," in Guy Thuillier, *Aspects de l'économie nivernaise au XIX^e siècle* (Paris: Armand Colin, 1966).

104. John Habakkuk, "Economic History and Economic Theory," in "The Historian and the World Order of the Twentieth Century," *Daedalus* (Spring 1971), p. 318.
105. To cite one example, in his contribution to the Kindleberger festschrift, Richard Caves demonstrates, in the most sophisticated and lucid manner, that there is more to Harold A. Innis's "staple hypothesis than some of his recent detractors bent on revisionism would allow ("Export-Led Growth and the New Economic History," pp. 403–38.).
106. For a brief account of what local historians have accomplished especially in France, see Pierre Goubert, "Local History," in "Historical Studies Today," *Daedalus* (Winter 1971), pp. 113–24.
107. Goubert, "Local History," esp. p. 117: "The return to local history proceeds from a new interest in social history—that is, the history of a whole society, not only the happy few who governed it, judged it, ground it down, or taught it."
108. For a discussion regarding the limited utility of "turning social history into a backward projection of sociology" . . . or "economic history into retrospective economic theory," see Hobsbawm, "From Social History to the History of Society."
109. Discussing regional differences with respect to the behavior of real wages in the face of population growth and structural maladjustments in the economy, E. A. Wrigley writes: "It also illustrates a point which can hardly be made too strongly . . . that economic fortunes were at least as much a matter of region as of country in early modern Europe. They remained so during the early days of the Industrial Revolution" ("The Process of Modernization and the Industrial Revolution in England," *The Journal of Interdisciplinary History*, 3/2 (Autumn 1972), 252, n. 57. For an interesting study of regional differences in Germany, see Knut Borchardt, "Regionale Wachstumsdifferenzierung in Deutschland im 19. Jahrhundert unter besonderer Berücksichtigung des West-Ost-Gefälles," in *Wirtschaft, Geschichte und Wirtschaftsgeschichte. Festschrift zum 65. Geburtstag von Friedrich Lütge*, eds, Wilhelm Abel et al. (Stuttgart: Gustav Fischer Verlag, 1966), pp. 325–39.
110. Hobsbawm, "From Social History to the History of Society," pp. 39–40.
111. F. Crouzet, "England and France in the Eighteenth Century: A Comparative Analysis of Two Economic Growths," reprinted in R. M. Hartwell, ed. *The Causes of the Industrial Revolution in England*, p. 159. In a similar vein, Rondo Cameron writes: "But why should nations—political entities—be selected as the units for a study of economic history? It is generally appreciated that industrialization is a regional, not a national phenomenon" ("Introduction," in Rondo Cameron et al., *Banking in the Early Stages of Industrialization* [New York: Oxford University Press, 1967], p. 5).
112. Hans-Ulrich Wehler has characterized the dominant trait of German economic historiography as follows: "Both a widespread and general hostility toward explicit theories, particularly an aversion for those theories that are critical of the established order, as well as a reluctance toward any preoccupation with problems of *Hoch Kapitalismus* and its society. And the reason for this [reluctance] is that a preoccupation with the latter two issues requires that the historian articulate in an unambiguous manner his political and social philosophy" ("Theorieprobleme der modernen deutschen Wirtschaftsgeschichte," in *Wandel der modernen in Entstehung und Gesellschaft. Festschrift für Hans Rosenberg* (Berlin, 1970), p. 73.
113. On this point, note the discussion by Phyllis Deane, *The First Industrial Revolution* (Cambridge: University Press, 1965), pp. 2–3. See also Christopher Hill, *Reformation to Industrial Revolution: The Making of Modern English Society 1530–1780*, I (New York: Pantheon, 1967).
114. Deane. *First Industrial Revolution*, p. 3.

115. George Unwin, *Studies in Economic History*, 2nd ed. (London: Frank Cass, 1966), p. 345.
116. Quoted from "The Progress of Technology and Growth of Large-Scale Industry in Great Britain 1540–1640," *Economic History Review*, 5/1 (October 1934), 22.
117. See especially Simon Kuznets, "Notes on the Take-Off," in *The Economics of Take-off into Sustained Growth*, ed. W. W. Rostow (London: Macmillan, 1963), pp. 22–43.
118. Harvey Leibenstein comments: "Rostow has succeeded in clothing it [the take-off] in a language that gives his hypothesis great suggestive and evocative power" ("Population Growth and the Take-off Hypothesis," in Rostow, *The Economics of Take-off*, p. 170).
119. Hla Myint, "Social Flexibility, Social Discipline and Economic Growth," reprinted from the *International Social Science Journal*, 16/2 (1964), and in *The Sociology of Economic Development—A Reader*, ed. Gayl D. Ness (New York: Harper and Row, 1970), pp. 404–5.
120. That recent research has tended to support the view regarding a long "pre-take-off" stage in Western industrialization is emphasized by Franklin F. Mendels, "Proto-Industrialization: The First Phase of the Industrialization Process," *Journal of Economic History*, 32/1 (March 1972), 257.
121. See n. 111.
122. To try to explain (as in this instance) some aspect of the past in the light of its eventual outcome may seem to some unscholarly determinism and a perversion of scholarship. A decade ago, E. H. Carr in *What is History?* (London: Macmillan, 1962), esp. chap. 4, dealt effectively with this criticism. To this can be added the comment of a German historian, "Die Geschichte Konjugiert nicht im Conditionalis."
123. The relationship between the agricultural setting and the rise of domestic industries has been emphasized by Joan Thirsk in her important essay "Industries in the Countryside," pp. 70–88. The same point has been reemphasized by Maurice Dobb, *Papers on Capitalism, Development and Planning* (London: Routledge and Kegan Paul, 1967), pp. 20–22.

CHAPTER 2

1. Bruno Kuske, *Die Volkswirtschaft des Rheinlands in ihrer Eigenart und Bedeutung* (Essen: G. D. Baedeker, 1925), pp. 69–70. Also Bruno Kuske's chapter, "Gewerbe, Handel und Verkehr," in *Geschichte des Rheinlands von der ältesten Zeit bis zur Gegenwart*, ed. H. Aubin et al. (Essen: G. D. Baedeker, 1922), II, pp. 195–99.
2. Ibid. and Max Barkhausen "Staatliche Wirtschaftslenkung und freies Unternehmertum im westdeutschen und im nord- und süd-niederländischen Raum bei der Entstehung der neuzeitlichen Industrie im 18. Jahrhundert," *Vierteljahrsschrift für Social- und Wirtschaftsgeschichte*, 45/2 (June 1958), esp. 229–31. Also reprinted in a posthumous collection of Barkhausen's essays, *Aus Territorial- und Wirtschaftsgeschichte* (Krefeld: printed by the city, 1963), pp. 231–96.
3. Theo Riedl, "Die Ursachen für den Niedergang des Kölner Seidengewerbes und für den Aufstieg der Krefelder Seidenindustrie im 17. und 18. Jahrhundert" (diss., Cologne University, 1952), pp. 17–21 and 81ff.
4. Barkhausen "Staatliche Wirtschaftslenkung," pp. 173–74 and 229–31.
5. Gustav von Gülich, *Geschichtliche Darstellung des Handels, der Gewerbe und des Ackerbaus der bedeutendsten handeltreibenden Staaten unserer Zeit* (Jena: Frie-

drich Fromann, 1830), II, pp. 197ff., and D. C. Coleman, "Economic Problems and Policies" in *The New Cambridge Modern History—The Ascendancy of France 1648–88* ed. F. L. Carsten (Cambridge: University Press, 1961), V, pp. 21–25, and Eric Hobsbawm, "The General Crisis of the European Economy in the 17th Century," *Past and Present*, 5 (May 1954), 38–39.

6. See F. L. Carsten's "The Rise of Brandenburg," in *The New Cambridge Modern History*, V, p. 544. As regards the various economic measures promulgated by the great elector and his royal descendants, see the exhaustive and uncritical study by Gustav Schmoller, "Das Merkantilssystem in seiner Bedeutung," in *Umriss und Untersuchungen zur Verwaltungs- und Wirtschaftsgeschichte des preussischen Staates im 17. und 18. Jahrhundert* (Leipzig: Duncker and Humblot, 1898), pp. 1–60.

7. Gülich, *Geschichtliche Darstellung*, II, pp. 197ff., and Selma Stern, *Der preussische Staat und die Juden. Die Zeit des Grossen Kurfürsten und Friedrich I. (Schriftenreihe wissenschaftlicher Abhandlungen des Leo-Baeck Instituts)* (Tübingen: J. C. B. Mohr, 1962), I, part 1, pp. 44–62.

8. Some 26,000 of these Huguenots eventually came to Prussia. See Warren C. Scoville, *The Persecution of Huguenots and French Economic Development 1680–1720* (Berkeley and Los Angeles: University of California Press, 1960), pp. 125 and 352.

9. See the "Introduction" in F. L. Carsten, ed., *The New Cambridge Modern History*, V, p. 4.

10. Scoville, *Persecution of Huguenots*, pp. 348–55.

11. *Ibid.* and Gülich, *Geschichtliche Darstellung*, II, pp. 212–15.

12. See *Die preussische Seidenindustrie im 18. Jahrhundert und ihre Begründung durch Friedrich den Grossen—Acta Borussica—Denkmäler der preussischen Staatsverwaltung im 18. Jahrhundert* (Berlin: Paul Parey, 1892), 3 vol. (Vols. 1 and 2 are a collection of documents edited by G. Schmoller and O. Hintze. Vol. 3 in a historical account of the industry by O. Hintze; to be quoted subsequently as *Acta Borussica.*), III, pp. 83–90.

13. *Acta Borussica*, I, pp. 9–10, and Gülich, *Geschichtliche Darstellung*, II, pp. 212–15.

14. The lack of ability on the part of the Huguenots in the days of Frederick William I is shown by Hugo Rachel, *Das Berliner Wirtschaftsleben im Zeitalter des Frühkapitalismus* (Berlin: Rembrandt Verlag, 1931), pp. 34–40.

15. *Acta Borussica*, III, pp. 98–99.

16. The most detailed account of Frederick William I's efforts to develop a Brandenburg woolen industry is provided by Carl Hinrichs, *Die Wollindustrie in Preussen unter Friedrich Wilhelm I.—Acta Borussica—Denkmäler der preussischen Staatsverwaltung* (Berlin: Paul Parey, 1933), esp. part 5, chap. 2, and part 2. Unfortunately, the study is marred by the virtual absence of any critical evaluation of the policies under review.

17. *Ibid.* and Stern, *Der preussische Staat und die Juden*, II, 2, part 1, pp. 63–66.

18. *Ibid.*

19. Hinrichs, *Wollindustrie*, p. 330.

20. That the granting of monopoly might under certain circumstances be necessary and wise policy has been stressed by J. A. Schumpeter in his *History of Economic Analysis* (New York: Oxford University Press, 1954), p. 151:

Poverty is a bad customer, and normal risks of doing business are greatly increased in an environment where the wealth from which demand is to proceed has not only to be attracted and created. In business as elsewhere, forward strategy very often requires

defensive tactics as a complement. . . . This holds, of course, with added force for those countries that had been ravaged by war [the Thirty Years' War is meant] such as Germany, where only prospects of abnormal gain could call forth entrepreneurial effort from a population immersed in misery and despair.

21. The importance of industrial labor in meeting the needs of these early industrial enterprises is discussed by Kurt Hinze. *Die Arbeiterfrage zu Beginn des modernen Kapitalismus in Brandenburg-Preussen* (Veröffentlichungen der historischen Kommission zu Berlin), IX (=new vol. no. 1), 2nd ed. (Berlin: Walter de Gruyter, 1963), pp. 155–69.

22. *Acta Borussica*, III, pp. 92–99.

23. See Gülich, *Geschichtliche Darstellung*, II, pp. 235–41, for some of Frederick William I's efforts on behalf of the Prussian economy.

24. Carl Hinrichs, *Preussen als historisches Problem: Gesammelte Abhandlung*, ed. Gerhard Oestreich (Veröffentlichungen der historischen Kommission zu Berlin), X (Berlin: Walter de Gruyter, 1964), pp. 185–202.

25. Reinhold Koser, *Geschichte Friedrichs des Grossen*, 5th ed. (Stuttgart and Berlin: I. G. Cotta, 1913), III, pp. 221ff., where Frederick the Great's filial piety vis-à-vis his economic policy is praised.

26. That Frederick the Great's interest in contemporaneous thought did not extend to political economy has been suggested by Franz Mehring, *Die Lessing-Legende. Zur Geschichte und Kritik des preussischen Despotismus und der klassischen Literatur* (Berlin: Dietz Verlag, 1953), p. 152–53.

27. Gustav Schmoller, "Die preussische Seidenindustrie im 18. Jahrhundert und ihre Begründung durch Friedrich den Grossen" in *Umriss und Untersuchungen*, p. 532, and Koser, *Geschichte Friedrichs des Grossen*, p. 240.

28. *Acta Borussica*, III, pp. 103–5.

29. *Ibid.*, I, pp. 94–96, and III, pp. 107–9 and 131–32. The state employees involved were local officials, teachers, and parsons; the public institutions were orphanages and monasteries.

30. *Ibid.*, III, p. 110.

31. *Ibid.*, III, pp. 105 and 115–18. According to Hintze, some of the most capable Frenchmen had to be guaranteed annual pensions of up to 500 and 600 talers.

32. *Ibid.*

33. *Ibid.*, III, pp. 114–15, and Gülich, *Geschichtliche Darstellung*, II, p. 244.

34. Rachel, *Das Berliner Wirtschaftsleben*, pp. 40ff.

35. For an enumeration of the various foreign specialists brought to Berlin, see Friedrich Nicolai, *Beschreibung der königlichen Residenzstädte Berlin und Potsdam und aller deselbst befindlicher Merkwürdigkeiten* (Berlin: Friedrich Nicolai, 1769), p. 309.

36. On the firms Girard and Michelet, and Baudoin, see *Acta Borussica*, III, pp. 124–25.

37. Friedrich the Great was apparently intent on introducing the industrial structure as it existed in Lyons: i.e., where a few large merchants dominated the multitude of small producers. For a perceptive account of the Lyons scene at the end of the eighteenth century, see Louis Trenard, "La crise sociale lyonnaise à la veille de la Révolution" *Revue d'Histoire Moderne et Contemporaine*, II (1955), esp. pp. 10–18.

38. This "stop-go-stop" course of industrial failure is somewhat analogous to the model elaborated by David Felix with respect to some of the South American industries meant to be import substitutes; see David Felix, "Monetarists, Structuralists, and Import Substituting Industrialization: A Critical Appraisal" in *Inflation and Growth in*

Latin America, eds. Werner Baer and Isaac Kerstenetzky (Homewood, Ill.: Irwin, 1964), pp. 370–401.

39. Horst Krüger, *Zur Geschichte der Manufakturen und der Manufakturarbeiter in Preussen* (Berlin: Rütten and Loening, 1958), p. 155. It is a pity that this excellent study by an East German historian has not as yet achieved the prominence it deserves.

40. See Wilhelm Treue, "David Splitgerber. Ein Unternehmer im preussischen Merkantilstaat (1683–1764)" in *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte*, 41/3 (1954), 253–67; note esp. p. 255.

41. Krüger, *Zur Geschichte der Manufakturen*, p. 127.

42. See W.O. Henderson, *Studies in the Economic Policy of Frederick the Great* (London: Frank Cass, 1963), chap. 2, "The Rise of the Berlin Silk and Porcelain Industries."

43. Gotzowsky's autobiography—an apologia *pro vita sua*—written after he had gone bankrupt, is most interesting. But it must be read, of course, with the necessary reservations: "Geschichte eines patriotischen Kaufmanns," *Schriften des Vereins für die Geschichte der Stadt Berlin*, 7 (1873), 5ff.

44. Apart from the above-mentioned autobiography, there is a biography of Gotzowsky by Otto Hintze, "Ein Berliner Kaufmann aus der Zeit Friedrichs des Grossen," *Schriften des Vereins für die Geschichte Berlins*, 30 (1893), 1–18. But the most convenient summary of Gotzowsky's life story (in English) is given by Henderson, *Studies in the Economic Policy of Frederick the Great*, pp. 17–37.

45. *Ibid.*

46. *Acta Borussica*, I, pp. 217–20.

47. Henderson, *Studies in the Economic Policy of Frederick the Great*, pp. 17–37.

48. *Ibid.*

49. *Ibid.*, pp. 34–35 and 50–51, and *Acta Borussica*, I, pp. 440–42. The most detailed account of the 1763 crisis, in its impact upon the Berlin economy in general and Berlin merchants and manufactures especially, is provided by Stephan Skalweit, *Die Berliner Wirtschaftskrise von 1763 und ihre Hintergründe*, supplement number 34 of the *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte* (Stuttgart: 1937), esp. chap. 3 and 4.

50. Hintze, "Ein Berliner Kaufmann," pp. 4–5, and *Acta Borussica*, I, pp. 217–19.

51. Hintze, "Ein Berliner Kaufmann," p. 5.

52. W. O. Henderson specifically personalizes the silk industry of the Frederician age in terms of Gotzowsky's biography, *Studies in the Economic Policy of Frederick the Great*, pp. 17–37.

53. Schmoller, *Umriss und Untersuchungen*, chap. 8, pp. 540–45.

54. *Acta Borussica*, III, chap. 3 and 4. It is worth noting that by the mid-eighteenth century, imports of silk wares into the hereditary provinces reached 400,000 talers. See Krüger, *Zur Geschichte der Manufakturen*, p. 162.

55. *Acta Borussica*, I, pp. 217–19.

56. For a thoughtful critique by one of Frederick's former officials, see Christian Wilhelm von Dohm, *Denkwürdigkeiten meiner Zeit oder Beiträge zur Geschichte vom letzten Viertel des 18. und vom Anfang des 19. Jahrhunderts 1778 bis 1806* (Lemgo and Hannover: Meyersche and Helwigsche Hofbuchhandlung, 1819). IV, pp. 421–34.

57. The repressive atmosphere of Frederician Berlin has been portrayed in his own inimitable way by Franz Mehring, *Die Lessing-Legende*, pp. 290–91; also Hans Reissner, *Mirabeau und seine "Monarchie prussienne"* (Berlin and Leipzig: Walter de Gruyter, 1926), p. 20.

58. Note the urgency of Frederick the Great's orders, summarized in Hintze's account: *Acta Borussica*, III, pp. 137–53. For the analogy of the gaming table and lottery, see Comte de Mirabeau, *De la Monarchie prussienne sous Frédéric le Grand* (London: n.p., 1788), p. 54.

59. *Acta Borussica*, III, pp. 137–53.

60. *Ibid.*, III, p. 142, and I, pp. 290–95.

61. Most of these merchants were Jews; note the memorandum reprinted in *Acta Borussica*, II, pp. 298–301.

62. Even as late as the 1770s, when the control schemes to limit contraband had been highly developed, supposedly one-third of total sales consisted of illicitly imported silk wares: J. Kulischer, *Allgemeine Wirtschaftsgeschichte des Mittelalters und der Neuzeit* (Berlin: 1958), II, p. 273.

63. *Ibid.*, and Hintze, "Ein Berliner Kaufmann," pp. 5–6.

64. *Acta Borussica*, I, pp. 313–14 and 386–92; and III, pp. 151–53.

65. *Acta Borussica*, III, esp. pp. 267–69, where Hintze summarizes the increasing economic isolation of the Krefeld velvet and silk trades in relation to the Prussian kingdom.

66. Comte de Mirabeau, *De la monarchie prussienne*, vol. 5, book 8, p. 341, where Berlin's languishing silk manufactories are compared to the "remarkable ones of Krefeld which Frederick has always treated as if they were foreign."

67. *Acta Borussica*, III; p. 153.

68. *Ibid.*, III, pp. 155–56.

69. At the end of the war, Frederick the Great was to describe the acquisition of the province of Silesia as "my new Peru." On the Austro-Prussian conflict being a "mercantilist war" of the "colonial type," see C. H. Wilson, "Trade, Society and the State," in *The Cambridge Economic History of Europe*, IV, *The Economy of Expanding Europe in the 16th and 17th Centuries*, ed. E. E. Rich and C. H. Wilson (Cambridge: University Press, 1967), p. 562.

70. *Ibid.*, and Henderson, *Studies in the Economic Policy of Frederick the Great*, p. 28.

71. Skalweit, *Die Berliner Wirtschaftskrise*, chap. 3.

72. *Acta Borussica* III, p. 161.

73. By Moses Riess and Meyer Benjamin Levi; see *Acta Borussica*, I, pp. 450–52, and Henderson, *Studies in the Economic Policy of Frederick the Great*, pp. 34–35. Gotzowsky had considered the Jewish traders his most dangerous adversaries.

74. S. Stern, *Der preussische Staat und die Juden*, vol. 2, part 1, chap. 5 and 8, and Hugo Rachel, "Die Juden im Berliner Wirtschaftsleben zur Zeit des Merkantilismus," *Zeitschrift für die Geschichte der Juden in Deutschland*, 2 (1930), 175–85.

75. *Ibid.*

76. Rachel, "Die Juden im Berliner Wirtschaftsleben," pp. 185–90.

77. *Ibid.*, pp. 187–91, and Selma Stern Täubler, "The Jews in the Economic Policy of Frederick the Great," *Jewish Social Studies*, 2 (1949), 149–50.

78. *Acta Borussica*, I, pp. 448–49.

79. Alfred Marshall, *Principles of Economics*, 8th ed. (London: Macmillan, 1938), p. 473.

80. See a critique of the bounty system with respect to the Berlin silk industry, earlier.

81. *Acta Borussica*, III, pp. 163–64.

82. Skalweit, *Die Berliner Wirtschaftskrise*, pp. 107–10, and *Acta Borussica*, I, pp. 526–28.

83. *Ibid.*; Henderson, *Studies in the Economic Policy of Frederick the Great*, pp. 56–58; *Acta Borussica*, III, pp. 165–66.
84. *Acta Borussica*, III, pp. 166–68, and J. D. E. Preuss, *Urkundenbuch zur Lebensgeschichte Friedrichs des Grossen* (Berlin: 1832), III, pp. 88–98.
85. *Ibid.*; *Acta Borussica*, III, pp. 166–68; Mehring, *Die Lessing-Legende*, pp. 166–67.
86. For a careful discussion of this “experiment in royal monocracy” and the repressive atmosphere prevailing in Berlin, see Hans Rosenberg, *Bureaucracy, Aristocracy and Autocracy—The Prussian Experience 1660–1815* (Cambridge: Harvard University Press, 1958), pp. 40–42.
87. The essence of the *règlements* is summarized in Hintze, *Acta Borussica*, III, chap. 7.
88. *Ibid.*
89. *Ibid.* See also Krüger, *Zur Geschichte der Manufakturen*, pp. 226–31.
90. For a hard-hitting critique of Frederician carelessness in trying to emulate the French pattern, see Mirabeau, *De la monarchie prussienne*, I, pp. 138–42 and 178.
91. The advantages of the Lyons labor market from the standpoint of the capitalist entrepreneurs have been emphasized by the Prussian factory inspector Majet, *Mémoire sur les fabriques de soie de sa Majesté le roi de Prusse*, in *Acta Brussica*, III, pp. 316–26.
92. *Acta Borussica*, III, p. 241, stresses the advantages of the Lyons commission system by comparison to methods prevailing in Berlin. In Lyons, it was easy for the petty producer to buy raw silk against credit and sell the finished fabric for cash.
93. *Acta Borussica*, III, p. 161, shows some of the efforts made toward specialization in production. The general absence of the division of labor is elaborated by Krüger, *Zur Geschichte der Manufakturen*, pp. 210–13.
94. The techniques of dyeing the fabrics left much to be desired. See *Acta Borussica*, III, p. 240; also II, pp. 433–35.
95. Von Dohm, *Denkwürdigkeiten meiner Zeit*, IV, pp. 420–30.
96. *Acta Borussica*, II, pp. 460–63, and III, pp. 245–46.
97. According to Majet, Berlin’s wage costs were supposedly 25 percent above those in Lyons. Real earnings were supposedly the same in both cities, but Berlin’s productivity per person lagged considerably. This was due to lack of training, absence of external economies, and inadequate specialization: *Acta Borussica*, II, pp. 323–24, and III, pp. 242–45. During the 1780s a silk weaver’s weekly earnings ranged from about 3.5 to 6 talers, depending on dexterity and experience.
98. Krüger, *Zur Geschichte der Manufakturen*, pp. 414–15, and *Acta Borussica*, III, p. 224.
99. *Acta Borussica*, III, p. 183.
100. *Acta Borussica*, III, chap. 10.
101. See Krüger, *Zur Geschichte der Manufakturen*, Appendix D, pp. 532–33, on the state of the Berlin silk and ribbon trades in 1782. *Acta Borussica*, II, pp. 350–51.
102. By 1782 Baudoin operated 150 looms, Girard and Michelet only 123 looms: Krüger, *Zur Geschichte der Manufakturen*, Appendix D, p. 533.
103. *Acta Borussica*, III, pp. 230–31.
104. *Ibid.*, II, pp. 412–27.
105. *Ibid.*, II, pp. 460–65.
106. *Ibid.*, II, pp. 373–74, and III, pp. 231–32.
107. *Ibid.*, II, pp. 204–21 (the proposal by de Launays) and Majet’s above-mentioned *Mémoire*, pp. 316–26.

108. *Acta Borussica*, III, p. 232, and Rachel, *Das Berliner Wirtschaftsleben*, p. 246.
109. *Acta Borussica*, III, p. 237.
110. *Ibid.*, III, pp. 241–43.
111. *Ibid.*, and the critique of a liberal mercantilist like J. F. Pfeiffer, (Anonymous) *Die Manufakturen und Fabriken Deutschlands nach ihrer heutigen Lage betrachtet und mit allgemeinen Vorschlägen zu ihren vorzüglichsten Verbesserungsmitteln begleitet* (Frankfurt a. M.: Varrentropp Sohn and Wenner, 1780), chap. 9.
112. *Acta Borussica*, III, pp. 246–47.
113. *Ibid.* On the high food prices and exorbitant rents prevailing in Berlin, see G. Wolfram, ed., “Eine Reise nach Berlin im Jahre 1787. Mittheilungen aus Heinrich Harries Tagebuch,” in *Schriften des Vereins für die Geschichte Berlins*, 34 (Berlin, 1897), 46–47.
114. Krüger, *Zur Geschichte der Manufakturen*, p. 196. To put these amounts into proper perspective, Mehring points out that at the time the annual army estimates came to 13 million talers: *Die Lessing-Legende*, p. 172.
115. *Acta Borussica*, III, pp. 246–47.
116. *Ibid.*, III, p. 248, and Krüger, *Zur Geschichte der Manufakturen*, p. 196.
117. Hans Rosenberg writes: “Frederick II succeeded in retarding the rise of aristocratic-bureaucratic absolutism in Prussia, but he was unable to prevent it. He labored hard to tighten up the working alliance between the autocracy and the nobility. For this alliance he paid a heavy price: limitation of class competition in dynastic employment, the stiffening of the noble monopoly of the purchase and sale of *Rittergütern*, the extension of noble privileges in law and in fact” (*Bureaucracy, Aristocracy and Autocracy*, p. 155).
118. Mehring, *Die Lessing-Legende*, pp. 146–48. According to Hans Rosenberg, “a drill sergeant like Frederick William I revealed more liberality of outlook and freedom from prejudice than his brilliantly gifted, enlightened son, the captive of class bias and aristocratic superstitions” (*Bureaucracy, Aristocracy and Autocracy*, p. 158).
119. See Rosenberg, *Bureaucracy, Aristocracy and Autocracy*, esp. chap. 7, and Mehring, *Die Lessing-Legende*, pp. 183–84.
120. Anton Zottmann, *Die Wirtschaftspolitik Friedrichs des Grossen (Gesellschaftswissenschaftliche Abhandlungen)*, ed. Othmar Spann (Leipzig and Vienna: F. Deuticke, 1937), VIII, pp. 48–53, and Ludwig Beutin, “Die Wirkungen des Siebenjährigen Krieges auf die Volkswirtschaft in Preussen,” *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte*, 26/3 (1933), 223, n. 2.
121. Arnold Berney, *Friedrich der Grosse, Entwicklung eines Staatsmannes* (Tübingen: J. C. B. Mohr, 1934), pp. 248–50. For a discussion of the privileges enjoyed by the *Rittergutsbesitzer*, see M. F. von Bassewitz, *Die Kurmark Brandenburg, ihr Zustand und ihre Verwaltung vor dem Ausbruche des Französischen Krieges im Oktober 1806* (Leipzig: F. A. Brockhaus, 1847), pp. 493–94.
122. Rosenberg, *Bureaucracy, Aristocracy and Autocracy*, p. 156, emphasizes that the alliance between monarch and nobility was strategic to Frederick’s efforts to maintain a “pacified home front.”
123. Berney, *Friedrich der Grosse*, p. 249.
124. That investment outlets were scarce has been emphasized and documented by Hermann Mauer, *Die private Kapitalanlage in Preussen während des 18. Jahrhunderts* (Mannheim, Berlin, and Leipzig: J. Bensheimer, 1921), pp. 6–9, 37–43, 71–74, and 77–93.
125. Mauer, *Die private Kapitalanlage*, p. 78. Frederick the Great is quoted (as of

June 14, 1785) transmitting an order to the Justice Department: "From now on no man of bourgeois status should be any longer allowed to purchase noble estates. For bourgeois and merchants can invest their money much better and more usefully in trade and industry. Instead all estates are and should remain for the aristocrats alone."

126. The curious way in which regular soldiers on leave worked in industry and then paid a kind of tribute to their commanders was originally analyzed by Mehring in his *Lessing-Legende* and has since been exhaustively treated in a remarkable study by Otto Büsch, *Militärssystem und Sozialleben im Alten Preussen 1713-1807 (Veröffentlichungen der Berliner Historischen Kommission)* (Berlin: Walter de Gruyter, 1962), VII, esp. part 2, chap. 2.

127. Büsch, *Militärssystem und Sozialleben*, pp. 104-5.

128. This reminds one of Celso Furtado's *Diagnosis of the Brazilian Crisis* (Berkeley and Los Angeles: University of California Press, 1965), esp. p. xvii: "The fact that industrialization occurred as a by-product of policies aimed at other objectives had various consequences. Thus, the effort to convert the sub-structure of an economy based on the export of primary products into an industrial system was not undertaken at the right time." "An economy based on the export of primary products" is in some way the modern equivalent of the Junker estate.

129. See Ronald Meek, ed., *Marx and Engels on Malthus* (London: Lawrence and Wishart, 1953), pp. 17 and 157; quoted from *Theories of Surplus Value*.

130. Büsch, *Militärssystem und Sozialleben*, p. 105, and Mauer, *Die private Kapitalanlage*, pp. 37-44.

131. *Ibid.*

132. Anonymous (John Russell), *A Tour in Germany and some of the Southern Provinces of the Austrian Empire 1820, 1821, 1822* (Edinburgh: Archibald Constable, 1824), II, p. 120, note:

It will scarcely be believed that, up to 1807, a person not noble could only by accident find a piece of land, whatever number of estates might be in the market, which he would be allowed to purchase. By far the greater proportion of the landed property consisted of estates-noble; and if the proprietor brought his estate into the market, only a nobleman could purchase it. The merchant, the banker, the artist, the manufacturer, every citizen, in short, who had acquired wealth by industry and skill, lay under an absolute prohibition against investing it in land, unless he previously purchased a patent of nobility, or stumbled on one of those few spots which in former days, had escaped the hands of a noble proprietor, small in number, and seldom in the market. Even Frederick the Great lent his aid to perpetuate this preposterous system, in the idea that he would best compel the investment of capital in trade and manufactures, by making it impossible to dispose of it, when realized, in agricultural pursuits, a plan which led to the depression of agriculture, the staple of the kingdom, as certainly as it was directed in vain to cherish artificially a manufacturing activity, on which the country is much less dependent. This could not possibly last; the noble proprietors were regularly becoming poorer, and the same course of events which compelled so many of them to sell disabled them generally from buying; destitute of capital to cultivate their own estates, it was not among *them* that the purchasers of the Royal domains were to be looked for.

133. Alphons Thun, *Die Industrie am Niederrhein und ihre Arbeiter (Staats- und sozialwissenschaftliche Forschungen)* (Leipzig: Duncker and Humblot, 1879), vol. 2, book 2, part 1, section 2, pp. 86-87. The Physiocrat Comte de Mirabeau had this to say about Krefeld's development: "The real reason for the success of the factories in the principality of Moers is to be found in liberty; it is precisely because they are unencumbered and left to operate among natural lines; it is because nothing is regimented that

these factories enjoy continuous prosperity. Unhappy those [factories] if ever a Prussian king should love them." The last sentence, of course, refers to the lack of success of the Berlin silk industry: *De la monarchie prussienne*, vol. 3, book 4, part 4, pp. 239–40.

134. See earlier.

135. For a discussion of the agricultural basis of regional industry, see Walter Cremers, "Der M. Gladbacher-Rheydter Textilgrosshandel im 19. Jahrhundert" (dissertation, Cologne University, 1953), pp. 1–5.

136. Wilhelm Krapohl, "Historisch-topographische Entwicklungsgeschichte von Rheydt" (dissertation, Cologne University, 1953), pp. 37 and 74ff.

137. F. W. Lohmann, *Geschichte der Stadt Viersen* (Viersen: published by the city, 1913), pp. 474–78.

138. For the relationship of land tenure and economic behavior, see the article by Nathan Rosenberg, "Adam Smith on the Division of Labour: Two Views or One?" *Economica*, n.s., vol. 32, no. 126 (May 1965), 129–30.

139. Barkhausen, "Staatliche Wirtschaftslenkung," pp. 195–97.

140. For the remarkable advance by the country's agriculture during this period, see B. H. Slicher van Bath, "Agriculture in the Low Countries (ca. 1600–1800)" in *10th International Congress of Historical Sciences-Relazioni*, IV (Florence: C.C. Sansoni, 1955), pp. 171ff.

141. Slicher van Bath, "Agriculture in the Low Countries," pp. 182–83, and Barkhausen, "Staatliche Wirtschaftslenkung," pp. 174–75.

142. For a discussion of the secular buoyancy prevailing in the Dutch maritime area and its beneficent impact upon the Flanders economy, despite the Spanish terror, see the important essay by Jan Craeybeckx, "Les industries d'exportation dans les villes flamandes au XVII^e siècle, particulièrement à Gand et à Bruges," in *Studi in Onore di Amintore Fanfani* (Milan: A. Giuffrè, 1962), 4, pp. 414–19.

143. Graeybeckx, "Les industries d'exportation," pp. 421ff.

144. *Ibid.*

145. Cremers, "Der M. Gladbacher-Rheydter Textilgrosshandel," pp. 1–5.

146. Lohmann, *Geschichte der Stadt Viersen*, pp. 475–80.

147. *Ibid.*, pp. 478–79, and P. Koch, *Der Einfluss des Calvinismus und des Mennonitismus auf die niederrheinische Textilindustrie. Ein Beitrag zu Max Weber: Die protestantische Ethik und der Geist des Kapitalismus* (Krefeld: n.p., 1928), pp. 16–18.

148. Willy Brendgens, *Die wirtschaftliche, soziale und kommunale Entwicklung von Viersen* (Viersen: Gesellschaft für Druck und Verlag, 1929), pp. 53–55, and Lohmann, *Geschichte der Stadt Viersen*, pp. 478–79.

149. Cremers, "Der M. Gladbacher-Rheydter Textilgrosshandel," p. 5.

150. Brendgens, *Die wirtschaftliche . . . Entwicklung von Viersen*, pp. 36–37.

151. Quoted by Lohmann, *Geschichte der Stadt Viersen*, p. 474.

152. *Ibid.*, pp. 650–51 and 662–65, where the inadequacies in the raising of cattle are specifically related to the fragmentation of land. See also Brendgens, *Die wirtschaftliche . . . Entwicklung von Viersen*, p. 99.

153. Brendgens, *Die wirtschaftliche . . . Entwicklung von Viersen*, p. 25.

154. Arthur Young's critical comments are summarized by Conrad Gill, *The Rise of the Irish Linen Industry* (Oxford: The Clarendon Press, 1925), pp. 44–49. Also see G. Willemsen, *Contribution à l'histoire de l'industrie linière en Flandre*, in *Annales de la Société d'Histoire et d'Archéologie de Gand*, 7, (1907), 224ff.

155. Charles H. Wilson, *England's Apprenticeship 1603–1763* (London: 1965), p. 69.

156. P. Koch, *Der Einfluss des Calvinismus und des Mennonitismus*, p. 9.

157. Ibid.

158. The rapid rise of the Mennonites to industrial preeminence is summarized by Gerhard von Beckerath, "Die wirtschaftliche Bedeutung der Krefelder Mennoniten und ihrer Vorfahren im 17. und 18. Jahrhundert" (diss., Bonn University, 1952), pp. 16–19.

159. Beckerath, *Die wirtschaftliche Bedeutung der Krefelder Mennoniten*, p. 22.

160. According to von Beckerath, the movement of the Mennonites from the countryside into the various townships was an index of their growing self-confidence: *Die wirtschaftliche Bedeutung der Krefelder Mennoniten*, p. 19. See also Walther Risler, *Das München-Gladbacher Mennonitenverzeichnis von 1654*, in *Breitträge zur Geschichte rheinischer Mennoniten*, II, (1936), esp. pp. 97–107.

161. Beckerath, *Die wirtschaftliche Bedeutung der Krefelder Mennoniten*, pp. 23 and 55., and Riedl, "Die Ursachen für den Niedergang des Kölner Seidengewerbe," pp. 24–25.

162. Beckerath, *Die wirtschaftliche Bedeutung der Krefelder Mennoniten*, p. 26. At one stage, the dukes of Jülich even considered recalling the Mennonite merchants.

163. Riedl, "Die Ursachen für der Niedergang des Kölner Seidengewerbes," pp. 24–25. Also, Hermann Keussen, *Die Stadt und Herrlichkeit Krefeld—Historisch-topographisch dargestellt* (Krefeld: J. B. Klein, 1865), IV, p. 178, and Helmut Croon who discovered Engelbert vom Bruck's essay "Von der Herrlichkeit und Stadt Krefeld im Fürstentum Moers" in *Die Heimat*, 5/4 (Dec. 1926), 265. Vom Bruck was one of the intellectual leaders in the period of the Enlightenment. On developments in Rheydt, see William Niepoth, *Die Mennonitengemeinde in Krefeld und ihre Beziehung zu den Nachbargemeinden*, in *Beiträge zur Geschichte rheinischer Mennoniten*, 2 (1939), pp. 138–39.

164. "Intolerance practiced at the end of the last century against some sects of the duchy of Jülich and Berg caused, as always happens, prosperity in the industrial settlements of neighboring lands. This was particularly true of the large borough of Krefeld where these sects settled" (Mirabeau, *De la monarchie prussienne*, vol. 3, book 4, part 4, pp. 237–38). This latter quote might serve as a fitting introduction to Herbert Lüthy's interesting and more general essay, "Calvinisme et Capitalisme" published in *Cahiers Vilfredo Pareto*, 2 (1963), 5–35.

165. Beckerath, *Die wirtschaftliche Bedeutung der Krefelder Mennoniten*, p. 23, n. Some went to Holland and others tried to settle at least temporarily in Vienna. See Keussen, *Die Stadt und Herrlichkeit Krefeld*, p. 178. The Willems family fled to Nymwegen; see Richard Wolfferts, "Geschichte der Familie Floh und von Löwenich," in *Die Heimat*, 8/2 (July 1929), 135.

166. Gottfried Buschbell and Karl Heinzelmann, *Geschichte der Stadt Krefeld* (Krefeld: Staufer Verlag, 1953), I, p. 144, and Hans Botzet, "Hausarme und Bettler—Ein Beitrag zur Social- und Wirtschaftsgeschichte Krefelds im 17. Jahrhundert," *Die Heimat*, 35 (1964), 4.

167. Buschbell and Heinzelmann, *Geschichte der Stadt Krefeld*, I, p. 146.

168. W. Föhl, "Eine Nachricht über die Herrlichkeit Krefeld aus dem Jahre 1643," *Die Heimat*, 11/1–2 (April 1932), 40–41.

169. Botzet, "Hausarme und Bettler," p. 4.

170. Hermann Keussen, "Die Entwicklung der Krefelder Seiden- und Samtindustrie," in *Builder vom Niederrhein*, ed. J. Nover (Leipzig: Otto Spamer, 1881), p. 132.

171. Riedl, "Die Ursachen für den Niedergang des Kölner Seidengewerbes," p. 23, and Rembert, "Der Wirtschaftsindividualismus in Krefeld und sein Schutz im 18. Jahrhundert," *Die Heimat*, 11/1–2 (April 1932), 56.

172. Botzet, "Hausarme und Bettler," pp. 6–10, and Hermann Keussen, "Beiträge zur Geschichte Crefelds und des Niederrheins," *Annalen des historischen Vereins für den Niederrhein*, 65 (1898), 136–38.

173. In 1654 the local mayor expressed majority feelings when he commented, "We do not want any more Mennonites"; Beckerath, *Die wirtschaftliche Bedeutung der Krefelder Mennoniten*, p. 88, and Keussen, "Beiträge zur Geschichte Crefelds und des Niederrheins," p. 137.

174. *Ibid.* It is well to remember that it required a special edict of William III of Orange before the Mennonites were granted, in 1678, full civic rights within Krefeld. Given their religious views, the Mennonites did not at first seek public office. Again their minority position gave them the best of both worlds, especially during the eighteenth century, when they enjoyed effective power without de jure responsibility. See Ludwig Friese, *Die Verwaltung der Stadt Krefeld im 18. Jahrhundert—Ein Beitrag zur Geschichte der preussischen Stadtverwaltung*, *Krefeld Archives*, IV (Krefeld: Zelt Verlag, 1936), pp. 75–76.

175. Botzet, "Hausarme und Bettler," p. 9.

176. Koch, *Der Einfluss des Calvinismus und des Mennonitentums*, pp. 22–23. According to Koch, some Mennonite immigrants could not even afford the four and a half talers with which to acquire the "Bürgerrechts" in Krefeld.

177. For a social analysis of the Mennonites during this period, see Buschbell and Heinzelmänn, *Geschichte der Stadt Krefeld*, I, p. 146.

178. Harold J. Laski, *The American Democracy* (London, 1949), pp. 456–57.

179. The manner in which the Mennonites turned all these discriminations to their advantage is stressed by Koch, *Der Einfluss des Calvinismus und Mennonitentums*, pp. 23ff.

180. Keussen, "Die Entwicklung der Krefelder Seiden- und Samtindustrie," pp. 131–32, and Buschbell and Heinzelmänn, *Geschichte der Stadt Krefeld*, vol. 1, p. 144.

181. *Ibid.* and Riedel, "Die Ursachen für den Niedergang des Kölner Seidengewerbes," p. 23, and Koch, *Der Einfluss des Calvinismus und Mennonitentums*, p. 21.

182. See H. Croon (von Bruck), "Von der Herrlichkeit und Stadt Krefeld," p. 265, and Beckerath, *Die wirtschaftliche Bedeutung der Krefelder Mennoniten*, pp. 28ff. See also Niepoth, *Die Mennonitengemeinde in Krefeld*, pp. 138–39, and H. Botzet, "Die Krefelder Einwohnerzahlen im 17. und 18. Jahrhundert—Eine bevölkerungsstatistische Untersuchung," *Die Heimat*, 36 (1966), 86.

183. Beckerath, *Die wirtschaftliche Bedeutung der Krefelder Mennoniten*, pp. 87ff.

184. Buschbell and Heinzelmänn, *Geschichte der Stadt Krefeld*, vol. 1, pp. 146–47.

185. For more details, see Niepoth, *Die Mennonitengemeinde in Krefeld*, pp. 139–40.

186. According to Riedel, "Die Ursachen für den Niedergang des Kölner Seidengewerbes," p. 25, the loss sustained by the Rheydt Mennonites reached about 54,000 talers.

187. Oscar von Beckerath, *Familie von Beckerath* (Krefeld: 1936), II, p. 11.

188. Keussen, *Die Stadt und Herrlichkeit Crefeld*, pp. 180–81.

189. Beckerath, *Familie von Beckerath*, II, p. 11.

190. Koch, *Der Einfluss des Calvinismus und des Mennonitentums*, p. 76.

191. Beckerath, *Die wirtschaftliche Bedeutung der Krefelder Mennoniten*, pp. 98ff. Above all, see David Landes's fine discussion of the commercial advantages derived by minorities from "common pressures and prejudices imposing unity from without": *Bankers and Pashas: International Finance and Economic Imperialism in Egypt* (Cambridge: Harvard University Press, 1958), p. 19.

192. The accounts of minorities and marginal groups as pioneers of economic progress are legion. For a good summary of some of this literature, see Bert F. Hoselitz, *Sociological Aspects of Economic Growth* (Glencoe, Ill.: Free Press, 1960), chap. 3, esp. pp. 62–67 and 79–82.

193. See Eberhard Gothein, "Agrarpolitische Wanderungen im Rheinland" in *Festgabe für Karl Knies* (ed. Otto Freiherr von Boenigh) (Berlin: D. Haring, 1898), esp. pp. 328–29.

194. Buschbell and Heinzelmann, *Geschichte der Stadt Krefeld*, I, p. 147. For rather analogous developments among the early Quaker communities who did not care to possess land because such ownership compelled them to pay what they considered the hateful tithe, see Arthur Raistrick, *Quakers in Science and Industry* (New York: Philadelphia Library, 1950), pp. 53–54.

195. Again, the pattern is most evident in England. See H. J. Habakkuk's famous essay, "English Landownership, 1680–1740," *Economic History Review*, 11 (1939–1940), 2–7.

196. See Wilhelm Kurschat, *Das Haus Friedrich und Heinrich von der Leyen in Krefeld—Zur Geschichte der Rheinlande in der Zeit der Fremdenherrschaft 1794–1814* (Frankfurt a. M.: Vittorio Klostermann, 1933), pp. 84–85.

197. *Ibid.* The similarity with the Quakers of the seventeenth and eighteenth centuries is only too obvious: Raistrick, *Quakers*, pp. 31–34. In a most impressive and suggestive essay, "Social Mobility in England, 1500–1700," *Past and Present*, 33 (April 1966), 44, Lawrence Stone observes "that close association of religious dissent with commercial success does not become plentiful until after the Restoration. Even then the association may have been as much an incidental by-product of exclusion from social and political life under the Clarendon Code as a direct consequence of religious ideology."

198. For intermarriages among this group, see Richard Wolfferts, "Zur Geschichte der Familien Floh und von Löwenich," esp. the table on p. 137.

199. Beckerath, *Die wirtschaftliche Bedeutung der Krefelder Mennoniten*, pp. 98ff. Also Landes, *Bankers and Pashas*, p. 23, n. 3: "Superior family unity and group cooperation . . . were major advantages in this age of early capitalism."

200. Riedl, "Die Ursachen für den Niedergang des Kölner Seidengewerbes," pp. 113–16.

201. The efficacy of an international network of trade and finance based on a common faith is also emphasized in Herbert Lüthy's magnum opus, *La Banque Protestante en France de la révocation de l'Édit de Nantes à la révolution* (Paris: S.E.V.P.E.N., 1959), I, esp. pp. 31–33.

202. Riedl, "Die Ursachen für den Niedergang des Kölner Seidengewerbes," pp. 113–16.

203. Beckerath, *Die wirtschaftliche Bedeutung der Krefelder Mennoniten*, p. 99, and Buschbell and Heinzelmann, *Geschichte der Stadt Krefeld*, I, p. 238.

204. The dynamism and economic efficacy of the Mennonite community—as an extended family advancing upon a narrow front—by concentrating upon one industry and thus creating, as it were, a vertically and a horizontally integrated combine, is most sensitively and perceptively analyzed by T. Riedl in his chapter "Die Auswirkungen der Wirtschaftsauffassung" in "Die Ursachen für den Niedergang des Kölner Seidengewerbes," esp. pp. 113–23. It is a pity that at least parts of this chapter of the dissertation never appeared in print.

205. A Marshallian might say that their tribal loyalties enabled the Mennonites to "internalize" those "external economies" which the economy at large did not as yet provide.

206. However, one none-too-friendly observer, the aforementioned von Bruck, suggests that despite their proverbial probity, the Mennonites were not beyond practicing certain “commerical tricks.” See Kurschat, *Das Haus Friedrich und Heinrich von der Leyen*, p. 27.

207. Kurschat, *Das Haus . . . von der Leyen*, pp. 9–25, and Riedl, “Die Ursachen für den Niedergang des Kölner Seidengewerbes,” pp. 25ff.

208. Keussen, “Entwicklung,” pp. 132ff.

209. Keussen, *Die Stadt und Herrlichkeit Crefeld*, pp. 178ff. and *Acta Borussica*, II, pp. 581–82.

210. Beckerath, *Die wirtschaftliche Bedeutung*, p. 37. See J. Hashagen et al., *Bergische Geschichte* (Remscheid-Lennep: 1858), pp. 107, 149, 166, and 364.

211. W. Niepoth, “Zur Frühgeschichte der Familie von der Leyen,” *Die Heimat*, 21 (1950), 156–58. Also Keussen, “Entwicklung,” p. 134.

212. Keussen, “Entwicklung,” pp. 133–34.

213. *Ibid.*

214. Koch, *Der Einfluss des Calvinismus und Mennonitentums*, p. 31, and Keussen, *Die Stadt und Herrlichkeit Crefeld*, p. 453.

215. Keussen, *Die Stadt und Herrlichkeit Crefeld*, pp. 459–61.

216. Keussen, “Entwicklung,” p. 134.

217. H. v. der Upwich, “Die Geschichte und die Entwicklung der rheinischen Samt- und Seidenindustrie,” (diss. Cologne, 1920), p. 50.

218. Koch, *Der Einfluss des Calvinismus und Mennonitentums*, pp. 31–32.

219. Keussen, *Die Stadt und Herrlichkeit Crefeld*, pp. 457–59.

220. Koch, *Der Einfluss des Calvinismus und Mennonitentums*, pp. 32–33, and Upwich, “Geschichte und Entwicklung,” pp. 50–51.

221. Koch, *Der Einfluss des Calvinismus und des Mennonitentums*, p. 32.

222. Keussen, *Die Stadt und Herrlichkeit Crefeld*, pp. 61–62.

223. *Ibid.*

224. Karl Rembert, “Die älteste Seidenfärberei in Krefeld,” *Die Heimat*, 7/2 (July 1928), 221. The von der Leyens entrusted the new establishment to a Dutchman, Abraham Gerpoth.

225. Upwich, “Geschichte und Entwicklung,” p. 52, and Keussen, “Die Entwicklung der Krefelder Seiden- und Samtindustrie,” pp. 135–37. Note that silk thefts were to be a problem of the industry as long as domestic manufacture remained the dominant mode of production. Throughout the eighteenth and nineteenth centuries, the von der Leyens and other Krefeld silk manufacturers never tire in exhorting the authorities to help them in bringing this abuse under control.

226. Upwich, “Geschichte und Entwicklung,” pp. 3–53, and *Acta Borussica*, II, pp. 583–85. It is well worth noting that in 1730 Peter von der Leyen extended his manufacture to silk throwing, using up to 5,973 pounds of raw silk and spending, 2,774 talers on wages. See Keussen, *Die Stadt und Herrlichkeit Crefeld*, p. 462.

227. Johann and his brother-in-law Peter Jentges were partners until the latter’s death in 1748; then another brother-in-law, Gottschalk von Elten, became partner, and finally the brothers Cornelius and Johannes Floh joined the partnership. The name of the firm was “Johann von der Leyen and Co.” See Keussen, *Die Stadt und Herrlichkeit Crefeld*, pp. 463–64.

228. *Ibid.*

229. Thus, in 1749 the von der Leyens provided the funds for the establishment of the firm “Franz Heinrich Heydeweiller.” Peter Heydeweiller, a son-in-law of von der Leyen, hailed from Kaiserslautern and became a producer of silk stockings. In 1770 he

was joined by his brother, the "talented" Johann Valentin. Subsequent dissolution of the original firm led to the creation in 1794 of two establishments, "Friedrich von Franz Heinrich Heydeweyler and Ludwig Max Rigal" and "Johann Valentin Heydeweyler and Söhne." See Keussen, *Die Stadt und Herrlichkeit Crefeld*, p. 464, and *Acta Borussica*, II, p. 595.

230. See Upwich, "Geschichte und Entwicklung, p. 52-53.

231. The 1733-56 accounts are reproduced in *Acta Borussica*, II, pp. 585-88. The figures for 1794 are derived from M. Barkhausen, "Der Aufstieg der rheinischen Industrie im 18. Jahrhundert und die Entstehung eines industriellen Grossbürgertums," *Rheinische Vierteljahrsblätter*, 19 (1954), 161-63.

232. Kurschat, *Das Haus . . . von der Leyen*, pp. 19-23.

233. According to extant accounts, profits up until 1756 appear to have ranged from about 8 to 15 percent on capital invested, except for the depression quinquennium 1751-56. These "profits" as stated in one period's balance sheet are equal to the increase of the "capital account" in the next period. This could suggest that these "profits" were really "undistributed profits," a residual from total profits after the consumption needs of the partners had been satisfied. See *Acta Borussica*, II, pp. 585-88.

For the period before 1756, according to Kurschat, 25,000 talers were the "maximum" earned per annum, but during the era 1772-94 (barring the crisis years of 1779 and 1789), 31,000 talers were the "minimum" profit made per year. The average annual profit for the latter period came to almost 49,000 talers. See Kurschat, *Das Haus . . . von der Leyen*, p. 19 and appendix.

234. In his discussion of their wealth, Keussen made the point that in view of the von der Leyen resources it is easy "to appreciate the enormous capital that had to be at hand, considering that raw silk had to be either imported in large quantities, directly from Italy, or had to be purchased in equally sizable amounts in Amsterdam. This is why a financially less solidly endowed enterprise could not even hope to offer the mildest kind of competition. Apart from everything else, lack of a sizable amount of capital made the conduct of this kind of business not feasible" (Keussen, "Entwicklung," p. 140).

235. *Acta Borussica*, II, pp. 585-88.

236. The assets of the 1794 balance sheet are conveniently summarized by M. Barkhausen, "Der Aufstieg der rheinischen Industrie," pp. 161-62:

1794 Balance Sheet

| <u>Assets</u> | <u>Talers</u> |
|--|---------------|
| Inventories of raw materials (raw silk) | 446,681 |
| Inventories of finished goods | 511,200 |
| Cash | 60,286 |
| Debtors (probably "accounts receivable") | 638,086 |
| Equipment (probably mostly looms) | 23,564 |
| All dye equipment of the black dye shop | 2,084 |
| Color dye shop including equipment | 12,000 |
| Five factory buildings and storehouse for silk | 27,160 |
| Annex | 4,637 |
| Forest | 5,188 |
| Various communally owned buildings | 23,400 |
| | 1,754,293 |

237. Alfred Marshall, *Industry and Trade* (London: Macmillan, 1919), p. 68, and Sidney Pollard, *The Genesis of Modern Management—A Study of the Industrial Revolution in Great Britain* (London: Edward Arnold, 1965), pp. 238–41.
238. *Acta Borussica*, I, p. 609, n. 1.
239. Probably “velvet looms,” sometimes referred to as “draw looms,” are meant.
240. These are most likely “Dutch loom engines” capable of “weaving four to six ribbons simultaneously.” For an excellent discussion of silk and velvet weaving, including the weaving of figured and brocaded ribbons prior to the nineteenth century, see R. Patterson, “Spinning and Weaving,” and J. F. Flanagan, “Figured Fabrics,” in a *History of Technology*, ed. Charles Singer et al., III (Oxford: Clarendon Press, 1957), chap. 7 and 8, esp. pp. 178–79 and 199–205.
241. *Ibid.* and Keussen, “Entwicklung,” p. 140.
242. *Acta Borussica*, III, p. 269. Hintze points out that the figures presented in the table (*Acta Borussica*, I, pp. 560–69) understate the extent of the Krefeld manufacture inasmuch as those working for Krefeld employers but not resident in Prussian territory are not included in the statistics. This, of course, reflects the mercantilist bias of the authorities preparing these tables.
243. Keussen, *Die Stadt und Herrlichkeit Crefeld*, p. 488.
244. Koch, *Der Einfluss des Calvinismus und Mennonitentums*, pp. 36–37, and Keussen, *Die Stadt und Herrlichkeit Crefeld*, pp. 464–65.
245. Keussen, “Entwicklung,” pp. 137ff. Also see Beckerath, *Die Wirtschaftliche Bedeutung der Krefelder Mennoniten*, pp. 50ff.
246. Koch, *Der Einfluss des Calvinismus und Mennonitentums*, p. 36.
247. *Ibid.*
248. Beckerath, *Die wirtschaftliche Bedeutung der Krefelder Mennoniten*, pp. 58–62.
249. *Ibid.*
250. Riedl, “Die Ursachen für den Niedergang des Kölner Seidengewerbes,” pp. 24ff.
251. A. H. John, “Aspects of English Economic Growth in the First Half of the Eighteenth Century,” *Economica*, 5 (1961); reprinted in E. M. Carus-Wilson, ed., *Essays in Economic History* (London: Edward Arnold, 1962), esp. pp. 368–72.
252. J. Kulischer, *Allgemeine Wirtschaftsgeschichte des Mittelalters und der Neuzeit*, II, pp. 171–73, and Justin Godart, *L’ouvrier en soie—Monographie du tisseur lyonnais* (Lyons and Paris: A. Rousseau, 1899), I, pp. 46–49.
253. Kulischer, *Allgemeine Wirtschaftsgeschichte*, II, pp. 250–52.
254. Riedl, “Die Ursachen für den Niedergang des Kölner Seidengewerbes,” pp. 80–92, and H. Koch, *Geschichte des Seidengewerbes in Köln vom 13. bis 18. Jahrhundert* (Leipzig: 1907). Also note the efforts made by the Cologne city fathers to prohibit the sales of Krefeld silk wares in the imperial city: “Krefeld und Umgebung in den Kölner Rathsprötkollen 1749–1786,” eds. Hermann Keussen and Arnold Güttsches, *Die Heimat*, 12/1 (Easter 1933), 27.
255. Riedl, “Die Ursachen für den Niedergang des Kölner Seidengewerbes,” p. 91, and Leo Schwering, “Die Auswanderung protestantischer Kaufleute aus Köln nach Mülheim am Rhein,” *Westdeutsche Zeitschrift im Jahre 1714*, 26 (Trier: 1907), 7ff.
256. By the late eighteenth century, a contemporary observer noted that Cologne was “drowning” in its own filth and “crawling with beggars and monks” (J. Kulischer, *Allgemeine Wirtschaftsgeschichte*, 2, p. 251).
257. Schwering, “Die Auswanderung protestantischer Kaufleute,” pp. 7ff.
258. Hermann Keussen, “Das Verbot der Crefelder Seidenbänder durch den

- Kölner Rat im 18. Jahrhundert," *Die Heimat*, 4/1 (April 1925), 23–26, and Riedl, "Die Ursachen für den Niedergang des Kölner Seidengewerbes," p. 20.
259. See Upwich, "Geschichte und Entwicklung," pp. 58–59. Also note the following interesting observations regarding Krefeld on the eve of its incorporation into Prussia: "So far Krefeld had been more than one of the many minor townships in the wider region of the German Lowlands, a rising satellite on the fringes of the dominant Dutch commercial centers" (Walther Föhl, "Die Träger der Krefelder Wirtschaft im 18. Jahrhundert," *Die Heimat*, 28 [March 9, 1957], 130).
260. See Gustav Mertens, "Die Geschichte des Pauperismus in der Stadt Krefeld und seine Bekämpfung" (diss., Cologne University, 1921), p. 16.
261. Barkhausen, "Staatliche Wirtschaftslenkung und freies Unternehmertum," pp. 211–19.
262. See *Acta Borussica*, II, p. 630. However, the claim expressed by the von der Leyens in 1767—"we have surpassed the Dutch and almost ruined them"—should be taken with a grain of salt. After all, the point is being made in a memorandum to the Prussian authorities where the von der Leyens are at pains to stress their importance to the local and national economy.
263. Mertens, "Geschichte des Pauperismus," p. 16.
264. Barkhausen, "Staatliche Wirtschaftslenkung und freies Unternehmertum," pp. 199ff.
265. *Ibid.*
266. Beckerath, *Die wirtschaftliche Bedeutung der Krefelder Mennoniten*, p. 69.
267. Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, eds. R. H. Campbell and A. S. Skinner (Oxford: 1976), p. 151: "that either a linen or silk weaver might become a tolerable workman in a few days."
268. As shown below, there was a shortage of skilled craftsmen; it persisted throughout most of the eighteenth century. See Hans Botzet, "Die Geschichte der sozialen Verhältnisse in Krefeld und ihre wirtschaftlichen Zusammenhänge" (diss., Cologne University, 1954), pp. 13–14.
269. Krefeld's eighteenth-century wage structure appeared as follows: 7 talers was the average weekly wage of a ribbon loom weaver, 5 talers for a silk weaver, and 3 talers for a linen weaver (Koch, *Der Einfluss des Calvinismus und des Mennonitentums*, p. 37).
270. Beckerath, *Die wirtschaftliche Bedeutung der Krefelder Mennoniten*, p. 69.
271. Botzet, "Geschichte der sozialen Verhältnisse," p. 6.
272. *Acta Borussica*, III, pp. 269–70.
273. Keussen, "Beiträge zur Geschichte Krefelds und des Niederrheins," p. 159, and Botzet, "Geschichte der sozialen Verhältnisse," p. 20. Also see Barkhausen, "Die Aufstieg der rheinischen Industrie," p. 165.
274. Only those rural weavers and ancillary laborers who resided on Prussian soil are included in the statistics for 1781–96 published in *Acta Borussica*, II, pp. 560–67.
275. According to one official report, Xanten boasted 5 manufacturers who operated 25 weaving looms and 4 ribbon looms and "produced annually about 26,000 pieces of silk ribbons, plain and fancy, for the brothers von der Leyen in Krefeld and the firm of Lauts in Wesel. These merchants provide the silk and collect the finished product" (*Acta Borussica*, I, p. 71). The purchase of the Lauts enterprise was probably not too important.
276. *Acta Borussica*, III, pp. 269–70.
277. *Ibid.* and F. Nettesheim, *Geschichte der Stadt und des Amtes Geldern* (Krefeld: Gustav Kühler, 1863), II, pp. 541–42.

278. For the shift from linen to velvet ribbon weaving in Viersen, see Lohmann, *Viersen*, pp. 650–51:

1786: 65 velvet ribbon looms with 65 workers and annual output of 10,920 talers.

1787: 136 velvet ribbon looms with 136 workers and annual output of 18,012 talers.

1789: 147 velvet ribbon looms with 147 workers and annual output of 20,572 talers.

1792: 184 velvet ribbon looms with 184 workers and annual output of 41,455 talers.

See also Koch, *Der Einfluss der Calvinismus and des Mennonitentums*, pp. 35ff.

279. Beckerath, *Die wirtschaftliche Bedeutung der Krefelder Mennoniten*, p. 69.

280. *Acta Borussica*, III, p. 270.

281. *Ibid.*

282. Beckerath, *Die wirtschaftliche Bedeutung der Krefelder Mennoniten*, pp. 72–73, and G. Mertens, *Geschichte des Pauperismus*, p. 16.

283. Upwich, "Geschichte und Entwicklung," pp. 58–60.

284. Mertens, "Geschichte des Pauperismus," p. 17, and Botzet, "Die Geschichte der sozialen Verhältnisse," p. 20.

285. Lohmann, *Viersen*, pp. 649–51.

286. Gill, *The Rise of the Irish Linen Industry*, pp. 64–66 and 195–207.

287. Barkhausen, "Staatliche Wirtschaftslenkung and freies Unternehmertum," p. 199.

288. M. Barkhausen, "Bilder aus der Krefelder Seidenindustrie vor 100 Jahren," *Die Heimat*, 24 (1953), 21–22, and *idem.* *Aus Territorial- und Wirtschaftsgeschichte*, p. 162. In addition to their wealth, or rather because of it, the von der Leyens enjoyed the confidence of Zurich, Frankfurt a. M., and Italian raw silk dealers who were willing to grant them credit. Also see Keussen, "Entwicklung," p. 140.

289. Koch, *Der Einfluss des Calvinismus und Mennonitentums*, p. 41. According to Barkhausen, "Der Aufstieg der Rheinischen Industrie," pp. 163–65, the requirement of sizable capital assets within the silk and velvet trades may explain why Krefeld continued to grow as the industrial hub of an ever-larger hinterland without any rival centers emerging within the vicinity.

290. Wolfferts, "Zur Geschichte der Familien Floh und von Löwenich," pp. 135–37.

291. Keussen, *Die Stadt und Herrlichkeit Crefeld*, pp. 471ff.

292. The von der Leyens subsequently denied that they had exploited the presence of a foreign government to advance their interest: *Acta Borussica*, II, p. 606. Also see G. Rothhoff, "Wiener Dokumente über einen Konkurrenzstreit der Firma Friedrich und Heinrich von der Leyen," *Die Heimat*, 41 (1970), 69–70.

293. Paul Schulze, "Einführung der Seidenindustrie in Europe," *Die Heimat*, 4/4 (July 1925), 153–54.

294. *Acta Borussica*, II, pp. 599–603.

295. Botzet, "Geschichte der sozialen Verhältnisse," p. 13.

296. *Acta Borussica*, II, pp. 605–6.

297. *Ibid.*, II, pp. 646–48.

298. Frederick the Great's unequivocal position in favor of the von der Leyens was given in a cabinet order of January 11, 1764. See *Acta Borussica*, II, p. 611. The argument in favor of protecting the innovator against the loss of his trade secrets and his workmen was forcefully stated by one of the local officials in 1762. See *Acta Borussica*, II, pp. 603–4. For a summary of the correspondence pertaining to this matter and originally produced in the *Acta Borussica*, see K. Rembert, "Anerkennung

- und Förderung der Krefelder Seidenfirma F. und H. von der Leyen durch König Friedrich den Grossen," *Die Heimat*, 14/1 (April 1935), pp 26–30.
299. "Cornelius and Johannes Floh," was henceforth the name of the firm: Keussen, *Die Stadt und Herrlichkeit Crefeld*, pp. 477–78, and *Acta Borussica*, II, pp. 621–24.
300. Ibid. For a most interesting yet very jaundiced view of von der Leyen activities to maintain their monopoly, see the contemporaneous account contained in the diary of the local miller, Abraham ter Meer, a man already very much influenced by the Enlightenment. Ter Meer was affected by the von der Leyen monopoly: he was forbidden to make woolen ribbons: *Das Tagebuch des Abraham ter Meer* as prepared by Gottfried Buschbell. *Krefelder Archiv-Quellen und Forschungen zur Geschichte der Stadt Krefeld und des Niederrheins*, 3 (1936), 174–80 and 247–58.
301. Beckerath, *Die wirtschaftliche Bedeutung der Krefelder Mennoniten*, pp. 56–58 and 60–61.
302. The exceptional position of the western province within the Hohenzollern kingdom, under Frederick William I and especially under Frederick the Great, has been stressed by M. Barkhausen in "Staatliche Wirtschaftslenkung und freies Unternehmertum," pp. 229–31, and in his "Der Aufstieg der rheinischen Industrie," pp. 155–56.
303. *Acta Borussica*, I, p. 595, and II, pp. 615–16.
304. *Acta Borussica*, II, pp. 47 and 270.
305. Barkhausen, *Staatliche Wirtschaftslenkung und freies Unternehmertum*, p. 230.
306. *Acta Borussica*, II, pp. 190–91. In 1768 the von der Leyens reported that they employed 3,026 persons. See *Acta Borussica*, I, p. 609, n.
307. *Acta Borussica*, II, pp. 191 and 648–50.
308. *Acta Borussica*, III, pp. 267–70, and Barkhausen, "Staatliche Wirtschaftslenkung und freies Unternehmertum," pp. 204–5.
309. Schulze, "Einführung des Seidenindustrie in Europa," p. 154.
310. Upwich, "Geschichte und Entwicklung," p. 59.
311. There is evidence that the von der Leyens tried to partake in smuggling operations to America as early as the 1750s. In 1755 they complained to Frederick the Great that some of their goods had been confiscated by Spanish coast guards. The king replied that, inasmuch as the von der Leyens had engaged in illegal practices without his knowledge or his permission, he would not interfere in the matter: *Acta Borussica*, II, pp. 596–97. After 1764 the von der Leyens seem to have done well in legitimately exporting to the United States. See Kurschat, *Das Haus . . . von der Leyen*, pp. 15–16.
312. The general prosperity of these decades is recorded in the various monthly reports prepared by local officials for the benefit of the Berlin government: see *Acta Borussica*, II, pp. 650–57.
313. *Acta Borussica*, III, pp. 267–70.
314. Beckerath, *Die wirtschaftliche Bedeutung der Krefelder Mennoniten*, pp. 61 and 78.
315. Ibid. In 1775 the brothers Andreaä (whose ancestors had led the Protestant exodus out of Cologne), silk manufacturers in the town of Mülheim a. Rhein (duchy of Berg), tried to detain some of the Italian craftsmen the von der Leyens had hired. The von der Leyens appealed to their king. Frederick the Great immediately issued a warning to the Andreaä brothers to let these Italian craftsmen go or else "his soldiers would come and get these fellows." See Wilhelm Schumacher, *Untersuchungen über die Entwicklung der bergischen Seidenindustrie* (Heidelberg: Rössler and Herbert, 1919), pp. 9–13, and Keussen, *Die Stadt und Herrlichkeit Crefeld*, pp. 483–85.

316. Barkhausen, "Staatliche Wirtschaftslenkung und freies Unternehmertum," pp. 206–7.
317. J. M. Campe, who in his younger years had been a teacher in the Humboldt household, was now eager to witness personally the revolutionary developments in Paris, and he asked his former pupil to join him in his travel. See K. Rembert, "Wilhelm von Humboldt im gastfreien Hause von der Leyen in Krefeld (1789)," *Die Heimat*, 8/3 (October 1929), 206–10.
318. *Wilhelm von Humboldt Tagebücher*, ed. Albert Leitzmann, I, 1788–89 (Berlin: B. Behr's Verlag, 1916), pp. 80–81.
319. J. H. Campe, *Reise von Braunschweig nach Paris im Heumonat 1789* (Braunschweig: Schulbuchlandlung, 1790), pp. 47–50.
320. See Beckerath, *Die wirtschaftliche Bedeutung der Krefelder Mennoniten*, p. 73; Barkhausen, "Staatliche Wirtschaftslenkung," p. 200; and Botzet, "Geschichte der sozialen Verhältnisse," pp. 18–19.
321. Barkhausen, "Der Aufstieg der rheinischen Industrie," pp. 163–65. For the dependence of the countryside around Krefeld upon the employment offered by the merchant-manufacturers, see W. Föhl, "Die Träger der Krefelder Wirtschaft im 18. Jahrhundert," p. 137–38. During the 1780s the country weavers and ancillary workers residing on Kurköln territory were forced to accept payment in depreciated Prussian and other currencies from Krefeld merchants.
322. For a careful account of the relationship between the *Verleger* and his workmen during this period, see Botzet "Geschichte der sozialen Verhältnisse," pp. 11–20. For a similar group of merchant-manufacturers, see the account of the organization of the Coventry ribbon trade in John Prest, *The Industrial Revolution in Coventry* (London: Oxford University Press, 1960), pp. 49ff. In Coventry these "old manufacturers" are, of course, immortalized in George Eliot's *Middlemarch*.
323. Botzet, "Geschichte der sozialen Verhältnisse," p. 14.
324. See *Acta Borussica*, II, p. 654. A local magistrate wrote in his monthly report of September 22, 1784, that the von der Leyens had ordered many more looms and "have appointed several journeymen to be masters."
325. Guilds were unknown in the Krefeld textile trades and the manufacturers did their utmost to keep it so. See Botzet "Geschichte der sozialen Verhältnisse," p. 14.
326. See *Acta Borussica*, III, pp. 272–73. Barring a few exceptions, the merchants were able to maintain order in this decentralized industry.
327. Note the regulations (*Fabrikverordnung*) promulgated in 1786 by the von der Leyens and similar "factory rules" passed two years later by the other Krefeld silk and velvet manufacturers. In the case of the von der Leyens, the betrayal of factory secrets was the principal concern. As for the other manufacturers, they were preoccupied to circumscribe the freedom of master and journeyman to leave their posts. See *Acta Borussica*, II, pp. 660–63.
328. These practices would also compromise the manufacturers in their position as employers of these factors. See the pronouncement made in 1788 by the firm F.H. Heydweiller Son and Rigal following some irregular activities by some of their masters in Süchteln: *Acta Borussica*, II, pp. 660–63.
329. Kurschat, *Das Haus . . . von der Leyen*, pp. 18 and 79, and Botzet, "Geschichte der sozialen Verhältnisse," pp. 21–22.
330. The Krefeld magistrate reported for September 1781 that because of depressed conditions, the von der Leyens had reduced working hours and had issued a warning that they would dismiss any ribbon-weaver working beyond eight and twelve in the morning and one to four in the afternoon. See *Acta Borussica*, II, pp. 652–53.

- At that time, the normal work period was between twelve and thirteen hours per day. See also Botzet, "Geschichte der sozialen Verhältnisse," p. 27.
331. Botzet, "Geschichte der sozialen Verhältnisse," p. 37.
332. A. Thun, *Die Industrie am Niederrhein und ihre Arbeiter*, vol. 1, part 2, pp. 87–88.
333. Botzet, "Geschichte der sozialen Verhältnisse," p. 22.
334. *Ibid.*, p. 15.
335. *Acta Borussica*, II, pp. 660–63.
336. Botzet, "Geschichte der sozialen Verhältnisse," p. 33, and Keussen, *Die Stadt und Herrlichkeit Crefeld*, p. 481.
337. *Ibid.* Also see Mertens, "Geschichte des Pauperismus," p. 23.
338. At the time the accumulation of inventory was not as yet vexed by the problem of changing fashions. See Botzet, "Geschichte der sozialen Verhältnisse," pp. 35–36.
339. *Ibid.*
340. See *Acta Borussica*, II, pp. 655–56.
341. Botzet, "Geschichte der sozialen Verhältnisse," pp. 29 and 35.
342. *Ibid.*
343. *Ibid.*, pp. 23ff., and Mertens, "Geschichte des Pauperismus," p. 23.
344. Among these authors: T. Riedle, W. Kurschat, and K. Rembert; the latter appears to have been a Nazi.
345. H. Bozet cites the case of Sunday labor as an obvious violation of the sanctity of the Sabbath prescribed by the Mennonite faith (Geschichte der sozialen Verhältnisse," p. 30. n.).
346. The manufacturers opposed the entry of new industry into Krefeld. In the long run it would have been to their advantage, even though at the same time it might have raised some problems.
347. For a discussion of these rather elusive population figures, see the very careful account (on the basis of archival material) by Walther Föhl, "Krefeld und das Fürstentum Moers—Verwaltung und Wirtschaft 1787–1788," *Die Heimat*, 26/3–4 (Christmas 1955), esp. pp. 124–25.
348. *Acta Borussica*, II, p. 665. Also Botzet, "Die Krefelder Einwohnerzahlen im 17. und 18. Jahrhundert," p. 97.
349. Keussen, *Die Stadt und Herrlichkeit Crefeld*, p. 465.
350. Buschbell and Heinzelmann, *Geschichte der Stadt Krefeld*, 1, pp. 234–45.
351. Some of the authorities refer to 70 families; others to 140 families. See Botzet, "Die Krefelder Einwohnerzahlen im 17. und 18. Jahrhundert," esp. p. 86.
352. *Ibid.*
353. Föhl, "Die Träger der Krefelder Wirtschaft," pp. 130–38.
354. *Ibid.*
355. See "Gewerbliche Einwanderung der Städte Mörs und Krefeld 1770–1792," *Public Records Office*, Historical Classification 2, Merseburg, General directorate, Moers. Title 105, Number 4 (photocopy in Public Records Office, Düsseldorf).
356. Föhl, "Die Träger der Krefelder Wirtschaft," pp. 133–35.
357. Guido Rotthoff, "Das Münkerhofverzeichnis," *Die Heimat*, 36 (1965), 65–77.
358. Helmut Roewer, *Linksniederrheinische städtische Siedlungen—Eine funktionell-genetische Untersuchung zur vergleichenden Stadtgeographie (Forschungen zur deutschen Landeskunde)* (Remagen: Verlag der Bundesanstalt für Landeskunde, 1954), LXXXIII, pp. 29–30. Rotthoff, "Münkerhofverzeichnis," pp. 73–74.
359. K. Rembert, "Zur politischen Geschichte Krefelds," *Die Heimat*, 11 (1932), 53. At the time, Krefeld had 395 households.

360. Buschbell and Heinzelmann, *Geschichte der Stadt Krefeld*, 1, p. 147.
361. K. Rembert, "Ein amtlicher Bericht über Crefeld und die Burg Cracau vom Jahre 1725," *Die Heimat*, 4/2 (July 1925), esp. pp. 96–97.
362. Botzet, "Die Krefelder Einwohnerzahlen im 17. und 18. Jahrhundert," pp. 80–97.
363. Föhl, "Die Träger der Krefelder Wirtschaft," pp. 131–33, summarizes the 1735–36 employment census and provides additional illuminating information about this particular era.
364. Walther Risler, "Die Krefelder Mennonitengemeinde im Jahre 1740," *Die Heimat*, 30/1–4 (1959), 22–31.
365. Of the twenty-four, two were "manufacturers," one a ribbon manufacturer, and twenty were ribbon weavers (already the largest single occupation within the Mennonite community). The twenty-fourth man was probably a dye master. *Ibid.*
366. *Ibid.*
367. See again *Acta Borussica*, I, p. 609.
368. According to the extant statistics, the von der Leyens employed (including children), some 3,500 hands toward the end of the 1760s. Unfortunately there is no indication how many of those were residents of the town. Botzet, "Die Krefelder Einwohnerzahlen im 17. und 18. Jahrhundert," p. 97.
369. Föhl, "Krefeld und das Fürstentum Moers," p. 126.
370. *Public Records Office*, Historical Classification 2, Merseburg, General Directorate, Moers. Title 104a (photocopy in Public Records Office, Düsseldorf).
371. Jürgen Olmes, "Zur Krefelder Stadtgeschichte—Ein holländischer Reisebericht über das Krefeld des Jahres 1784," *Die Heimat*, 29/1–4 (November 1958), 2–3. The Dutchman also mentioned the winding establishments owned by the brothers von der Leyen where "one thousand bobbins [drums] are in use" and upon which the silk is wound, "a horse walking in a circle providing the motive power." In connection with the silk storehouse then being built ("where instead of wooden, iron doors and windows are installed to reduce the risks of fire"), the author comments that weekly 15,000 to 16,000 pounds of silk valued at 500 to 600 guilders are distributed by the von der Leyens among their workmen.
372. W. H. Bruford, *Germany in the Eighteenth Century: The Social Background of the Literary Revival* (Cambridge: University Press, 1939), pp. 73–107, and Hans Eberhardt, *Goethes Umwelt. Forschungen zur gesellschaftlichen Struktur Thüringens* (Weimar, 1951), pp. 25–30.
373. See the interesting study by Rolf Engelsing, "Die wirtschaftliche und soziale Differenzierung der deutschen kaufmännischen Angestellten 1690–1900," part 1, *Zeitschrift für die gesamte Staatswissenschaft*, 123 (1967), 347ff.
374. H. Roewer, *Linksniederrheinische städtische Siedlungen*, esp. table 2 (appendix) where it is shown that in 1780 about 40 percent of the employed population depended on textiles.
375. See the well-known article by P. T. Bauer and B. S. Yamey, "Economic Progress and Occupational Distribution," *Economic Journal*, 61 (1951), 741–55.
376. All these figures are derived from W. Föhl's most useful studies, "Krefeld und das Fürstentum Moers," pp. 124ff., and "Die Träger der Krefelder Wirtschaft im 18. Jahrhundert," pp. 132ff.
377. Föhl, "Die Träger der Krefelder Wirtschaft im 18. Jahrhundert," pp. 132–33.
378. See *ibid.*, esp. pp. 131–33. It may be important to note that by 1794 in Krefeld town, the silk and velvet trades employed 92 masters and 280 journeymen, the ribbon trades 40 masters and 60 journeymen. Besides, some 50 lacemakers

- plied their trade here. See Keussen, "Beiträge zur Geschichte Crefelds und des Niederrheins," p. 159.
379. Ibid. Virtually the same pattern prevailed in Lyons where the 6,000 masters assumed a similar, mediating role within the social structure. See L. Trénard, "La crise sociale lyonnaise," pp. 20–21.
380. Keussen, "Beiträge zur Geschichte Crefelds und des Niederrheins," p. 156.
381. Mertens, "Geschichte des Pauperismus," pp. 15ff.
382. Föhl, "Krefeld und des Fürstentum Moers," pp. 126ff., and Föhl, "Die Träger der Krefelder Wirtschaft im 18. Jahrhundert," pp. 133ff.
383. Buschbell and Heinzelmann, *Geschichte der Stadt Krefeld*, 1, p. 147.
384. Botzet, "Hausarme und Bettler," p. 41, emphasizes the upward trend in the price of housing.
385. Keussen, *Die Stadt und Herrlichkeit Crefeld*, p. 352, and Beckerath, *Die wirtschaftliche Bedeutung der Krefelder Mennoniten*, p. 66.
386. Keussen, *Die Stadt und Herrlichkeit Crefeld*, pp. 466–67.
387. Ibid., pp. 465–66. At this time, Krefeld still claimed seven linen merchants.
388. K. Rembert, "Zur Geschichte der ersten Krefelder Stadterweiterung 1678–1692," *Die Heimat*, 7/1 (April 1928), 30–32.
389. This procrastination had in part been caused by the other political activities the prince of Orange had been engaged in; by then he was William III, king of England. This is why the main street in this new part of town was named *Königsstrasse*.
390. Buschbell and Heinzelmann, *Geschichte der Stadt Krefeld*, 1, pp. 234–35.
391. H. Grethe, "Bautätigkeit in Krefeld unter besonderer Berücksichtigung der Zeit Friedrichs des Grossen," *Die Heimat*, 6/2–3 (April and July 1927), 91–93.
392. Ibid.
393. Ibid.; Buschbell and Heinzelmann, *Geschichte der Stadt Krefeld*, I, pp. 237–238; "Historische Beschreibung der Grafschaft Mörs am Anfang des 18. Jahrhunderts," p. 49. *German Public Records Office*, Classification 2, Meresburg, Report 34, number 243b (photocopy in Düsseldorf Public Records Office).
394. Ibid.
395. Grethe, "Bautätigkeit in Krefeld," pp. 93–94.
396. The standard weaver's cottage was meant for two families, one to live on the ground floor and another on the first floor. Each family had two rooms, a bedroom and a kitchen cum workroom where the looms were set up close to the window. At times, the size of the kitchen-workroom varied with the extent of the master's operations, enabling him to install more than the usual two or three looms. Only later in the eighteenth century and then only under exceptional circumstances did a weaver's home consist of three or more rooms. See H. Grethe, "Bautätigkeit in Krefeld," pp. 4–8.
397. Buschbell and Heinzelmann, *Geschichte der Stadt Krefeld*, I, pp. 238–40.
398. Margarete Hersing, "Die Krefelder Stadterweiterung im 18. Jahrhundert, unter besonderer Berücksichtigung der preussischen Bodenpolitik," *Die Heimat*, 9/3 (October 1930), 156–57, and 10/1 (April 1931), 18–20.
399. Grethe, "Bautätigkeit in Krefeld," pp. 94–98, and K. Rembert, "Beiträge zur Geschichte der Mennoniten in Krefeld. Besuch des Königs Friedrich Wilhelm I in Krefeld (1738)," *Die Heimat*, 10 (1931), p. 89, and K. Rembert, "Wilhelm Reinhard Müntz und Anverwandte," *Die Heimat*, 12/3–4 (Christmas 1933), 131–32.
400. Ibid.
401. K. Rembert, "Die erste katholische Volksschule zu Krefeld 1743," *Die Heimat*, 6/3 (October 1927), 170–73. By 1750 the Catholic community claimed 1,400 members.

402. Grethe, "Bautätigkeit in Krefeld," pp. 98–100, and Hersing, "Die Krefelder Stadterweiterung im 18. Jahrhundert," pp. 20–23.
403. Croon, "Von der Herrlichkeit und Stadt Krefeld," p. 263, and Buschbell and Heinzelmann, *Geschichte der Stadt Krefeld I*, pp. 240–42.
404. Grethe, "Bautätigkeit in Krefeld," pp. 101–2.
405. Franz Schlüter-Padberg, "Die fünfte Stadterweiterung Krefelds im Jahre 1766," *Die Heimat*, 6/3 (October 1927), 194–97.
406. *Ibid.* It is worth noting that in 1788 plans for another expansion were being made. They came to naught because of the outbreak of the French Revolution.
407. Schlüter-Padberg, "Die fünfte Stadterweiterung," pp. 194–97.
408. W. Risler, "Engelberg vom Bruch und seine Selbstbiographie," *Die Heimat*, 24 (1953), 145, and Rembert, "Wilhelm v. Humboldt in gastfreien Hause von der Leyen in Krefeld," pp. 210–11.
409. *Ibid.*
410. *Ibid.*
411. Upwich, "Geschichte und Entwicklung," p. 54, and Thun, *Die Industrie am Niederrhein und ihre Arbeiter*, vol. 1, part 2, p. 88.
412. Frederick William I visited Krefeld in 1738. Frederick the Great in 1751 and 1763; see P. Schulze, "Einführung der Seidenindustrie in Europa," pp. 153–54, and Buschbell and Heinzelmann, *Geschichte der Stadt Krefeld*, 1, p. 170.
413. Rembert, "Wilhelm v. Humboldt im gastfreien Hause von der Leyen," p. 211.
414. Note the critical account by Abraham ter Meer of *un repas prodigieux* given in November 1762 by the von der Leyens for their workers in honor of their son's (Friedrich) marriage to a Herstadt (of the Cologne banking family): G. Bushbell, ed., *Das Tagebuch des Abraham ter Meer*, p. 182.
415. Rembert, "Wilhelm v. Humboldt im gastfreien Hause von der Leyen," p. 211.
416. For some indications regarding the education given to the younger generation of von der Leyens, see W. Kurschat, "Friedrich Heinrich von der Leyen. Ein Krefelder Kaufmann," *Die Heimat*, 11/4 (Christmas 1932), 169–70; also see Rembert, "Wilhelm von Humboldt im gastfreien Hause von der Leyen," pp. 206–11. Friedrich Heinrich von der Leyen was born in 1765.
417. Friese, *Die Verwaltung der Stadt Krefeld*, pp. 75–76, and "Historische Beschreibung der Grafschaft Mörs am Anfang des 18. Jahrhunderts," p. 49.
418. *Ibid.* and Upwich, "Geschichte und Entwicklung," p. 54. According to contemporaries, the von der Leyens appear to have lavished most munificent gifts (their own wares, wines, etc.) upon the powerful of the realm. At the time, the Scheiblers in Montjoie did likewise.
419. *Ibid.* and Friese, *Die Verwaltung der Stadt Krefeld*, pp. 74–84. The burden of war debts following the Seven Years' War raised the specter of additional taxes and therefore made it almost inevitable that the rich Mennonite merchants be represented by special deputies in the Moers county diet and in the councils of the city fathers where these new tax burdens were being discussed.
420. Buschbell, *Das Tagebuch des Abraham ter Meer*, pp. 98–100.
421. *Ibid.* and *Acta Borussica*, II, pp. 617–18.
422. Rembert, "Beiträge zur Geschichte der Mennoniten in Krefeld," pp. 88–90. The king was told at the time that "here various manufacturers have reached great prosperity. Furthermore the town is so crowded with strangers that no houses are available for those seeking shelter and hay lofts are being used as places of human

habitation. Also, because of the lack of housing, people are moving into the countryside" (Grethe, "Bautätigkeit in Krefeld," p. 97). See also Keussen, *Die Stadt und Herrlichkeit Crefeld*, pp. 469–70.

423. "I consider Crefeld and its manufacture a jewel from which the recruiting officers should keep their distance." See K. Rembert, "Anerkennung und Förderung der Krefelder Seidenfirma F. und H. von der Leyen durch König Friedrich den Grossen," p. 30, and Keussen, *Die Stadt und Herrlichkeit Crefeld*, pp. 469–70.

424. *Ibid.*

425. *Ibid.*

426. Keussen, *Die Stadt und Herrlichkeit Crefeld*, pp. 468–69.

427. See earlier in connection with the award to the von der Leyens of this monopoly. Frederick the Great is supposed to have said on this occasion that "he would prefer to have in his land one large manufacturer rather than ten small ones" (Buschbell and Heinzlmann, *Geschichte der Stadt Krefeld*, I, p. 167).

428. Keussen, *Die Stadt und Herrlichkeit Crefeld*, p. 480, and Friese, *Die Verwaltung der Stadt Krefeld*, pp. 66–74.

429. Keussen, *Die Stadt und Herrlichkeit Crefeld*, pp. 470–71.

430. "Die drei Brüder von der Leyen, die Kommerzienräte Conrad, Friedrich junior and Johann, bitten um Befreiung von der Rechtsprechung des Krefelder Landgerichts und Magistrats 1775," *Die Heimat*, 5/4 (December 1926), pp. 281–82.

431. In the year 1787. See Keussen, *Die Stadt und Herrlichkeit Crefeld*, p. 487.

432. *Ibid.*, pp. 126ff.

433. See *Acta Borussica*, II, pp. 619–20.

434. Moreover, because of their distance from Berlin they escaped the court intrigues and the corruption that were so much a part of the mercantilist scene.

435. Note the accusation made by the Berlin officials that the von der Leyens were guilty of smuggling into the country English and French wares. See Keussen, *Die Stadt und Herrlichkeit Crefeld*, pp. 480–81.

436. Rudolph Vierhaus, "Preussen und die Rheinlande," *Rheinische Vierteljahrsblätter*, 30/1–4 (1965), esp. pp. 152–61.

437. Karl Biedermann, *Deutschlands politische, materielle und sociale Zustände in 18. Jahrhundert* (Leipzig: J. J. Weber, 1880) I, 2nd ed., pp. 124–27.

438. Biedermann, *Deutschlands politische, materielle und sociale Zustände*, I., p. 164: "Thus were more or less, all classes of traders closely tied to the representatives of the ruling order; they were even beholden to their upper-class abuses and thus could never seriously entertain the thought of opposing these malpractices."

439. The atmosphere of this era where Schmoller became the academic "king-maker," as far as the social sciences of imperial Germany were concerned, has been the topic of many a biographical and autobiographical account. Only the most important can be mentioned here: Lujo Brentano's *Mein Leben im Kampf um die soziale Entwicklung Deutschlands*, which captures the spirit of the age (1870–1914) from the standpoint of a Gladstonian liberal. See also Marianne Weber's celebrated life story of her husband, *Max Weber*, and M. J. Bonn's (Brentano's disciple) charming *Wandering Scholar*. Schumpeter referred to Schmoller as a "Scholarchen" (*History of Economic Analysis*, p. 809, n. 4).

440. For a critical evaluation of the "Hohenzollern legend," see Krüger, *Zur Geschichte der Manufakturen*, pp. 10–15.

441. Schmoller, "Die preussische Seidenindustrie," p. 534.

442. *Ibid.*, p. 536.

443. *Ibid.*, p. 537.

444. Biedermann's study epitomizes, in many ways, the liberal creed of the mid-nineteenth century. His above-mentioned study was first published in 1854.

445. Schumpeter, *History of Economic Analysis*, pp. 800–820.

446. For a most perceptive analysis of the circumstances that nurtured the origins of the German "Historical School," see the very fine study by Gottfried Eisermann, *Die Grundlagen des Historismus in der deutschen Nationalökonomie* (Stuttgart: Ferdinand Enke, 1956), pp. 20–56. Also see the essay by S. B. Kan, *Dva vosstaniya silezskich tkáčej (1793–1844)* (Moscow, 1948), here from Czech translation, *Dvě povstání slezských tkalců 1793–1844* (Two rebellions of Silesian weavers 1793–1844) (Prague, 1952), pp. 7–36.

447. Eisermann, *Die Grundlagen des Historismus*, pp. 56–74.

448. These views are clearly reflected in Hildebrand's study, *Die Nationalökonomie der Gegenwart und Zukunft* (Frankfurt a. Main, 1848). See also Eisermann, *Die Grundlagen des Historismus*, pp. 158–88.

449. Eisermann, *Die Grundlagen des Historismus*, pp. 188–230.

450. The great historian Friedrich Meinecke wrote in 1922:

Already before and during the war the question arose as to whether Germany would not fare better by shifting toward a parliamentary form of government. Schmoller quite roundly denounced the suggestion; he clearly opposed it in favor of the (existing) monarchic-constitutional system. He went as far as to suggest that perhaps England had acquired its parliamentary system at too high a price insofar as it lacked the kind of well-trained officialdom Germany was privileged to enjoy. I too defended up until its collapse the monarchic-constitutional system. . . . Whosoever today criticizes Schmoller, criticizes the illusions of a whole generation and he who belongs to that generation criticizes his own (former ideals) as well [Friedrich Meinecke, "Drei Generationen deutscher Gelehrtenpolitik," *Historische Zeitschrift* 125 (1922), 267–68].

Quoted by Johann Albrecht von Rantzau, "Deutsche Geschichtsschreibung und Politik," in *Aus Geschichte und Politik. Festschrift für Ludwig Bergstraesser*, ed. Alfred Herrmann (Düsseldorf: Droste Verlag, 1954), pp. 204–5. This is a very perceptive account of German historiography in the pre-1914 era with due emphasis on its distinctness, as contrasted with French and English writings.

451. Schumpeter, *History of Economic Analysis*, pp. 810–12.

452. Robert A. Brady, "The Economic Impact of Imperial Germany: Industrial Policy," *Journal of Economic History*, 3 (December 1963), 108–23.

453. Hans Rosenberg, "Political and Social Consequences of the Great Depression of 1873–1896," *Economic History Review*, 13 (1943), 58–73.

454. Eisermann, *Die Grundlagen des Historismus*, pp. 240–41.

455. Georg W. F. Hallgarten, *Imperialismus vor 1914* (Munich: C. H. Beck, 1951), I, pp. 124–25 and 158.

456. Arthur Sommer refers to the "middle-class economic historicism" waging "an economic war of religion" against economic liberalism on the one hand and socialism on the other. See "Über Inhalt, Rahmen und Sinn älterer Stufentheorien," in *Festgabe für Alfred Weber*, ed. A. Salin (Heidelberg, 1948), p. 555.

457. Franz Mehring, *Geschichte der deutschen Sozialdemokratie* (Stuttgart: J. H. W. Dietz, 1913), 5th ed., book 6, chap. 5, and Walter Vogel, *Bismarcks Arbeiterversicherung im Kräftepiel der Zeit* (Braunschweig: Georg Westermann, 1951).

458. See Rosenberg, *Bureaucracy, Aristocracy and Autocracy*, pp. 232–37.

459. Otto Hintze, "Die Industrialisierungspolitik Friedrichs des Grossen," in *Historische und Politische Aufsätze* (Berlin: Otto Kobs, 1908), II, pp. 131–32.

460. Rosenberg, *Bureaucracy, Aristocracy and Autocracy*, pp. 236–37.

461. The prewar and World War I chauvinism that had penetrated the German universities has been described by Fritz Fischer in his well-known *Griff nach der Weltmacht* (Düsseldorf: Droste Verlag, 1964), pp. 184–89. Historians and economists were especially prone to expressions of superpatriotism.

462. See the critical remarks by Geoffrey Barraclough reviewing *German History—Some New German Views*, in *The Listener*, May 27, 1954, p. 923.

CHAPTER 3

1. Bruno Kuske, “Die Grundzüge der Wirtschaftsentwicklung am Niederrhein vom Mittelalter bis zur Gegenwart,” *Annalen des Historischen Vereins für den Niederrhein*, 115 (1929), 45–48. W. Schumacher, *Untersuchung über die Entwicklung der bergischen Seidenindustrie* (Heidelberg: Rössler und Herbert, 1914), p. 7.

2. Elli Oberbach, *Das Kölner Textilgewerbe von der Wende des Mittelalters bis zum 19. Jahrhundert* (Cologne: M. Welzel, 1929), pp. 122ff.

3. That trade between Cologne and the Berg area was active in the early modern period has been suggested by R. Isenburg, “Untersuchungen über die Entwicklung der bergischen Wollenindustrie” (diss., Heidelberg University, 1906), p. 6, and Emertrude von Ranke, “Kölns binnendeutscher Handel im 16. und 17. Jahrhundert,” *Hansische Geschichtsblätter*, 49 (1924), 64–77.

4. Helmut von Stein, *Die industrielle Entwicklung der Stadt Wermelskirchen seit Anfang des neunzehnten Jahrhunderts* (Düsseldorf: G. H. Nolte, 1939), p. 1.

5. Stein, *Industrielle Entwicklung*, p. 2.

6. G. von Gülich, *Geschichtliche Darstellung des Handels, der Gewerbe und des Ackerbaus der bedeutendsten handelstreibenden Staaten unserer Zeit* (Jena: Friedrich Fromman, 1830), 2, p. 163.

7. The weakening of the feudal order as a result of market pressures has been elaborated by François Louis Ganshof and Adrian Verhulst: “This collective economy was replaced by a system of agrarian individualism with stock-raising on natural pastures as the chief resource. This basic change in the system of cultivation, particularly noticeable in Flanders during the thirteenth century, was without doubt stimulated by a more active trade in meat, wool, and leather, mainly in the neighborhood of the great cities” (“Medieval Agrarian Society in its Prime,” in *Cambridge Economic History*, vol. 1, part 1. *The Agrarian Life of the Middle Ages*, ed. M. M. Postan [Cambridge: University Press, 1966], 2nd ed., p. 298).

8. Gülich, *Geschichtliche Darstellung*, 2, p. 183.

9. For an expert discussion of the Berg agrarian structure, see Franz Steinbach, *Beiträge zur bergischen Agrargeschichte—Rheinisches Archiv*, ed. Hermann Aubin and Theodor Frings (Bonn and Leipzig: Kurt Schroeder, 1922), I, esp. pp. 55–61.

10. J. F. Knapp, *Geschichte, Statistik und Topographie der Städte Elberfeld und Barmen im Wupperthale. Mit Bezugnahme auf die Stadt Solingen und einige Städte des Kreises Lennep* (Iserlohn and Barmen: Wilh. Langewiesche, 1835), pp. 43–44, and Herman Ringel, “Bedingungen der Wirtschaftsentwicklung im Bergischen Land bis zum Beginn des 19. Jahrhunderts” (diss., Cologne University, 1922), pp. 5–7.

11. *Ibid.* and Gert von Eyern, *Die Unternehmungen der Familie von Rath* (Bonn: Kurt Schroeder, 1930), pp. 4–5.

12. “Arable conditions,” writes no less an authority than Joan Thirsk, “did not usually give warm hospitality to domestic crafts.” See chap. 1, “The Farming Regions

of England," in *The Agrarian History of England and Wales*, IV, ed. H. P. R. Finberg (Cambridge: University Press, 1967), p. 45. As regards the Wupper valley scene, see H. F. Macco, *Geschichte der Familie Wuppermann* (Berlin: n.p., 1911), p. 3, and Johann Viktor Brecht, "Studien zur Rechtsgeschichte von Barmen," *Zeitschrift des Bergischen Geschichtsvereins* 65 (1937), 15.

13. See Ringel, "Bedingungen der Wirtschaftsentwicklung," pp. 7–9, and Johann Viktor Brecht, "Barmen im 15. Jahrhundert," *Zeitschrift des Bergischen Geschichtsvereins*, 6 (June 1899), 117.

14. For a general evaluation of a large city's demand upon the neighboring agriculture, see Ganshof and Verhulst, "Medieval Agrarian Society in its Prime," p. 339. Regarding the agrarian and especially Kulak origins of Wupper valley bleaching, see the standard account by Johann Viktor Brecht, *Die Lohnindustrie dargestellt an der Garn- und Textilindustrie von Barmen* (Berlin: von Bruer, 1905), pp. 14–15 and 20–21.

15. Hermann van der Wee, *The Growth of the Antwerp Market and the European Economy (Fourteenth to Sixteenth Centuries)* (The Hague: Martinus Nijhoff, 1963), II, *Interpretation*, pp. 24–26 and esp. chap. 3.

16. Ringel, "Bedingungen der Wirtschaftsentwicklung," p. 55.

17. For an expert summary of these developments, see Walter Dietz, *Die Wupperthaler Garnnahrung—Geschichte der Industrie und Handels von Elberfeld und Barmen, 1400 bis 1801 (Bergische Forschungen, vol. 4)*, ed. Edmund Strutz (Neustadt an der Aisch: P. L. C. W. Schmidt, 1957), pp. 13–15.

18. Brecht, *Die Lohnindustrie*, p. 21.

19. For emphasis on Cologne's influence as an important factor in promoting Wupper valley bleaching, see Edmund Strutz, "Bergische Wirtschaftsgeschichte," in Justus Hashagen et al., *Bergische Geschichte* (Remscheid-Lennep: Ad. Mann, 1958), esp. pp. 321–22.

20. Brecht, *Die Lohnindustrie*, pp. 14–15, 21.

21. Knapp, *Geschichte, Statistik und Topographie*, pp. 133–34; Strutz, "Bergische Wirtschaftsgeschichte," p. 322; and Gülich, *Geschichtliche Darstellung des Handels*, 2, pp. 185–86, n. Note the emphasis upon nearby Werden and Essen as earlier sites of yarn bleaching, providing the Wupper valley with an example worthy of imitation.

22. *Industrie- und Handelskammer Wuppertal 1931–1956* (Wuppertal-Elberfeld: Handelskammer, 1956), p. 9, and Brecht, "Studien zur Rechtsgeschichte von Barmen," p. 47, show that the increased fragmentation of holdings had reached the figure of 491 by 1591.

23. For developments in Saxony, see Gerhard Heitz, *Ländliche Leinenproduktion in Sachsen 1470–1555 (Deutsche Akademie der Wissenschaften. Schriften des Instituts für Geschichte, Landesgeschichte, IV)* (Berlin: Akademie Verlag, 1961), p. 17. For Flanders and Brabant, see Van der Wee, *The Growth of the Antwerp Market*, II, pp. 70ff., and H. Van Werweke, "The Low Countries," in *The Cambridge Economic History of Europe*, vol. 3, *Economic Organization and Policies in the Middle Ages*, eds. M. M. Postan, E. E. Rich, and Edward Miller (Cambridge: University Press, 1963), pp. 354–56. Also Etienne Sabbé, *De belgische vlasnijverheid—De zuidnederlandse vlasnijverheid tot het Verdrag van Utrecht—1713* (Bruges: "deTempel," 1943), pp. 140ff.

24. C. M. Cipolla, "The Italian and the Iberian Peninsulas," in the *Cambridge Economic History*, III, eds. M. M. Postan et al. (Cambridge: University Press, 1963), pp. 419–20.

25. Alex J. Warder, *The Linen Trade—Ancient and Modern*, 3rd impression (London: Frank Cass, 1967), pp. 289–91.

26. See Dietz, *Die Wuppertaler Garnnahrung*, pp. 20–21 and 30–32; at the time “Elberfeld merchants” referred to all those hailing from the Wupper valley. According to J. V. Bredt, “Studien zur Rechtsgeschichte von Barmen,” p. 15, the local Protestants were excluded from appointments in the duke’s civil service, a factor which supposedly intensified their preoccupation with mercantile activities.

27. Dietz, *Die Wuppertaler Garnnahrung*, pp. 20–21.

28. *Ibid.*, pp. 19–20.

29. *Ibid.*

30. *Ibid.*, p. 12.

31. Bredt, *Die Lohnindustrie*, pp. 15–16.

32. Strutz, “Bergische Wirtschaftsgeschichte,” p. 321, and Eynern, *Die Unternehmungen der Familie von Rath*, p. 14. Contrary to all other authors, Dietz emphasizes that the fee paid by the bleachers and their yarn dealers was not really as large as some of the other historians have maintained (*Die Wuppertaler Garnnahrung*, p. 28).

33. Dietz, *Die Wupperthaler Garnnahrung*, p. 30.

34. The actual document of the *Garnnahrung* is no longer available. The closest reproduction of the original text (in Middle High German) is offered in “Urkunden zur Geschichte der Garnnahrung im Wuppertale,” eds. W. Creelius and A. Werth, *Zeitschrift des Bergischen Geschichtsvereins*, 16 (1880), part 1, pp. 76–81. Part 2 is in the same journal, vol. 17 (1881).

35. As far as older accounts are concerned, see the rather typical comments by two nineteenth-century officials: W. Huthsteiner and C. Rocholl, *Barmen in historischer, topographischer und statistischer Beziehung von seiner Entstehung bis zum Jahre 1841* (Barmen: Friedrich Staats, 1841), p. 9. For a modern view, see Wolfgang Köllmann, *Wirtschaft, Weltanschauung und Gesellschaft in der Geschichte des Wuppertals* (Wuppertal: Abendland Verlag, 1955), pp. 7–13.

36. According to Ringel, “Bedingungen der Wirtschaftsentwicklung,” p. 41, an accord was signed with the inhabitants of Schwelm, permitting the latter to bleach 2,000 pieces of yarn.

37. Dietz, *Die Wuppertaler Garnnahrung*, pp. 30–33.

38. *Ibid.*, pp. 23–25.

39. *Ibid.*, p. 24; and Wilhelm Langewiesche, ed., *Beschreibung und Geschichte dieser Doppelstadt des Wupperthals nebst besonderer Darstellung ihrer Industrie, einem Überblick der Bergischen Landesgeschichte . . .* (Barmen: W. Langewiesche, 1863), p. 128. At the time the number of Wupper valley inhabitants had supposedly reached one thousand.

40. Ringel, “Bedingungen der Wirtschaftsentwicklung,” pp. 39–40.

41. Dietz, *Die Wuppertaler Garnnahrung*, pp. 34–35 and 49. It is worth noting that the initial statutes of the *Garnnahrung* prohibited the use of the thread mill. Later on the ban was to be ignored; during the seventeenth century the thread mill was used universally.

42. *Ibid.*, pp. 35–36.

43. *Ibid.*, pp. 36–37 and 54ff.

44. *Ibid.*, esp. tables on p. 55. That this credit pattern was quite widespread in the early days of European capitalism has been emphasized by George V. Taylor, “Types of Capitalism in Eighteenth-Century France,” *English Historical Review*, 79 (1964), 485.

45. All members of the *Garnnahrung* were members of the Reformed Lutheran Church. During the late sixteenth century they were exposed to pressures and inconveniences which presumably enhanced as a group their sense of belonging. See Huth-

- steiner and Rocholl, *Barmen*, pp. 13–14. Also see Köllmann, *Wirtschaft, Weltanschauung und Gesellschaft*, pp. 21 and 41–42.
46. The *Garnnahrung*'s flexibility, its ability to roll with the punches meted out by the world economy, has been emphasized by Dietz, *Die Wuppertaler Garnnahrung*, pp. 34–38. At the time the vitality and resilience of the bleaching industry was enhanced by virtue of its close ties to agricultural activity.
47. The main sales outlets for bleached yarn were Cologne, Frankfurt am Main, and Antwerp. When an Antwerp merchant declared bankruptcy in 1540, all twenty of his German creditors were bleachers and traders residing in the Wupper valley (Strutz, "Bergische Wurtsgaftsgeschichte," pp. 340–41.).
48. Dietz, *Die Wuppertaler Garnnahrung*, p. 26.
49. See especially J. A. Schumpeter, *History of Economic Analysis* (New York: Oxford University Press, 1955), pp. 151–53. As regards local advantages to be derived from the monopoly, see Langewiesche, *Beschreibung und Geschichte*, p. 266.
50. Dietz, *Die Wuppertaler Garnnahrung*, p. 21, and Ringel, "Bedingungen der Wirtschaftsentwicklung," p. 41.
51. "The sixteenth century was an age of economic expansion" (H. R. Trevor-Roper, *Religion, the Reformation and Social Change* [London: Macmillan, 1967], p. 60).
52. See C. H. Wilson, "Trade, Society and the State," in *Cambridge Economic History of Europe, the Economy of Expanding Europe in the 16th and 17th centuries*, ed. E. E. Rich and C. H. Wilson (Cambridge: University Press, 1967), 4, pp. 490–91, and Etienne Sabbé, *Histoire de l'industrie linière en Belgique* (Brussels: Office de Publicité, 1945), pp. 22–24.
53. Gülich, *Geschichtliche Darstellung des Handels*, II, pp. 186–87.
54. Dietz, *Die Wuppertaler Garnnahrung*, pp. 26–28, and Ringel, "Bedingungen der Wirtschaftsentwicklung," p. 42.
55. Klaus Goebel, *Zuwanderung zwischen Reformation und Franzosenzeit . . . ein Beitrag zur vorindustriellen Bevölkerungs- und Wirtschaftsgeschichte Wuppertals 1527–1808* (Wuppertal: Born-Verlag, 1966), pp. 43–44, and Bredt, *Lohnindustrie*, p. 21.
56. Goebel, *Die Zuwanderung zwischen Reformation und Franzosenzeit*, p. 21; see Ringel's comments, "Bedingungen der Wirtschaftsentwicklung," p. 43, and esp. Dietz's list of producers with their quantities of annual output: *Die Wuppertaler Garnnahrung*, pp. 55–62.
57. Dietz, *Die Wuppertaler Garnnahrung*, pp. 28–29. At that time Rittershaus was Elberfeld's second wealthiest merchant. Also see Macco, *Geschichte der Familie Wuppermann*, p. 23. In 1598 Peter Wuppermann had been fined one guilder.
58. Goebel, *Die Zuwanderung zwischen Reformation und Franzosenzeit*, p. 43.
59. Ringel, "Bedingungen der Wirtschaftsentwicklung," pp. 42–43, and Dietz, *Die Wuppertaler Garnnahrung*, pp. 66–68.
60. Bredt, *Die Lohnindustrie*, pp. 23–25.
61. Dietz, *Die Wuppertaler Garnnahrung*, pp. 69–72.
62. *Ibid.*
63. *Ibid.* Also Goebel, *Zuwanderung zwischen Reformation und Franzosenzeit*, p. 40.
64. Dietz, *Die Wuppertaler Garnnahrung*, p. 63.
65. Köllmann, *Wirtschaft, Weltanschauung und Gesellschaft*, p. 12. Also see Bredt, *Die Lohnindustrie*, pp. 17–20.
66. George Unwin, *Industrial Organization in the 16th and 17th Centuries*, 2nd ed. (London: Frank Cass, 1963), esp. chap. 2.

67. Dietz, *Die Wuppertaler Garnnahrung*, pp. 62–72.

68. *Ibid.*, pp. 74–77; and W. Crecelius and A. Werth, "Urkunden zur Geschichte der Garnnahrung im Wuppertale," part 1, pp. 82–83, and part 2, pp. 11–40.

69. Crecelius and Werth. "Urkunden zur Geschichte der Garnnahrung im Wuppertale," part 2, pp. 11–40, and J. V. Bredt, *Geschichte der Familie Bredt* (Elberfeld: Baedekersche Buchdruckerei, 1902), pp. 13–14.

70. Crecelius and Werth, "Urkunden zur Geschichte der Garnnahrung im Wuppertale," part 2, pp. 11–40, and Ringel, "Bedingungen der Wirtschaftsentwicklung," p. 41.

71. In 1614 Schwelm was incorporated into Prussia; henceforth this town was to be free from any interference by the *Garnnahrung*. See esp. Goebel, *Die Zuwanderung zwischen Reformation und Franzosenzeit*.

72. Huthsteiner and Rocholl, *Barmen in historischer, topographischer und statistischer Beziehung*, pp. 9–11.

73. E. Böhmer, *Geschichte der Stadt Schwelm* (Schwelm: n.p., 1950), pp. 72–73.

74. Crecelius and Werth, "Urkunden zur Geschichte der Garnnahrung im Wuppertale," part 2, pp. 11–42. Above all, the Elberfeld dealers were involved in these illicit practices.

75. Böhmer, *Geschichte der Stadt Schwelm*, p. 73.

76. Bredt, *Die Lohnindustrie*, pp. 46–47.

77. Huthsteiner and Rocholl, *Barmen in historischer, topographischer und statistischer Beziehung*, p. 73. After all, the new ribbon loom was to be referred to as the "Dutch loom." See Josef Kulischer, *Allgemeine Wirtschaftsgeschichte des Mittelalters und der Neuzeit*, 2nd ed. (Berlin: Rütten and Loening, 1958), pp. 172–73.

78. See Crecelius and Werth, "Urkunden zur Geschichte der Garnnahrung im Wuppertale," part 2, pp. 66–67.

79. Bredt, *Die Lohnindustrie*, pp. 46–47; in turn the Dutch weavers promised not to bleach any yarn themselves and to rely exclusively upon Wupper valley supplies.

80. That in the early seventeenth century the Barmen bleachers continued with their agricultural activities has been emphasized by Bredt, *Geschichte der Familie Bredt*, p. 14. As regards Wupper valley flexibility, see Dietz, *Die Wuppertaler Garnnahrung*, p. 39.

81. Bredt, *Die Lohnindustrie*, pp. 47–48; Langewiesche, *Beschreibung und Geschichte dieser Doppelstadt*, p. 269; Gülich, *Geschichtliche Darstellung des Handels*, 2, pp. 182–83, 202, and 268.

82. Dietz, *Die Wuppertaler Garnnahrung*, p. 48. The actual amounts were 1339 cwt. of yarn and 100 cwt. of linen.

83. *Ibid.* It is worth observing that the *Garnnahrung* attempted and largely succeeded in extending its control over the production of linen fabric.

84. Dietz, *Die Wuppertaler Garnnahrung*, pp. 49–51.

85. *Ibid.*

86. Karl Wülfrath, *Bänder aus Ronsdorf—150 Jahr J.H. Sohn* (n.p., 1955), p. 8, and Dietz, *Die Wuppertaler Garnnahrung*, p. 51.

87. See Max Barkhausen, "Staatliche Wirtschaftslenkung und freies Unternehmertum im westdeutschen und im nord- und südniederländischen Raum bei der Entstehung der neuzeitlichen Industrie im 18. Jahrhundert," *Vierteljahrsschrift für Sozial- und Wirtschaftsgeschichte*, 45 (1958), 179; Knapp, *Geschichte, Statistik und Topographic*, p. 66; and Wilhelm Crecelius, "Beiträge zur Bergisch-Niederrheinischen Geschichte," *Zeitschrift des Bergischen Geschichtsvereins*, 27 (1891), 185–86.

88. Langewiesche, *Beschreibung und Geschichte*, pp. 166–67. and Heinrich Haacke, *Barmens Bevölkerung im XVII. und XVIII. Jahrhundert* (Barmen: Oskar Born, 1911), p. 23.

89. Knapp, *Geschichte, Statistik und Topographie*, p. 169.

90. Langewiesche, *Beschreibung und Geschichte*, pp. 166–167 and 268. Some of the local Baptists were expelled in 1622.

91. Knapp, *Geschichte, Statistik und Topographie*, p. 172.

92. There is no lack of information regarding the ravages of war. See Knapp, *Geschichte, Statistik und Topographie*, pp. 9 and 172–76; Gülich, *Geschichtliche Darstellung des Handels*, II, p. 176; and Langewiesche, *Beschreibung und Geschichte*, p. 219.

93. Knapp, *Geschichte, Statistik und Topographie*, pp. 175–76; Langewiesche, *Beschreibung und Geschichte*, p. 218; and V.P. Sonderland, *Die Geschichte von Barmen im Wuppertale . . .* (Elberfeld: H. Büschler, 1921), reissued Wuppertal, Born Verlag, 1963, pp. 35–36.

94. Macco, *Geschichte der Familie Wuppermann*, p. 26.

95. On the post–Thirty Years' War boom, see Knapp, *Geschichte, Statistik und Topographie*, pp. 66–67 and 134, n.; Langewiesche, *Beschreibung und Geschichte*, pp. 266–267; and Dietz, *Die Wuppertaler Garnnahrung*, p. 107. At that time French economic policy was to be dominated by the historic figure of Colbert. Colbert was bent on creating within France a major industrial structure and as part of his efforts reduced import duties on raw materials and semifinished products to be used by new manufacture. Bleached yarn to supply the lace-making industry was to be a beneficiary of this liberal trade policy. By the 1670s, bleached yarn was to pay an import duty of no more than 2.75 percent of its value. See Lawrence de Laprade, *Le Poinet de France et les centres dentelliers au XVII^e et au XVIII^e siècles* (Paris: J. Rothchild, 1905), pp. 374–75.

96. Knapp, *Geschichte, Statistik und Topographie*, p. 67, and the account of the chronicler Johannes Merken in Friedrich Kerst, *Aus der Alten Wuppertaler Chronik* (Wuppertal Barmen: Staats-Verlag, 1960), pp. 22–24.

97. Knapp, *Geschichte, Statistik und Topographie*, p. 67. The town hall was not completed until 1707.

98. Knapp, *Geschichte, Statistik und Topographie*, p. 138. NB: this quality refers to Elberfeld only.

99. Barkhausen, "Staatliche Wirtschaftslenkung und freies Unternehmertum," p. 66.

100. Haacke, *Barmens Bevölkerung*, p. 23. At the time there were probably 430 families in Barmen. At the same time, Amt Elberfeld paid taxes on seven carding mills.

101. Langewiesche, *Beschreibung und Geschichte*, pp. 66–69, had this to say about Barmen: "Before 1790 those couple of thousand living here resided for the most part in unprepossessing houses strewn throughout the district; i.e., they were dispersed over half of a square mile. Thus there did not as yet exist a proper locality which in any way could have been considered the nucleus of a future city."

102. Ringel, "Bedingungen der Wirtschaftsentwicklung," p. 41; Gülich, *Geschichtliche Darstellung des Handels*, 2, p. 192; and Bredt, *Geschichte der Familie Bredt*, p. 14. Also see Langewiesche, *Beschreibung und Geschichte*, p. 266, and Ottfried Dascher, *Das Textilgewerbe in Hessen-Kassel vom 16. bis 19. Jahrhundert. Veröffentlichungen der Historischen Kommission für Hessen und Waldeck*, 28,1. (Marburg: N. G. Elwert Verlag, 1968), pp. 29–30. Such was the importance of the Elberfeld merchants that they were able to exert considerable influence upon Hessen commercial policy. This influence lasted throughout the eighteenth century.

103. Dietz, *Die Wuppertaler Garnnahrung*, pp. 77–78. Many of the yarn dealers were Jewish traders and very petty ones at that. By the 1730s the Elberfeld merchants claimed to have spent 100,000 talers annually. See Dascher, *Das Textilgewerbe in Hessen-Kassel vom 16. bis 19. Jahrhundert*, pp. 145–46.

104. Bredt, *Die Lohnindustrie*, p. 15. This also suggests that substantial capital was a prerequisite for entering this particular trade.

105. Dietz, *Die Wuppertaler Garnnahrung*, pp. 78–80.

106. *Ibid.*, pp. 80–82.

107. Charles Wilson, *Anglo-Dutch Commerce and Finance in the Eighteenth Century* (Cambridge: University Press, 1966), pp. 5ff.

108. Dietz, *Die Wuppertaler Garnnahrung*, p. 81. In 1606 the Westphalian estates protested to the Netherland authorities that Dutch mercenaries had waylaid Elberfeld and Barmen yarn dealers “on their way to Amsterdam and Sunsten.” Four specific occasions are cited when the Wupper valley merchants were robbed of 1,500, 400, 1,030 and 1,200 talers worth of bleached brown yarn, respectively. See Ringel, “Bedingungen der Wirtschaftsentwicklung,” pp. 41–42.

109. See Charles Woolsey Cole, *Colbert and a Century of French Mercantilism* (New York: Columbia University Press, 1939), 1, pp. 64ff.

110. Dietz, *Die Wuppertaler Garnnahrung*, pp. 82–84.

111. On the role of Frankfurt am Main as an important fair, see Alexander Dietz, *Frankfurter Handelsgeschichte* (Frankfurt a. Main: Herman Minjon, 1910–25), I, pp. 64ff.

112. Dietz, *Die Wuppertaler Garnnahrung*, pp. 84–86. Even as far back as 1590, five Elberfeld merchants attended the Frankfurt fair; Johann Wichelhaus was one of them. See Dietz, *Frankfurter Handelsgeschichte*, II, p. 245.

113. Dietz, *Die Wuppertaler Garnnahrung*, pp. 86–89.

114. *Ibid.*, pp. 84–89.

115. *Ibid.*, p. 90.

116. *Ibid.*, pp. 91–94 and 100. Other Wupper valley merchants specialized in trading directly with Cologne (still an important market), England, the Netherlands, and France.

117. Eynern, *Die Unternehmungen der Familie von Rath*, p. 15.

118. *Ibid.*

119. Bredt, *Die Lohnindustrie*, pp. 24–25.

120. *Ibid.*, pp. 26–29; Bredt refers to the “new monopoly” of the landowners.

121. Kerst, *Aus der Alten Wuppertaler Chronik*, pp. 18–20. Those, who among others were to belong, during the first quarter of the eighteenth century, to this charmed circle were the families Carnap, Cappel, ter Schüren, von Sybelsdorf, Wichelhaus, Wuppermann, de Werth, Jan im Wüstenhoff, and Teschemacher.

122. Note that these clothes were only worn on special occasions. On working days even the garments of the rich were conspicuously simple (Kerst, *Aus der alten Wuppertaler Chronik*, pp. 36–37).

123. Bredt, *Geschichte der Familie Bredt*, pp. 15–17, and Goebel, *Die Zuwanderung zwischen Reformation und Franzosenzeit*, p. 42. See also W. Crecelius, “Beiträge zur Bergisch-Niederrheinischen Geschichte,” pp. 216–17 and 219ff.

124. Dietz, *Die Wuppertaler Garnnahrung*, p. 97.

125. Bredt, *Geschichte der Familie Bredt*, p. 22.

126. *Ibid.*, pp. 46ff. and Bredt, *Die Lohnindustrie*, pp. 28–29.

127. Dietz, *Die Wuppertaler Garnnahrung*, pp. 97–98; Goebel, *Die Zuwanderung zwischen Reformation und Franzosenzeit*, pp. 42–43; and W. Crecelius, *Beträge zur*

Bergisch-Niederrheinischen Geschichte, pp. 216–17. Also see Hans Kurzrock, *200 Jahre von der Heydt-Kersten Söhne 1754–1954* (n.p., n.d.), pp. 5–7. Conrad Kersten, born in Spangenberg (Hesse), migrated, during the first decade of the eighteenth century, to Elberfeld. There, in 1711 he married Anna Christina Teschemacher, daughter of one of the leading local merchants. By 1717 Kersten had been elected to the office of city elder. By 1722 he became an elder of the church.

128. Dietz, *Die Wuppertaler Garnnahrung*, pp. 97–98. Note that some of the centers were Frankfurt a. Main, Bremen, Kassel, Leipzig, Antwerp, Lyons, and London. Increasingly, some of the younger Wupper valley merchants started their own careers as apprentices with far-flung relatives.

129. Kurzrock, *200 Jahre von der Heydt-Kersten Söhne*, pp. 5–7. Dietz, *Die Wuppertaler Garnnahrung*, pp. 98–99, distinguishes three periods concerning change in the Wupper valley's social structure. During the initial period, which lasted until the end of the sixteenth century, all property owners were part of the upper crust. During the second period, which ended during the last decades of the seventeenth century, changes in the economy propelled the rich merchants, most of them being descendants of local yeomen, to the top of the social hierarchy. As for the third period, coinciding with the opening of the eighteenth century, a new era begins, marked by power being usurped by newcomers who marry into established families.

130. Bredt, *Die Lohnindustrie*, pp. 25–28, and Ringel, "Bedingungen der Wirtschaftsentwicklung," p. 45. Also Langewiesche, *Beschreibung und Geschichte*, p. 42. Also see Crecelius and Werth, "Urkunden zur Geschichte der Garnnahrung im Wuppertale," part 1, pp. 88–95.

131. Langewiesche, *Beschreibung und Geschichte*, pp. 129–130 and 269.

132. See the very important account by O. Schell, "Aus dem Inventarium des Elberfelder Bürgermeisters und Kaufherrn Johannes Plücker vom Jahre 1709–1710," *Zeitschrift des Bergischen Geschichtsvereins*, 46 (1913), 169ff.

133. *Ibid.*, pp. 175–80.

134. *Ibid.*, pp. 170–71.

135. *Ibid.*

136. *Ibid.*, p. 175, n.

137. *Ibid.*, p. 175. On those occasions when the Wupper valley merchants required banking services, they availed themselves of the Cologne banking houses. Peter Wuppermann (who died in 1674) left fourteen sacks filled with money plus one sack of gold. The value of the cash was about 4,000 talers. See Macco, *Geschichte der Familie Wuppermann*, p. 30.

138. Schell, "Aus dem Inventarium," pp. 171–73. For similarly agrarian ties to industry and trade in a more developed country like England, see the 1757 letter by Jedediah Struts to his wife, in R.S. Fitton and A. P. Wadsworth, *The Struts and the Arkwrights 1758–1830—A Study of the Early Factory System* (New York: A. M. Kelley Publishers, 1968), pp. 28–29.

139. Schell, "Aus dem Inventarium," p. 175.

140. *Ibid.*, esp. p. 172, n.

141. The hopeless state of the roads during this period has been described by Rudolf Schuler, *Verkehrsverhältnisse in den Herzogtümern Jülich und Berg zur Zeit des Herzogs Karl Theodor Kurfürsten von der Pfalz* (Düsseldorf: Ed. Lintz, 1917; orig. diss., Bonn University). Also see Langewiesche, *Beschreibung und Geschichte*, p. 229.

142. Occasionally it was not so much the quality of agricultural production per se that proved strategic for industrial progress; the agrarian structure allowed capitalist

yeomen to achieve a preeminent position within the community. For an interesting article along those lines, see E. L. Jones, "Agricultural Origins of Industry," *Past and Present*, no. 40 (July 1968), 58–71.

143. Schell, "Aus dem Inventarium," p. 173. Also see the account by Macco, *Geschichte der Familie Wuppermann*, p. 30. Peter Wuppermann (senior), 1610–1674, still walked to the Frankfurt fair.

144. For the classic account of a mob in a medieval-type city wresting privileges from the ruling class, see E. J. Hobsbawm, *Primitive Rebels—Studies in Archaic Forms of Social Movement in the 19th and 20th Centuries* (Manchester: University Press, 1959), chap. 7.

145. There were, of course, recalcitrants who did not submit too willingly to the austere rules of this religion. On several occasions, church elders admonished the "morals police" to supervise more strictly the taverns where a carousing populace supposedly preferred to while away the Sabbath rather than attend church services. See O. Schell, "Beiträge zur Geschichte der reformierten Gemeinde in Elberfeld—Kirchliche Gebräuche, Kirchliches Leben der früheren Zeit," *Zeitschrift des Bergischen Geschichtsvereins*, 51 (1918/1919), 233–41.

146. Schell, "Aus dem Inventarium," pp. 180–95.

147. *Ibid.*, pp. 196ff., considers the inventory of furniture, beddings, clothes, and jewelry as testimony to solid affluence. There seemed only one concession to the good life (see pp. 195–96), an obeissance to a Rhineland tradition that was stronger than the ingrained habits of parsimony: Plücker's wine cellar was generously stocked; its value at Plücker's death was assessed at about 5,000 talers. The wines listed in the estate were from German vineyards (Rhenish and Mosel wines predominated). By contrast, a large part of the Plücker library contained French books, proof of how important at the time the French language was for Elberfeld-Barmen traders. France constituted the most important outlet for Wupper valley goods (pp. 196–98).

148. Ringel, "Bedingungen der Wirtschaftsentwicklung," pp. 45–46. In this connection, it is also worth mentioning that by 1724 Göttingen's linen weavers and yarn dealers were supposedly adverse to expanding their bleaching business and ribbon trade because they feared they would be unable to withstand the competition of the Wupper valley operators who were thought to be ahead; see Dietz, *Die Wuppertaler Garnnahrung*, pp. 108–9.

149. For details regarding the rise of the local ribbon industry, including some of the early problems associated with the raw material supplies, see Wülfrath, *Bänder aus Ronsdorf*, pp. 10–11.

150. Langewiesche, *Beschreibung und Geschichte*, p. 269, and Dietz, *Die Wuppertaler Garnnahrung*, pp. 108–13, emphasize that cotton was originally introduced as part of the import of colonial wares.

151. By virtue of its commercial importance, the English economy was in the process of becoming a "cyclical center." This is why English developments had exerted a powerful impact upon the industrial regions of Western Europe. Consequently, the article by A. H. John, "Aspects of English Economic Growth in the First Half of the Eighteenth Century," *Economica*, n.s., 28 (1961), and reprinted in *Essays in Economic History*, ed. E. M. Carus-Wilson, II, pp. 360–73 (New York: St. Martin's Press, 1968), is most relevant.

152. For an account of this expansion, see the fine article by Ralph Davis, "English Foreign Trade 1770–1774," *Economic History Review*, 15/2 (December 1962), 285–98.

153. D. A. Farnie, "The Commercial Empire of the Atlantic 1607–1783," *Economic History Review*, 15/2 (December 1962), esp. 212–14. That Wupper valley prod-

ucts found an outlet "in all countries of Europe and in America" has been emphasized by Huthsteiner and Rocholl, *Barmen in historischer, topographischer und statistischer Beziehung*, p. 73.

154. Elberfeld and Barmen were typical twins whose coexistence accentuated their respective differences; the former was a mercantile center and primarily Reformed Lutheran; the latter was given to manufacturing and bleaching, and the majority of its inhabitants were Lutheran. But despite their differences, the common bond between them was a strong one. See Dietz, *Die Wuppertaler Garnnahrung*, p. 99.

155. Huthsteiner and Rocholl, *Barmen in historischer, topographischer und statistischer Beziehung*, p. 73, and Bredt, *Lohnindustrie*, p. 48.

156. Dietz, *Die Wuppertaler Garnnahrung*, pp. 97-99.

157. Goebel, *Die Zuwanderung*, pp. 43 and 80ff.

158. Langewiesche, *Beschreibung und Geschichte*, p. 230.

159. Ibid. That weavers, spinners, in short the "wage earners," were to be recruited from among the propertyless has been emphasized by Bredt, *Die Lohnindustrie*, p. 48.

160. Helmuth Dahn, "Verluste der jülich-bergischen Landmiliz in Dreissigjährigen Kriege," *Düsseldorfer Jahrbuch*, 45 (1951), 286. Dahn suggests the following population figures:

| | |
|-----------|-------------|
| 1600-1618 | 90-100,000 |
| 1650 | 70-80,000 |
| 1680 | 90-100,000 |
| 1730 | 140-150,000 |
| 1770 | 210-215,000 |
| 1772 | 219,000 |
| 1792 | 263,000 |

161. Leo Schwering, *Die Auswanderung protestantischer Kaufleute aus Köln nach Mülheim a. Rhein im Jahre 1714* (Trier: J. Lintz, 1907), pp. 5ff.

162. See Langewiesche, *Beschreibung und Geschichte*, pp. 232 and 269, and Haacke, *Barmens Bevölkerung*, p. 28.

163. Haacke, *Barmens Bevölkerung*, p. 28. The tentativeness of these figures cannot be overemphasized.

164. Langewiesche, *Beschreibung und Geschichte*, pp. 230-32.

165. Robert Wichelhaus, *Geschichte der Familie Wichelhaus* (Düsseldorf: A. Bagel, 1922), pp. 44-47.

166. Knapp, *Geschichte, Statistik und Topographie*, pp. 180-81. Some road construction was being started at the time as well. Moreover, in 1715 the authorities decreed that for the next 25 years those settling "on Gemarkte" would be exempt from all dues, taxes, and military conscription; see Bredt, "Studien zur Rechtsgeschichte von Barmen," pp. 161-62.

167. Haacke, *Barmens Bevölkerung*, pp. 29-30. Also see Sonderland, *Die Geschichte von Barmen im Wuppertale*, pp. 70-71.

168. Langewiesche, *Beschreibung und Geschichte*, pp. 228-31. The master bleachers are referred to as *Lohnbleicher*, which means they all worked on order for the wealthy merchants who took care of the packaging and exporting of the bleached yarn or sold it to local linen and ribbon manufacturers. Also see Sonderland, *Die Geschichte von Barmen im Wuppertale*, p. 75.

169. Ernst Muthmann, "Das Elberfelder Einwohnerbuch von 1702/03," *Zeitschrift des Bergischen Geschichtsvereins*, 64 (1936–37), 102–5.
170. Langewiesche, *Beschreibung und Geschichte*, pp. 231–32 and 271. Eventually these rural spinners turned to weaving "checks" and all the other types of half-cottons for which this area was to become well known. Also see Isenburg, "Untersuchungen über die Entwicklung der bergischen Wollenindustrie," p. 15.
171. "Zwei geographische Beschreibungen des Herzogtums Berg aus dem ersten Drittel des 18. Jahrhunderts," *Zeitschrift des Bergischen Geschichtsvereins*, 19 (1883), pp. 97 and 107.
172. *Ibid.*, pp. 122–23.
173. How narrow the base from which—in the case of Elberfeld—the city fathers and the mayor were elected has been carefully documented by W. Edmund Strutz, "Die Stadt- und Gerichtsverfassung Elberfelds 1610–1807," *Zeitschrift des Bergischen Geschichtsvereins*, 52 (1920–21), 40–46 and 81–93. See also Schell, "Beiträge zur Geschichte der reformierten Gemeinde in Elberfeld," pp. 212–14, and E. Muthmann, "Die Namen der Elberfelder Bürgermeister alter Ordnung und ihre Deutung," *Zeitschrift des Bergischen Geschichtsvereins*, 35 (1922), 105–10.
174. Otto Brügelmann, "Die Handelsbeziehungen des Elberfelder Kaufmanns Gerhard Werner Teschemacher—Aus einem Kontokorrent der Jahre 1700 bis 1737," *Jülich-Bergische Geschichtskalender*, 13, 1/2 (Summer 1936), 4 and 12. It should be noted that Teschemacher also carried on a retail business in textiles.
175. Dietz, *Die Wuppertaler Garnnahrung*, pp. 100–103.
176. *Ibid.*, p. 104. By the 1780s one merchant (Engelbert Eversen) supposedly made profits of 200 to 300 percent on his invested capital.
177. *Ibid.*, p. 106. Inasmuch as Teschemacher and the other leading merchants were *Verleger*, they provided the yarn for the bleachers and the ribbon weavers, respectively. See Brügelmann, "Handelsbeziehungen," pp. 5–6.
178. Dietz, *Die Wuppertaler Garnnahrung*, pp. 102–3 and 105–6.
179. *Ibid.*, pp. 106–7.
180. Wichelhaus, *Geschichte der Familie Wichelhaus*, pp. 47–48. In 1727 one of Barmen's important dealers bleached 242 cwt. of yarn. He, too, was a major benefactor in the area. See Adolf Werth, "Über die Höfe im Werth zu Barmen und den Ausbau derselben zu einem Ort," *Zeitschrift des Bergischen Geschichtsvereins*, 6 (1880), 140.
181. Wichelhaus, *Geschichte der Familie Wichelhaus*, pp. 47–48.
182. *Ibid.*
183. *Ibid.*, pp. 52–55.
184. *Ibid.*
185. H. J. Habakkuk, "The English Land Market in the Eighteenth Century," in *Britain and the Netherlands*, ed. J. S. Bromley and F. H. Kossman (London: Chatto and Windus, 1960), pp. 154–73, esp. 168ff.
186. Macco, *Geschichte der Familie Wuppermann*, pp. 30 and 33.
187. Bredt, *Geschichte der Familie Bredt*, pp. 61–63, and John Viktor Bredt, *Geschichte der Familie Siebel* (Marburg: John Hamel, 1937), pp. 169–71, for a pen portrait of the merchant-bleacher and philanthropist Peter Eversen.
188. Bredt, *Geschichte der Familie Bredt*, pp. 23–24.
189. Wichelhaus, *Geschichte der Familie Wichelhaus*, pp. 54–55.
190. Bredt, *Geschichte der Familie Bredt*, p. 24, and Muthmann, "Das Elberfelder Einwohnerbuch," p. 109. See also the comments of the chronicler Merke regarding girls' finishing schools, in F. Kerst, *Aus der alten Wuppertaler Chronik*, pp. 42–44.

191. This particular impact on Berg architecture as reflected in the houses of the leading merchants has been emphasized by O. Schell, "Einige Beiträge zur historischen Entwicklung des bergischen Hauses," *Zeitschrift des Bergischen Geschichtsvereins*, 38 (1905), 330.

192. Bredt, *Geschichte der Familie Bredt*, p. 24.

193. *Ibid.*, pp. 62–63; and Karl Lohmeier, "Die Barmer Familie Keuchen und ihr Grundbesitz im 18. Jahrhundert," *Zeitschrift des Bergischen Geschichtsvereins*, 44 (1911), 114.

194. For comments regarding the environment that led to this revivalism, see Dietz, *Die Wuppertaler Garnnahrung*, p. 109.

195. The possible relationship between industrial work and a religious dissent was raised by Friedrich Christop Müller, *Chorographie von Schwelm—Anfang und Versuch einer Topographie der Grafschaft Mark—1789*, ed. W. Crone (Schwelm: Schwelmer Tageblatt, 1922), p. 30.

196. Gerhart Werner, *Die Stillen in der Stadt—Eine Betrachtung über die Sekten, Freikirchen und Glaubensgemeinschaften Wuppertals* (Wuppertal: Hans Putty, 1964), pp. 17–19. Elias Eller was a ribbon weaver who, through hard work and prudent marriage to the rich widow of his former employer, rose to be an important ribbon manufacturer. He was undoubtedly a man of considerable talent and great energy. He also proved himself a shrewd politician. To his detractors he appeared as a fraudulent schemer and a lecher.

197. For some comments that the "children of Zion" are about to leave the thriving community of Elberfeld, see the report prepared in 1740 by the Prussian official Müntz: Victor Loewe, "Eine politisch-ökonomische Beschreibung des Herzogtums Berg aus dem Jahr 1740," *Beiträge zur Geschichte des Niederrheins—Jahrbuch des Düsseldorfer Geschichtsvereins*, 15 (1900), 171.

198. Wülfrath, *Bänder aus Ronsdorf*, pp. 18–19, and Bredt, *Die Lohnindustrie*, pp. 60–61.

199. Dietz, *Die Wuppertaler Garnnahrung*, p. 113. The use of cotton within the linen trade gave this manufacture a powerful impetus. According to Dietz, raw cotton was initially brought into the Wupper valley as part of the import trade in colonial products. This local pattern would help corroborate the suggestive hypothesis advanced by Eric Hobsbawm that "the cotton industry was launched, like a glider, by the pull of the colonial trade to which it was attached" (*The Age of Revolution: Europe 1789–1848* [London: Weidenfeld and Nicolson, 1962], pp. 33–34).

200. Bredt, *Die Lohnindustrie*, p. 48.

201. Otto Schell, *Geschichte der Stadt Elberfeld* (Elberfeld: Baederksche Buch- und Kunsthandlung und Buchdruckerei, 1900), pp. 238ff.

202. Karl Spannagel, "Die Gründung der Leinenweberzunft in Elberfeld und Barmen im Oktober 1738," *Zeitschrift des Bergischen Geschichtsvereins*, 30 (1894), 188.

203. Dietz, *Die Wuppertaler Gannahrung*, p. 114.

204. Spannagel, "Die Gründung der Leinenweberzunft," p. 196.

204. *Ibid.*, p. 186.

206. Bredt, *Die Lohnindustrie*, p. 51.

207. *Ibid.* In the Mark there were already 651 weavers, plying 279 looms, who were exclusively engaged in working for Berg merchant-manufacturers. Also see Schell, *Geschichte der Stadt Elberfeld*, p. 240.

208. Dietz, *Die Wuppertaler Garnnahrung*, p. 113.

209. Alphon Thun, *Die Industrie am Niederrhein und ihre Arbeiter (Staats- und*

Sozialwissenschaftliche Forschungen), book 2 part 2, section 3 (Leipzig: Duncker and Humblot, 1879), pp. 184–87.

210. Bredt, *Die Lohnindustrie*, p. 52. Journeymen received only half of the piece-rate paid by *Verleger*; the rest was pocketed by the master as the “wages of supervision.”

211. Thun, *Die Industrie am Niederrhein und ihre Arbeiter*, book 2, part 2, section 3, pp. 182–83.

212. *Ibid.*

213. *Ibid.* and Spannagel, “Die Gründung der Leinenweberzunft,” pp. 192ff.

214. Thun, *Die Industrie am Niederrhein und ihre Arbeiter*, book 2, part 2, section 3, pp. 171–72. Frederick the Great granted to these bleachers exemption from military service and premiums in support of their efforts. Also see Bredt, *Die Lohnindustrie*, p. 30.

215. Thun, *Die Industrie am Niederrhein und ihre Arbeiter*, book 2, part 2, section 3, p. 169, and Ringel, “Bedingungen der Wirtschaftsentwicklung,” p. 44.

216. By the 1750s, “Amt Barmen” had reached a population of 4,500; the community of Gemarke expanded spectacularly and already extended into several adjacent hamlets. Other localities that were part of Barmen also enjoyed respectable growth rates; notably Wichlinghausen, Rittershausen, and Heckinghausen. See Langewiesche, *Beschreibung und Geschichte*, pp. 231–32.

217. For the ups and downs of the European economy during the eighteenth century from the vantage point of the United Kingdom, see the well-known study by T. S. Ashton, *Economic Fluctuations in England 1700–1800* (Oxford: Clarendon Press, 1959), esp. chap. 6, Conclusions.

218. At the time France was the principal customer for bleached yarn and for the various types of ribbons. See Huthsteiner and Rocholl, *Barmen in historischer, topographischer und statistischer Beziehung*, p. 73.

219. Langewiesche, *Beschreibung und Geschichte*, p. 274, and Huthsteiner and Rocholl, *Barmen in historischer, topographischer und statistischer Beziehung*, p. 74.

220. Langewiesche, *Beschreibung und Geschichte*, p. 274, and Huthsteiner and Rocholl, *Barmen in historischer, topographischer und statistischer Beziehung*, p. 74.

221. This expansion coincides with the beginning of the rather happy reign of Carl Theodor. Industrial growth went hand in hand with increased diversification of manufacturing output. See Langewiesche, *Beschreibung und Geschichte*, p. 130.

222. *Ibid.*, p. 274, and Bredt, *Die Lohnindustrie*, p. 59. Because of their far-flung business connections, the Wupper valley merchants were in an excellent position not only to become acquainted with the various new manufacturing ventures being practiced in the Western world (notably in France and Holland), but also to assess the economic feasibility of these activities. Besides, the twin cities’ dealers had the necessary capital to enable them to assume the role of local innovators.

223. Thun, *Die Industrie am Niederrhein und ihre Arbeiter*, book 2, part 2, section 3, p. 170.

224. Kurzrock, *200 Jahre von der Heydt-Kersten Söhne*, pp. 16–17.

225. *Ibid.*, pp. 10–12. For “an interpretation of banking as originating in the commerce of notes and drafts rather than in loans and deposits,” see George V. Taylor, *Types of Capitalism in Eighteenth-Century France*, p. 486, n. 2.

226. Langewiesche, *Beschreibung und Geschichte*, p. 239, and Strutz, “Bergische Wirtschaftsgeschichte,” p. 366, emphasize the beginning of a new era.

227. Huthsteiner and Rocholl, *Barmen in historischer, topographischer, und statistischer Beziehung*, p. 73.

228. Strutz, “Bergische Wirtschaftsgeschichte,” pp. 366–67.

229. Langewiesche, *Beschreibung und Geschichte*, p. 269, and Huthsteiner and Rocholl, *Barmen in historischer, topographischer und statistischer Beziehung*, p. 73. See also Kerst, *Aus der Alten Wuppertaler Chronik*, p. 42.

230. Isenburg, "Untersuchungen über die Entwicklung der bergischen Wollenindustrie," p. 15, and H. Harless "Aus Hückeswagens Vorzeit," *Zeitschrift des Bergischen Geschichtsvereins*, 25 (1889), 87.

231. Ringel, "Bedingungen der Wirtschaftsentwicklung," p. 48.

232. Dietz, *Die Wuppertaler Garnnahrung*, p. 128, refers specifically to Barmen's continued specialization in "small wares," whereas Elberfeld came to concentrate on the manufacture of fabrics.

233. Strutz, "Bergische Wirtschaftsgeschichte," p. 366, emphasizes that innovations in manufacturing were primarily carried on by newcomers.

234. As to pressure regarding the road from Barmen to Elberfeld, see Sonderland, *Die Geschichte von Barmen im Wuppertale*, p. 128.

235. Especially Barmen still appeared like an overgrown village. See Dietz, *Die Wuppertaler Garnnahrung*, p. 128.

236. Werth, "Über die Höfe im Werth," p. 142.

237. Whereas until then the annual rent accruing to the state from the lease of the Dörnerhof amounted to 39 talers, Alhaus immediately realized 10,182 talers in letting these lots on hereditary leases. Besides, from then on, these hereditary tenants paid in addition an annual quit rent of 749 talers. For details regarding the subdivision of the Dörnerhof, see Sonderland, *Die Geschichte von Barmen in Wuppertale*, pp. 97–98, and above all Bredt, "Studien zur Rechtsgeschichte von Barmen," pp. 162–68.

238. For an evaluation of Johann Carl Friedrich Alhaus, see the comment in Sonderland, *Die Geschichte von Barmen in Wuppertale*, p. 94, n., and Knapp, *Geschichte, Statistik und Topographie*, pp. 181–82.

239. In his efforts Alhaus appears to have enjoyed the support of some leading merchants. For some contemporary commentaries regarding the abysmal conditions of this particular road and the difficulties encountered by those trying to overcome the objections of the men who did not care about the improvements, see Lohmeier, "Die Barmer Familie Keuchen und ihr Grundbesitz im 18. Jahrhundert," pp. 110–11.

240. Sonderland, *Die Geschichte von Barmen in Wuppertale*, pp. 94–95.

241. Karl Spannagel, "Barmen im siebenjährigen Kriege—Eine Beckmannsche Chronik," *Zeitschrift des Bergischen Geschichtsvereins*, 26 (1890), 99–100, and Sonderland, *Die Geschichte von Barmen in Wuppertale*, p. 94.

242. It should be remembered that Alhaus sided with the linen weavers when they tried to improve their bargaining position vis-à-vis their employers. For a critical stance regarding Alhaus, see Adolf Werth, "Die Verhaftung des lutherischen Pastors Spitzbarth durch Richter Alhaus in Barmen," *Monatsschrift des Bergischen Geschichtsvereins*, 7/5 (May 1900), 98–99. Also see Adolf Werth, ed., "Abgezwungene Bescherung der Kommerzianten und Fabricanten des Amts Barmen wider Richter Alhaus Bedrucker und Verfolger—6 März 1759," *Monatsschrift des Bergischen Geschichtsvereins*, 7/7 (July 1900), 143–44.

243. Sonderland, *Die Geschichte von Barmen im Wuppertale*, pp. 95–96.

244. *Ibid.*, p. 98.

245. The Andreä brothers, for example, provided houses for their workmen, particularly for those whom they recruited into Mülheim a. Rhein. See Franz Theodor Cramer, "Gewerbe, Handel und Verkehrswesen der Freiheit Mülheim a. Rh. im 18. Jahrhundert," p. 85, n. 3, *Beiträge zur Geschichte des Niederrheins*, 22 (1909).

246. Most of the histories of these entrepreneurial families are replete with stories

about the good deeds rendered by successive generations of the particular clan. The thrust of these chronicles is probably correct, but a caveat is in order. Because most of these histories were written by descendants, accounts regarding the respective ancestor's purity of motives and magnitude of charitable activities must be taken with a grain of salt. To quote Dr. Johnson, in the composition of "lapidary inscriptions, a man is not under oath."

For example, the father of the aforementioned brothers Wichelhaus, Peter Wichelhaus, donated one lot on his property in 1710 for the building of a new church. J.V. Bredt considers that supposed act of charity a "masterstroke. . . . In so doing he geared the extension of *Gemarkte* into his property and thus his speculative ventures reaped a very rich harvest" ("Studien zur Rechtgeschichte von Barmen," p. 161).

247. Langewiesche, *Beschreibung und Geschichte*, pp. 232 and 242–43.

248. Sonderland, *Die Geschichte von Barmen im Wuppertale*, pp. 90–91, 93, and 98.

249. For some comments on the boom, see Wülfrath, *Bänder aus Ronsdorf*, pp. 20–21.

250. Kersten, *Aus der Alten Wuppertaler Chronik*, pp. 61–65, and Macco, *Geschichte der Familie Wuppermann*, pp. 63–64. According to Macco, even as distinguished a merchant as Hildebrand Wuppermann still walked to the Frankfurt fair during the 1750s.

251. Dietz, *Frankfurter Handelsgeschichte*, I. Tables on pp. 96–97.

252. Most accounts of the Seven Years' War in the Wupper valley derive from Beckmann's diary. See Spannagel, "Barmen im siebenjährigen Kriege," pp. 130ff. Also see Sonderland, *Geschichte von Barmen im Wuppertale*, pp. 99–100. For some of the experiences of the hostages in their captivity, see Bredt, *Geschichte der Familie Bredt*, pp. 64–65. Two members of the Bredt family were among them.

253. For a contemporary account as to how the Wupper valley inhabitants handled the French troops that were to stay in their midst, see Kersten, *Aus der Alten Wuppertaler Chronik*, pp. 66–67.

254. *Ibid.*

255. This has been emphasized by Lohmeier, "Die Barmer Familie Keuchen und ihr Grundbesitz im 18. Jahrhundert," p. 113.

256. See Kuske, "Gewerbe, Handel und Verkehr," in H. Aubin et al., *Geschichte des Rheinlandes von der ältesten Zeit bis zur Gegenwart* (Essen: G. Baedeker, 1922), II, p. 189.

257. On the postwar boom in the Wupper valley, see Langewiesche, *Geschichte und Beschreibung*, p. 240. For an account of the boom in Western Europe, see A. H. John, "War and the English Economy," *Economic History Review*, n.s., 7/3 (1955), esp. pp. 343–44.

258. Sonderland, *Die Geschichte von Barmen im Wuppertale*, pp. 101–2, and Langewiesche, *Geschichte und Beschreibung*, p. 270.

259. Strutz, "Bergische Wirtschaftsgeschichte," p. 373, emphasizes the expansion of the *Siamois* manufacture into Lüttringhausen and Hückeswagen. For Wermelskirchen, see Stein, *Die industrielle Entwicklung der Stadt Wermelskirchen*, p. 2.

260. See Sonderland, *Die Geschichte von Barmen im Wuppertale*, pp. 101–2, and Böhmer, *Geschichte der Stadt Schwelm*, pp. 117–18.

261. Langewiesche, *Beschreibung und Geschichte*, p. 270.

262. *Ibid.*, p. 271.

263. The interpretation of the statistical table (both in this as well as in the subse-

quent three paragraphs) follows closely Duncan Bythell in his effort to put into historical perspective the seemingly exaggerated figure as regards the number of handloom weavers in England in the 1830s. See D. Bythell, *The Handloom Weavers—A Study in the English Cotton Industry during the Industrial Revolution* (Cambridge: University Press, 1969), pp. 54–65.

264. See below.

265. For this period, the rural atmosphere of these ribbon and linen-cotton weavers had been emphasized in the case of neighboring Schwelm (Böhmer, *Geschichte der Stadt Schwelm*, pp. 118–19).

266. A somewhat similar development is to be observed in eighteenth-century Norwich. Paul Mantoux writes: "Yet Norwich, at the height of its prosperity, had at the most 30,000 to 40,000 inhabitants. How then is it possible to credit those witnesses who affirmed that the industry of Norwich provided occupation for 70,000 to 80,000 persons? It overflowed into the surrounding country" (*The Industrial Revolution in the Eighteenth Century—An Outline of the Beginnings of the Modern Factory System in England*, rev. ed.) (New York: Macmillan, 1927), p. 54.

267. W. Gebhard, ed., "Bericht des Hof-Kammerrats Friedrich Heinrich Jacobi über die Industrie der Herzogtümer Jülich und Berg aus den Jahren 1773 und 1774," *Zeitschrift des Bergischen Geschichtsvereins*, 18 (1882), 1–27.

268. W. Gebhard, ed., "Bericht des Hof-Kammerrats Friedrich Heinrich Jacobi," Appendix 4, pp. 30–33.

269. *Ibid.*, Appendix 5, pp. 34–35.

270. *Ibid.*, Appendix 3, pp. 26–29.

271. *Ibid.*, Appendix 6, p. 36.

272. *Ibid.*, pp. 30–32.

273. *Ibid.*

274. *Ibid.*, pp. 26–29.

275. *Ibid.*, Appendix 3, 4, 5, and 6.

276. Fritz Schulte, "Die wirtschaftlichen Ideen Friedrich Heinrich Jacobi," *Düsseldorfer Jahrbuch*, 48 (1956), 280–82.

277. See esp. Appendix 2 in Gebhard, "Bericht des Hof-Kammerrats Friedrich Heinrich Jacobi," where the considerably lower costs (especially labor costs) prevailing in the neighboring Mark are emphasized. Because of these lower production costs, the sale prices of the bleached yarn being offered by the Mark merchants is about 5 to 6 percent below the sales prices in Elberfeld. According to Thun, *Die Industrie am Niederrhein und ihre Arbeiter*, book 2, part 2, section 3, p. 172, the difference in labor costs between the Mark and the Wupper valley came to almost 50 percent.

278. However Bredt, *Die Lohnindustrie*, p. 32, suggests that the occasional protests about Mark competition on the part of the Barmen bleachers were exaggerated. It was not true that the Oberbarmen bleachgreens were bare. Rather "the Mark bleachers prospered not because of low wages but because the Berg bleachers were fully occupied." In fact, the Barmen bleachers were so busy that they themselves distributed yarn to be bleached for their own account in the Mark. It need hardly be emphasized that the absorption of as yet unutilized land located in the vicinity into the industrial orbit reflects a familiar pattern of economic progress.

279. This has been emphasized by Thun, *Die Industrie am Niederrhein und ihre Arbeiter*, book 2, part 2, section 3, p. 73. According to Thun, Barmen no longer considered the bleaching of yarn its staple industry.

280. Strutz, "Bergische Wirtschaftsgeschichte," p. 363, and Bredt, *Die Lohnindustrie*, pp. 31–32.

281. Ringel, "Bedingungen der Wirtschaftsentwicklung," p. 46.

282. Ibid. "Food prices are steadily on the rise . . . only 25 years ago one paid in Elberfeld 5.5 talers for 100 pounds of beef, now 8.5 to 9 talers; for one pound of butter, 5 Stbr., now 8 to 9 Stbr. . . and for a 12-pound loaf of rye bread 8 to 10 Stbr., and now even in good years 13 to 15 Stbr; during the last three years the loaf of bread reached 18 to 25 Stbr" (Gebhard, "Bericht des Hof-Kammerrats Friedrich Heinrich Jacobi," p. 13). Note: 1771, 1772, and 1773 were years of famine prices. Food imports from Jülich into the Berg area—into the twin cities and into Solingen—are also emphasized by Gülich, *Geschichtliche Darstellung des Handels*, II, p. 271.

283. Gebhard, "Bericht des Hof-Kammerrats Friedrich Heinrich Jacobi," p. 16.

284. Ibid., pp. 16–17.

285. Ibid., p. 14. See also Bredt, *Lohnindustrie*, p. 34, and Schumacher, *Untersuchung über die Entwicklung der bergischen Seidenindustrie*, pp. 12–13.

286. Gebhard, "Bericht des Hof-Kammerrats Friedrich Heinrich Jacobi," p. 17.

287. Ibid., pp. 17–18.

288. Langewiesche, *Beschreibung und Geschichte*, p. 272.

289. Ibid.

290. Ibid. The Swiss supposedly enjoyed lower wages and lower interest rates. The French benefited from lower raw material costs.

291. Caspar Engels imported three so-called Haarlem ribbon looms; see Ringel, "Bedingungen der Wirtschaftsentwicklung," p. 46. According to Gustav Mayer, *Friedrich Engels—Eine Biographie* (The Hague: Martinus Nijhoff, 1934), I, pp. 4–5, Johann Casper Engels is supposed to have started business as a yarn dealer with 25 talers. When he eventually became one of the community's largest entrepreneurs, he assisted his weavers in buying their homes and gardens.

292. Sonderland, *Die Geschichte von Barmen im Wuppertale*, p. 119, and Strutz, "Bergische Wirtschaftsgeschichte," p. 369.

293. Strutz, "Bergische Wirtschaftsgeschichte," p. 369. On the industrial expansion in neighboring Ronsdorf, see Wülfrath, *Bänder aus Ronsdorf*, p. 21.

294. To appreciate the sophistication of Wupper valley industry, one need only enumerate the wide assortment of goods offered by the Elberfeld firm of Leonhard Feldhoff. Among these items were ribbons made of wool, linen, silk, waste silk, and velvet, belts, cords, tapes, and braids, and cotton yarn, dyed and white.

295. "During August of this year 1771 the bread grain was in short supply and because of the rising waters there was tension among burghers and bakers. The price of rye was very high and already had been raised several times" (Kerst, *Aus der Alten Wuppertaler Chronik*, pp. 71–72 and 76–77).

296. For some of the difficulties caused by the sudden decline in exports, see Bredt, *Lohnindustrie*, p. 52.

297. "Considering the momentum of this expansion, these calamities . . . became bearable" (Langewiesche, *Geschichte und Beschreibung*, p. 241).

298. However, as J. Hashagen points out, the individual communities had to foot the bill of this construction program; see J. Hashagen, "Politische und Religionsgeschichte des Bergischen Landes," in J. Hashagen, ed., *Bergische Geschichte* (Remscheid-Lennep, 1958), p. 192.

299. Hashagen, "Politische und Religionsgeschichte," p. 203, and Langewiesche, *Geschichte und Beschreibung*, p. 241. A new stone bridge crossing the Wupper at Heckinghausen was put into operation in 1775.

300. Wilhelm Rees, "Kunst- und Kulturgeschichte," in Hashagen, *Bergische Geschichte*, p. 510.

301. E. F. Wiebeking, *Beiträge zur Kurpfälzischen Staatengeschichte vom Jahre 1742 bis 1792 vorzüglich in Rücksicht auf die Herzogtümer Jülich und Berg* (Heidelberg and Mannheim: Schwan and Götz, 1793), pp. 18–21.

302. Sonderland, *Die Geschichte von Barmen im Wuppertale*, p. 119.

303. Langewiesche, *Beschreibung und Geschichte*, pp. 74 and 273.

304. Wiebeking, *Beiträge zur Kurpfälzischen Staatengeschichte*, p. 1.

305. For this and the following figures, see the table produced by Wiebeking, *Beiträge zur Kurpfälzischen Staatengeschichte*, p. 5.

306. See *ibid.*, p. 21. Ringel, "Bedingungen der Wirtschaftsentwicklung," pp. 44, points to some discrepancies in the statistical information given by contemporaries with respect to yarn bleached in the area. The difficulty of accounting for yarn bleached in the Mark for Wupper valley dealers may be the source of these difficulties.

307. Wiebeking, *Beiträge zur Kurpfälzischen Staatengeschichte*, table, p. 5.

308. *Ibid.*

309. *Ibid.*, table, p. 19, and appendix E.

310. Böhmer, *Geschichte der Stadt Schwelm*, pp. 118–19. A *Garnnahrung* report of June 1783 complained about the rise of Schwelm's bleaching establishments. At the time the cost of bleaching a barrel of yarn in Schwelm came to 25 louis d'or. However, in Elberfeld, because of the higher price of coal and potash, it came to between 38 and 40 louis d'or (*Staatsarchiv Düsseldorf Jülich-Berg 2, 1803, "Barmen und Elberfeld—Zwistigkeit zwischen der Garnnahrung und der Linnweberzunft 1781—desgl. mit Fabrikanten zu Ronsdorf betr. des Garnprivilegs 1782–1783"*).

311. Langewiesche, *Beschreibung und Geschichte*, p. 245. Also, Bredt, *Geschichte der Familie Siebel*, p. 171, where one author is quoted as saying that the Brothers Eversen did not consider 300 percent profits on one transaction as "out of order." However, these inordinate profits must be viewed in their proper context. The risks involved in these transactions were considerable. More important, the production period was very long. In 1792 a Barmen merchant Johann Peter Schlickum tried to explain to the authorities the reasons for the lack of liquidity. It took supposedly about "three years for capital invested to turn over." The first year, according to Schlickum, involved the manufacture of the product, the second year the sale of it, and the third year the extension of credit, and final repayment. See *Staatsarchiv Düsseldorf, Jülich-Berg 2, 1805, "Acten zur Sache Ober- und Unterbarmer Garnmeister wider Johann Peter Schlickum . . . 1792."*

312. Macco, *Geschichte der Familie Wuppermann*, pp. 74–76, and Dietz, *Die Wuppertaler Garnnahrung*, pp. 120–26.

313. Dietz, *Die Wuppertaler Garnnahrung*, p. 125.

314. *Ibid.*, p. 126.

315. Wiebeking, *Beiträge zur Kurpfälzischen Staatengeschichte*, pp. 21–22.

316. Langewiesche, *Beschreibung und Geschichte*, pp. 243–44. Note especially the expansion and growth of the community of Wupperfeld. See also Knapp, *Geschichte, Statistik und Topographie*, pp. 187 and 197–98. In Wupperfeld alone, 40 houses were completed between May 1778 and the end of 1785. Also Sonderland, *Die Geschichte von Barmen im Wuppertale*, pp. 117–18 and 120–21.

317. Wichelhaus, *Geschichte der Familie Wichelhaus*, p. 156, where the chronicler Merken is quoted regarding the construction of those palatial mansions in the Vicarie and Hoffkamp, two streets in Elberfeld, particularly during the period 1767–87. Also see Bredt, "Studien zur Rechtsgeschichte von Barmen," p. 165, where it is noted that the year 1781 saw the completion of one of the most "magnificent rococo houses" in Barmen.

318. Johannes Schmidt, *Geographie und Geschichte des Herzogthums Berg, der Grafschaft Mark, des Ruhr Departments und des . . . Herzogthums Limberg . . .* (Crefeld: Abraham ter Meer, 1804), p. 13.

319. Wiebeking, *Beiträge zur Kurpfälzischen Staatsgeschichte*, p. 19.

320. Haacke, *Barmens Bevölkerung im XVII and XIII Jahrhundert*, pp. 28–33. Between 1698 and 1747 the annual growth rate was 1.65 percent. In the next fifty years, it may have been as high as 2.5 percent.

321. W. Köllmann, "The Population of Barmen Before and During the Period of Industrialization," in E. V. Glass and D. E. C. Eversley, eds., *Population in History*, (London: Edward Arnold, 1965), pp. 592–93.

322. Elberfeld's official statistics for 1797 claimed 10,026 inhabitants, according to W. Güthling, ed., "Eine wehrkundliche Beschreibung des Bergischen Landes," *Zeitschrift des Bergischen Geschichtsvereins*, 64 (1936–37), 114, n. 8.

323. F. C. Müller, *Chorographie von Schwelm—Anfang und Versuch einer Topographie*, pp. 13–14.

324. *Ibid.*, p. 14. This paragraph would support the demand-and-supply thesis regarding population growth advanced by Sydney Coontz, *Population Theories and Economic Interpretation* (London: Routledge and Kegan Paul, 1957).

325. Müller, *Chorographie von Schwelm*, p. 15.

326. *Ibid.*

327. *Ibid.*

328. Müller, *Chorographie von Schwelm*, p. 18. No less an expert than D. E. C. Eversley comments in connection with the population dynamics in the Midlands during the same period: "To put the matter cautiously, we can say that the more elastic the supply of houses in a given economy, the fewer the obstacles to marriage" ("A Survey of Population in an Area of Worcestershire from 1660 to 1850 on the Basis of Parish Registers," *Population in History*, eds. D. E. C. Eversley and D. V. Glass, p. 407).

329. Bredt, *Die Lohnindustrie*, p. 34. Regarding the cost of land, Müller writes: "To gain at least some impression as to what the high price of Wupper valley real estate really means, it may be as well to point out that in this particular year [1789], a mere bleachgreen was sold for 13,000 talers, a sum for which in other regions one would indeed be able to purchase a small [manorial] estate" Müller, *Chorographie von Schwelm*, p. 19).

330. Friedrich Otto Dilthey, *Die Geschichte der Niederrheinischen Baumwollindustrie* (Jena, 1908):

Ever since 1770 had the population in the Duchy of Berg, the industrious Wupper valley especially, been insufficient to satisfy locally all the orders given to the textile industry. Also, the wages here had risen to heights where they could no longer be absorbed by the local manufacture of coarse half-cottons (*Siamois*). It was therefore necessary to seek elsewhere cheap labor. This work force was found in the Gladbach area where the centuries of old linen manufacture had reared a particularly suitable population. As a consequence some of the Berg manufacturers began, at least in part, to transfer their weaving establishments. They quite often managed their branches from their home town with the aid of factors [pp. 3–5].

Also see Willy Fränken, *Die Entwicklung des Gewerbes in den Städten Mönchengladbach und Rheydt im 18. Jahrhundert—Schriften zur Rheinisch-Westfälischen Wirtschaftsgeschichte* (Cologne: Rheinisch-Westfälischen Wirtschaftsarchiv, 1969), XIX, pp. 32–33.

331. Schell, *Geschichte der Stadt Elberfeld*, pp. 251–52, and Schumacher, *Unter-*

suchung über die Entwicklung der bergischen Seidenindustrie, p. 19, report that during the last decades of the eighteenth century the few lace workers within the area boasted a weekly wage of seven to eight talers. At the same time, the silk weavers earned four to five talers per week, whereas the majority of journeymen weavers working on linen earned about three talers. According to Dietz, *Die Wuppertaler Garnnahrung*, p. 126, the bleacher's wage per cwt. of bleached yarn during the 1770s was seven talers in the Wupper valley, and in the Mark only five talers.

332. Konrad Frohn, "Ansichten der bergischen Industrie," *Niederrheinische Blätter*, 4 (Dortmund, 1803), 569–71. These remarks suggest quite unmistakably the influence of Adam Smith and his classic indictment of monopoly privilege for diverting the flow of capital from its natural ways, for raising the rate of profit and prices and, in the long run, for slowing down the rate of growth (A. Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, E. Cannan, ed., II [London, 1961], chap. 3, part 3, pp. 146–58). For a discussion of these issues, see Maurice Dobb's celebrated essay, "Imperialism," *Political Economy and Capitalism* (London: Rutledge and Kegan Paul, 1937), esp. pp. 223–26, and the admirable study by Donald Winch, *Classical Political Economy and the Colonies* (Cambridge: Harvard University Press, 1965), pp. 9–14.

333. Both Schmidt and Wiebeking stressed the importance of commercial freedom as having been decisive in the attainment of eighteenth-century industrial prosperity. E.F. Wiebeking, who appears to have been one of the early German converts to the teachings of Adam Smith, was particularly emphatic on that point: "The commercial freedom enjoyed here quietly and without public display by every manufacturer and merchant would be cause for much advertisement in many a foreign land. Here there are no inspections by excise officials and the like" (Wiebeking, *Beiträge zur Kurpfälzischen Staatengeschichte*, p. 21). The foreign land so unfavorably compared with the duchy of Berg was, of course, Prussia. And writing somewhat later, K. Frohn, "Ansichten der bergischen Industrie," was even more explicit in his praise of the laissez-faire economy:

As long as they were under one crown, the duchies of Jülich and Berg provide a classic example that the maintenance of a flourishing commerce requires neither a tariff nor government supervision. More important, these duchies offer proof that such a trade and tariffs, especially in small German principalities, are strictly incompatible. Cut off from the united Netherlands by provinces where a monarch tried to regulate the commerce of his states by way of a tariff scheme, the duchies of Jülich and Berg, fully enjoying freedom of trade, were able to attract into their midst industry which was no longer viable in the rich Netherlands and which bypassed the duchy of Cleve. They [the duchies of Jülich and Berg] were able to attract this industry without offering any advantages or inducements except cheap wages and the insouciance of their authorities. What makes this choice location even more remarkable was the willingness of the industry to forego the most important advantages it would expect in the Prussian provinces. Neither the same religion nor the production of indispensable raw materials sufficed to place this industry in the states of the great Frederick whose crown it could hope for strict supervision and protection and in whose vicinity, by contrast, it had to fear his oppression [pp. 535–36].

334. Hashagen, "Politische- und Religionsgeschichte des bergischen Landes," pp. 189–93.

335. Ringel, "Bedingungen der Wirtschaftsentwicklung," pp. 94–96.

336. Crecelius, "Beiträge zur Bergisch-Niederrheinischen Geschichte," pp. 129–30.

337. Th. Ilgen, "Die Landzölle im Herzogtum Berg," *Zeitschrift des Bergischen Geschichtsvereins*, 38 (1905), 268–76. Ilgen also shows that in view of the specificity of

most duties, the inflation of this period eroded even further their already limited effectiveness.

338. Crecelius, "Beiträge zur Bergisch-Niederrheinischen Geschichte," pp. 130–31, and Hashagen, "Politische- und Religionsgeschichte," p. 203.

339. Sidney Pollard, *The Genesis of Modern Management—A Study of the Industrial Revolution in Great Britain* (Cambridge: Harvard University Press, 1965), esp. pp. 197–208.

340. As regards the extent of urbanization in the valley, see Güthling, "Eine wehrkundliche Beschreibung des Bergischen Landes," pp. 132–34.

341. See especially Elly Mohrmann, "Studie zu den ersten organisatorischen Bestrebungen der Bourgeoisie in einigen Städten des Rheinlands," in E. Giersiepen and D. Lösche, eds., *Beiträge zur deutschen Wirtschafts- und Sozialgeschichte des 18. und 19. Jahrhunderts* (Berlin: Akademie-Verlag, 1962), p. 217.

342. These complaints about the pervasiveness of luxury were mentioned by Hashagen, "Politische und Religionsgeschichte," p. 191. For a censorious stance by a contemporary regarding the prevalence of luxury, which supposedly affected all classes in society, see Müller, *Chorographie von Schwelm*, pp. 19–20. Müller deplores these parvenu efforts to emulate the richest and most distinguished, but he also admits one redeeming feature of this development: "In this way, they [the parvenus] are forced to spend more on the education of their children if only because they want to make their descendants more genteel."

343. For an account of this organization, see D. A. von Carnap, "Die geschlossene Lesegesellschaft in Elberfeld," *Zeitschrift des Bergischen Geschichtsvereins*, 1 (1863), 54–55, and Eynern, *Die Unternehmungen der Familie von Rath*, pp. 200–202.

344. Carnap, "Die geschlossene Lesegesellschaft in Elberfeld," pp. 56–60.

345. *Ibid.*

346. *Ibid.*, p. 58.

347. *Ibid.*

348. *Ibid.*, p. 69.

349. A social historian—perhaps somewhat unfairly—cannot avoid this indivious comparison. For an account of this Midland group, see the excellent study by Robert E. Schofield, *The Lunar Society of Birmingham—A Social History of Provincial Science and Industry in Eighteenth Century England* (Oxford: Clarendon Press, 1963).

350. Hermann M. Flasdieck, *Goethe in Elberfeld—Juli 1774* (Elberfeld: A. Martini and Grüttertien, 1929), pp. 43 and 47–48.

351. For some comments regarding the influences of the Enlightenment in the Wupper valley during the second half of the eighteenth century, see W. Rees, "Kunst und Kulturgeschichte," pp. 510–15. According to Rees, the impact of Rationalism at that time was considerable.

352. As regards opposition to the Lesegesellschaft and to Düsseldorf's masonic fraternities by church authorities, see Rees, "Kunst und Kulturgeschichte," pp. 520–21, and Carnap, "Die geschlossene Lesegesellschaft in Elberfeld," pp. 80–82.

353. Rees, "Kunst und Kulturgeschichte," pp. 520–21.

354. See esp. Hashagen, "Politische- und Religionsgeschichte," p. 199. Also, Ringel, "Bedingungen der Wirtschaftsentwicklung," p. 106, makes a telling point that these widely traveled merchants presumably imparted their impressions about the big world to their immediate family only, and not to the town at large. How far this was in response to the prevailing censorship and how far part of entrepreneurial strategy to keep from the *menu peuple* new ideas, remains a moot point.

355. In the England of George III, the lively debates among rulers and ruled

concerning public issues "testifying to the wide dispersion of interest in questions before the country" have been emphasized by Wesley C. Mitchell as among the important factors responsible for the environment conducive to the emergence of classic political economy. See W. C. Mitchell, *Types of Economic Theory—From Mercantilism to Institutionalism*, J. Dorfman, ed. (New York: Augustus M. Kelley, 1967), I, p. 60.

356. Dietz, *Die Wuppertaler Garnnahrung*, pp. 128ff.

357. *Ibid.*, pp. 30–31.

358. That the *Garnnahrung* controlled all textile activities in the Wupper valley is emphasized by Langewiesche, *Beschreibung und Geschichte*, p. 272.

359. Dietz, *Die Wuppertaler Garnnahrung*, pp. 129–31.

360. *Ibid.*, pp. 131–32.

361. *Ibid.*, pp. 129–31. At one time, Barmen's members wanted to refuse payment of their contributions to the *Garnnahrung* treasury.

362. *Ibid.*, p. 130.

363. The aggressiveness of the larger entrepreneurs in trying to mold a laissez-faire economy is well brought out by E. Mohrmann, "Studie zu den ersten organisatorische Bestrebungen der Bourgeoisie in einigen Städten des Rheinlandes," esp. pp. 248–49.

364. See *Staatsarchiv Düsseldorf—Jülich-Berg*, 2 1805/2: "Acten zur Sache Ober und Unter- Barmen Barmeister wider J. P. Schlickum gemeinschaftliche Absichten," and *Jülich-Berg*, 2 1805/3, II, "Acten zur Sache Ober und- Unter Barmen Garnmeister wider J. P. Schlickum. . . ."

365. As regards Schlickum, see the very flattering account by Walther von Eynern, "Nachrichten aus meinem Leben," *Zeitschrift des Bergischen Geschichtsvereins*, 58 (1929), 45.

366. See the trustees' report, "Actenmässige Ausführungen der Gründen . . ." (probably August 1792) in *Jülich-Berg*, 2 1805/3, II, pp. 49–60.

367. "Actenmässige Ausführungen der Gründen . . .": "Indeed, for some time now the Elberfeld and Barmen *Garnnahrung* members rarely agree on issues of mutual interest. Nor were they to be of one mind on this matter. The reason for the attitude of the Elberfeld residents was perhaps due to the fact that Schlickum is a relative of some of their leading members and especially a next of kin of the *Garnmeister* in office at the time. Or perhaps it was due to the fact that few of the Elberfeld members deal in ribbons and that hardly anyone among them has his main outlet in France" (p. 51).

368. *Ibid.*, p. 53.

369. *Staatsarchiv Düsseldorf—Jülich-Berg* 1805/3, I, "Acten zur Sache Ober- und Unter-Barmen Garnmeister wider Johann Peter Schlickum."

370. *Ibid.*, 1805/2, pp. 24–34, and *Jülich-Berg* 2, 1805/3, I.

371. *Ibid.*, 1805/2, and *Jülich-Berg* 2, 1805/3, I.

372. *Staatsarchiv Düsseldorf, Jülich-Berg* 2, 1805/2, pp. 25–34 (Schlickum's defense), and "Knapp's Report," *Jülich-Berg*, 1805/3, I, pp. 7ff.

373. *Staatsarchiv Düsseldorf, Jülich-Berg* 2, 1805/2, p. 33. Schlickum's Report.

374. Also E. Strutz, *175 Jahre Abr. Frowein junior*, pp. 27–30.

375. *Staatsarchiv Düsseldorf, Jülich-Berg* 1805/3, II: "Actenmässige Ausführung der Gründen . . .," pp. 49–60, esp. p. 57 where the Barmen trustees also ask "that the Privy Councilors Freiherrn von Kyllmann and Windscheid be entrusted with the reexamination of the present investigation." This is a printed memorandum.

376. *Ibid.*, 1805/1, "Acten zur Sache Ober- und Unter-Barmen Garnmeister," pp. 92–95.

377. Ibid., 1825/2 "Acten zur Sache . . . wider Johann Peter Schlickum."

378. Mohrmann, "Studien zu den ersten . . . Bestrebungen" pp. 248–49.

379. Ibid.

380. Regarding opposition by the *Garnnahrung* and the authorities to the introduction of machinery, see Frohn, "Ansichten der Bergischen Industrie," p. 569, n., and Friedrich Seitz, "Reisebeschreibungen über das Bergische Land aus dem Ende des achtzehnten Jahrhunderts," *Zeitschrift des Bergischen Geschichtsvereins*, 40 (1907), 49.

381. Franz Josef Gemmert, *Die Entwicklung der ältesten kontinentalen Spinnerei (Eine betriebs-wirtschaftliche-historische Untersuchung)* (Leipzig: M. Jänecke, 1927), pp. 6–8, and W. Dietz, *Die Wuppertaler Garnnahrung*, pp. 115–20.

382. Gemmert, *Die Entwicklung der ältesten kontinentalen Spinnerei*, pp. 10–13.

383. Wilhelm Treue, "Eine preussische 'technologische' Reise in die besetzten Gebiete im Jahr 1814," *Vierteljahrschrift für Social- und Wirtschaftsgeschichte*, 28/1 (1935), 27, and W. O. Henderson, *Britain and Industrial Europe 1750–1850—Studies in British Influence in the Industrial Revolution in Western Europe* (Liverpool: University Press, 1954), p. 142.

384. Gemmert, *Die Entwicklung der ältesten kontinentalen Spinnerei*, p. 10.

385. Dietz, *Die Wuppertaler Garnnahrung*, pp. 117–18.

386. Gemmert, *Die Entwicklung der ältesten Kontinentalen Spinnerei*, pp. 59–60.

387. Ibid., pp. 79–80.

388. Ibid.

389. Dietz, *Die Wuppertaler Garnnahrung*, pp. 114–16.

390. Thun, *Die Industrie am Niederrhein und ihre Arbeiter*, book 2, part 2, section 3, p. 184.

391. Ibid.

392. Ibid., p. 183.

393. *Staatsarchiv Düsseldorf Jülich-Berg 2, 1803*, "Barmen-Elberfeld Zwistigkeiten zwischen der Garnnahrung und der Linnweberzunft," p. 186.

394. Ibid., p. 34b, and Thun, *Die Industrie am Niederrhein und ihre Arbeiter*, book 2, part 2, section 3, p. 184.

395. Ibid.

396. See report by local guild masters, Elberfeld, dated August 1, 1781: *Staatsarchiv Düsseldorf, Jülich-Berg 2 1803*, "Barmen-Elberfeld Zwistigkeiten zwischen der Garnnahrung und der Linnweberzunft," pp. 19–20, and the Pro Memoria of August 1781 submitted by the *Garnnahrung*, pp. 4–8.

397. Ibid., p. 193. See also the complaint about the weavers by Commisarius Freiherr von Schlieper, pp. 112–13.

398. Ibid., pp. 157 and 197.

399. Thun, *Die Industrie am Niederrhein und ihre Arbeiter*, book 2, part 2, section 3, p. 185.

400. Frohn, "Ansichten der Bergischen Industrie," p. 567.

401. Thun, *Die Industrie am Niederrhein und ihre Arbeiter*, book 2, part 2, section 3, p. 185. According to one account, in the first six months of 1781 wages were reduced by 0.5 taler. See *Staatsarchiv Düsseldorf, Jülich-Berg 1803*, "Barmen-Elberfeld Zwistigkeiten," pp. 19–20.

402. Ibid.; "Pro Memoria der Leinenweber," August 1781, pp. 1–2.

403. *Staatsarchiv Düsseldorf, Jülich-Berg 1803*, "Barmen-Elberfeld Zwistigkeiten," pp. 1–2.

404. Ibid., pp. 58 and 186.

405. Quoted by Mohrmann, "Die ersten organisatorischen Bestrebungen," p. 217.
406. *Staatsarchiv Düsseldorf, Jülich-Berg 1803*, "Barmen-Elberfeld Zwistigkeiten," pp. 4, 496, and 163–65.
407. *Ibid.*, pp. 44 and p. 205.
408. *Ibid.*, p. 165.
409. *Ibid.*, p. 28b.
410. See Mohrmann, "Die ersten organisatorischen Bestrebungen," pp. 210–11, and *Staatsarchiv Düsseldorf, Jülich-Berg 1803*, "Barmen-Elberfeld Zwistigkeiten," p. 20.
411. Dietz, *Die Wuppertaler Garnnahrung*, p. 115.
412. *Staatsarchiv Düsseldorf, Jülich-Berg 1803*, "Barmen-Elberfeld Zwistigkeiten," pp. 181–82.
413. Thun, *Die Industrie am Niederrhein und ihre Arbeiter*, book 2, part 2, section 3, pp. 182–83.
414. *Ibid.*
415. W. Crecelius (W. Harless, ed.), "Beiträge zur Bergisch-Niederrheinischen Geschichte," p. 205. See also Frohn, "Ansichten der Bergischen Industrie," p. 567.
416. By that time a silk weaver was earning four to five talers per week; a master ribbon weaver who owned his loom, seven to eight talers. See Seitz, "Reisebeschreibungen über das Bergische Land," p. 49. In the Brügelmann plant at Cromford, the daily wage of an operative during the 1785–90 period was about twenty Stüber (60 Stüber = 1 taler; the weekly pay of a master about 5.5 talers. See Gemmert, *Die Entwicklung der ältesten Kontinentalen Spinnerei*, p. 122.

CHAPTER 4

1. Alex Hermandung, *Das Zunftwesen der Stadt Aachen bis zum Jahre 1681* (Aachen: De La Ruelle, 1908), pp. 7–8.
2. That an old tradition-bound trade like the woolen industry is slow in adjusting to progress has been emphasized by Herbert Heaton, *The Yorkshire Woolen and Worsted Industries—From the Earliest Times up to the Industrial Revolution* (Oxford Historical and Literary Studies), X (Oxford: Clarendon Press, 1920), p. 323.
3. Joseph Dahmen, *Das Aachener Tuchgewerbe bis zum Ende des 19. Jahrhunderts—Ein Beitrag zur Wirtschaftsgeschichte der Stadt Aachen* (Berlin, Leipzig, and Vienna: Leopold Weiss, 1930), pp. 73–81.
4. Maria Hammer, *Geographische Betrachtung des Wollgewerbes am Rande des Hohen Venns—Aachener Beiträge zur Heimatkunde* ed. Max Eckert), vol. 19 (Aachen: J. A. Mayersche Buchhandlung, 1937), pp. 9–10.
5. Herbert Kley, *Geschichte und Verfassung des Aachener Wollenambachts wie überhaupt der Tuchindustrie der Reichsstadt Aachen* (Siegburg: Fried. Kratz, 1916), p. 15, and H. Amann, "Deutschland und die Tuchindustrie Nordwesteuropas im Mittelbar," *Hansische Geschichtsblätter*, 72 (1954).
6. Kley, *Aachener Wollenambacht*, p. 32.
7. Anton Seidl, "Die Aachener Wollenindustrie im Rahmen der Rheinischen bis zur Gewerbefreiheit, 1798" (diss. Cologne University, 1923), pp. 4–5, and Kley, *Aachener Wollenambacht*, pp. 188–91.
8. Kley, *Aachener Wollenambacht*, pp. 16–23.
9. Seidl, "Die Aachener Wollenindustrie," p. 24.
10. Hermandung, *Das Zunftwesen*, p. 9.

11. Gustav von Gülich, *Geschichtliche Darstellung des Handels, der Gewerbe und des Ackerbaus der bedeutendsten Staaten unsrer Zeit* (Jena: Friedrich Fromann, 1930), II, pp. 182–83, and Alphons Thun, *Die Industrie am Niederrhein und ihre Arbeiter—in Staats- und Socialwissenschaftlichen Forschungen* (Leipzig: Duncker and Humblot, 1879), I, pp. 9–18.
12. In the preindustrial world, the transfer of institutions was more easily effected if only because the degree of social and economic inequality between differing regions never reached the proportions known to the nineteenth and, above all, the twentieth century.
13. Hermandung, *Das Zunftwesen*, pp. 27–29, and Kley, *Aachener Wollenambacht*, pp. 55ff.
14. Hermandung, *Das Zunftwesen*, p. 21.
15. Seidl, “Die Aachener Wollenindustrie,” pp. 35–41, and Kley, *Aachener Wollenambacht*, pp. 128–29.
16. Hermandung, *Das Zunftwesen*, pp. 61–62.
17. *Ibid.*, and Friedrich Haagen, *Geschichte Aachens von seinen Anfängen bis zur neuesten Zeit* (Aachen: P. Kaarzers Buchhandlung, 1874), II, pp. 587–88.
18. Kley, *Aachener Wollenambacht*, pp. 211–16.
19. *Ibid.*, pp. 36–39.
20. Hermandung, *Das Zunftwesen*, pp. 29–31.
21. Haagen, *Geschichte Aachens*, II, pp. 583–86 and 593–94.
22. Haagen, *Geschichte Aachens*, II, pp. 597–604, and Otto R. Redlich, “Urkundliche Beiträge zur Geschichte Aachens im 15. Jahrhundert,” *Zeitschrift des Aachener Geschichtsvereins*, 19, part 2 (1897), 24–25 and 48–49.
23. Hermann Arioivist von Fürth, ed., *Beiträge und Material zur Geschichte der Aachener Patrizier-Familien* (Aachen: Cremersche Buchhandlung, 1890), I, pp. 97–101, and Haagen, *Geschichte Aachens*, II, pp. 67–69.
24. Kley, *Aachener Wollenambacht*, p. 42.
25. Haagen, *Geschichte aachens*, 1, p. 69.
26. Hermandung, *Das Zunftwesen*, pp. 35–38.
27. Dahman, *Aachener Tuchgewerbe*, pp. 50ff.
28. Seidl, “Die Aachener Wollenindustrie,” p. 23. For a discussion of English woolen cloth exports, see Barry E. Supple, *Commercial Crisis and Change in England 1600–1642* (Cambridge: University Press, 1959), pp. 23–32 and Appendix A, pp. 258–59, and F. J. Fisher, “Commercial Trends and Policy in Sixteenth Century England,” *Economic History Review*, 10 (1940), esp. pp. 96–97.
29. B. Hildebrand, “Zur Geschichte der deutschen Wollenindustrie,” *Jahrbücher für Nationalökonomie und Statistik*, 6 (1866), 231–32 and 7 (1867), 145.
30. On the rise of the English woolen trades, see Heaton, *Yorkshire Woolen Industries*, pp. 68–88, and K. G. Ponting, *A History of the West of England Cloth Industry* (London: Macdonald and Co., 1957), chap. 2 and 3.
31. Seidl, “Die Aachener Wollenindustrie,” p. 38.
32. For a general survey of the fight waged by corporations, merchant capitalists, and other entrenched interest groups wed to a medieval order against nascent capitalism, see Maurice Dobb’s chapter “The Rise of Industrial Capital” in his *Studies in the Development of Capitalism* (London: George Routledge and Sons, 1946). The specific inflexibility of the “older” textile centers in the face of a changing world economy has been analyzed by Eric Hobsbawm in his important article, “The General Crisis of the European Economy in the Seventeenth Century,” *Past and Present*, 5 (May 1954), 41–

42. Also see Carlo M. Cipolla, "The Decline of Italy: The Case of a Fully Matured Economy," *Economic History Review*, 2nd series, 5/2 (1952), 178–87.
33. Henri Pirene, *Histoire de Belgique* (Brussels: Henri Lamertin, 1907), III, pp. 13–14, 215–18, and 419–23. Also see Dobb, *Studies*, p. 158.
34. Hermandung, *Das Zunftwesen*, pp. 34–35.
35. Kley, *Aachener Wollenambacht*, p. 45.
36. H. F. Macco, *Die reformatorischen Bewegungen während des 16. Jahrhunderts in der Reichsstadt Aachen* (Leipzig: Friedrich Fleischer, 1900), p. 7.
37. J. Fey, *Zur Geschichte Aachens im 16. Jahrhundert* (Aachen: Ignaz Schweitzer, 1905), pp. 17ff. and Reiner von Kempen, "Die Streitigkeiten zwischen dem Kurfürsten von der Pfalz als Herzog von Jülich und der Reichsstadt Aachen wegen der Vogtmeierei im 18. Jahrhundert," *Zeitschrift des Aachener Geschichtsvereins*, 34 (1912), 239.
38. Herbert von Asten, "Die religiöse Spaltung in der Reichsstadt Aachen und ihr Einfluss auf die industrielle Entwicklung in der Umgebung," *Zeitschrift des Aachener Geschichtsvereins*, 68 (1956), 78.
39. *Ibid.*, pp. 91–82,
40. According to some estimates, Aachen's total population in 1580 was about 25,000. The Calvinists numbered about 10,000 and the Lutherans from 1,000 to 1,500. see Asten, "Die religiöse Spaltung," pp. 92–96.
41. J. Hashagen, *Der Rheinische Protestantismus und die Entwicklung der Rheinischen Kultur* (Essen: G. D. Baedeker, 1924), p. 126, and Asten, "Die Religiöse Spaltung," pp. 92–94.
42. H. F. Macco, *Reformatorische Bewegungen*, pp. 34–39.
43. Asten, "Die religiöse Spaltung," pp. 92–94.
44. R. v. Kempen, "Aachener Vogtmeierei," pp. 239–41.
45. For an account of these intraurban feuds, see Hashagen, *Der Rheinische Protestantismus*, p. 126, and Jos. Hansen, "Die Lutherische Gemeinde zu Aachen im Laufe des 16. Jahrhunderts," *Beiträge zur Geschichte Aachens* (1886), pp. 38–39 and 42–49.
46. Alloys Wessling, *Die konfessionellen Unruhen in der Reichsstadt Aachen zu Beginn des 17. Jahrhunderts und ihre Unterdrückung durch den Kaiser und die Spanier im Jahre 1614* (Strassburg: M. DuMont Schauberg, 1905), pp. 2–3.
47. Wessling, *Die konfessionellen Unruhen*, pp. 2–3. For some of the difficulties facing the Aachen economy (including the famine of 1587), see the abbreviated translation into French by Henry Schmalhausen of Noppius's history. *Chronique de la ville d'Aix-la-Chapelle, depuis son origine jusqu'en 1630* (Aachen: J. J. Bovard, 1828), pp. 132–33.
48. Asten, "Die religiöse Spaltung," p. 109.
49. Wessling, *Die Konfessionellen Unruhen*, pp. 8–11 and 19.
50. *Ibid.*, pp. 16–18.
51. Asten, "Die religiöse Spaltung," p. 109.
52. Haagen, *Geschichte Aachens*, II, pp. 207–8.
53. For an account of the coup d'état, see Haagen, *Geschichte Aachens*, II, pp. 214–17.
54. Wessling, *Die Konfessionellen Unruhen*, pp. 35ff.
55. *Ibid.*, pp. 809–10.
56. The Spanish occupation of Aachen lasted until 1632.
57. Haagen, *Geschichte Aachens*, II, pp. 229–33 and 254. Also see Joseph

Finken, *Die Reichsstadt Aachen auf dem westfälischen Friedenskongress—ein Beitrag zur Aachener Religionsgeschichte* (Aachen: H. Kaatzer, 1910), pp. 3–4.

58. Asten, “Die religiöse Spaltung,” p. 122.

59. For an account of the very strong position enjoyed by the Calvinist merchants and manufacturers in the Aachen economy, see R. A. Peltzer, “Geschichte der Messingindustrie und der künstlerischen Arbeiter in Messing (Dinanderies) in Aachen und den Ländern zwischen Maas und Rhein von der Römerzeit bis zur Gegenwart,” *Zeitschrift des Aachener Geschichtsvereins*, 30 (1908), 390. The burden of occupation costs made it imperative that the city fathers continued to avail themselves of the Protestant tax capacity. See Asten, “Die religiöse Spaltung,” p. 124.

60. For an account of the changes occurring in the international economy at that time, see Hobsbawm, “The General Crisis of the European Economy,” pp. 38–42.

61. This was particularly true in the years 1625–27 when Aachen faced famine prices. See Haagen, *Geschichte Aachens*, II, p. 241.

62. Finken, *Die Reichsstadt Aachen*, p. 6.

63. See Max Wohlhage, “Aachen im Dreissigjährigen Kriege,” *Zeitschrift des Aachener Geschichtsvereins*, 33/1 (1911), 35–36, 55–59, and 61. See also Finken, *Die Reichsstadt Aachen*, p. 9.

64. The city elders were as eager as the Spaniards to weaken the hold Calvinist merchants had over the city economy and some of the strategic sectors (woolen industry, brass manufacture, and foreign trade), but they also realized that, given the circumstances, only a very cautious and flexible policy would be practicable. This is why the aldermen suggested to the emperor that they be endowed with the power to determine guild membership. It meant that even if some Protestants were to continue as members of the corporations, at least their activities would be under the continuous surveillance of the council. See Peltzer, “Geschichte der Messingindustrie,” pp. 391–95.

65. Asten, “Die religiöse Spaltung,” pp. 126–27, and Haagen, *Geschichte Aachens*, II, p. 245.

66. Haagen, *Geschichte Aachens*, II, pp. 253–59.

67. Asten, “Die religiöse Spaltung,” p. 142.

68. For an account of the fire and ensuing misery, see Haagen, *Geschichte Aachens*, II, pp. 262–66, and H. Schmalhausen (Noppius), *Chronique de la ville d’Aix-la-Chapelle*, pp. 144–50. Supposedly seven-eighths of all Aachen buildings were destroyed.

69. Asten, “Die religiöse Spaltung,” pp. 145–46.

70. *Ibid.*, pp. 127, 174, and 175.

71. *Ibid.*, pp. 100–101 and 116, n.

72. *Ibid.*, pp. 112–14, and Macco, *Reformatatorische Bewegungen*, pp. 56–57.

73. Asten, “Die religiöse Spaltung,” pp. 128–47.

74. *Ibid.*, p. 147.

75. *Ibid.*

76. Warren C. Scoville, *The Persecution of the Huguenots and French Economic Development 1680–1720* (Berkeley and Los Angeles: University of California Press, 1960), esp. “Nonreligious Impediments to Economic Growth,” pp. 365–433. Also see pp. 219–28.

77. Wohlhage, “Aachen im Dreissigjährigen Kriege,” p. 19.

78. The Aachen woolen producers depended increasingly on Saxon, Bohemian, Moravian, and Silesian raw wool (Seidl, “Die Aachener Wollenindustrie,” p. 15).

79. Apart from all the other markets during the seventeenth century, the Leipzig

fair became one of Aachen's principal outlets. Regarding these competitive pressures, see Seidl, "Die Aachener Wollenindustrie," p. 21, and Wohlhage, "Aachen im Dreissigjährigen Kriege," p. 61. For an account of the competitive pressures that prevailed in the international economy, see Charles Wilson, "Cloth Production and International Competition in the Seventeenth Century," *Economic History Review*, 2nd series, 13 (December 1960), 209–21.

80. Fürth, "Beiträge und Material," II, p. 63, and Wohlhage, "Aachen im Dreissigjährigen Kriege," pp. 33–39.

81. Finken, *Die Reichsstadt Aachen*, pp. 13–14, and W. Brüning, "Die Reichsstadt Aachen im Dreissigjährigen Kriege," *Aus Aachens Vorzeit* (1899), XII, pp. 78–85.

82. Haagen, *Geschichte Aachens*, II, p. 246, and Finken, *Die Reichsstadt Aachen*, pp. 16–17 and 38–39. Also Brüning, "Die Reichsstadt Aachen," pp. 84ff.

83. The city fathers levied property taxes as well as indirect taxes; the remainder was borrowed from Aachen's patriciate. To some individuals the city owed as much as 30,000 talers; See Wohlhage, "Aachen im Dreissigjährigen Kriege," p. 34, n. Though the calculations may be somewhat exaggerated, it has been estimated that between 1636 and 1638 the occupation costs amounted to more than 325,000 talers.

84. Wohlhage, "Aachen im Dreissigjährigen Kriege," pp. 35 and 61.

85. At the time the price of wheat and rye almost doubled (Wohlhage, "Aachen im Dreissigjährigen Kriege," p. 17, and Fürth, *Beiträge und Material*, II, p. 59).

86. Wohlhage, "Aachen im Dreissigjährigen Kriege," p. 25, and Haagen, *Geschichte Aachens*, II, p. 246.

87. Wohlhage, "Aachen im Dreissigjährigen Kriege," p. 17, and Hobsbawm, "The General Crisis of the European Economy," pp. 38–42, for some general reflections on the postwar European scene, particularly regarding the plight of guild-dominated economies geared to a trade pattern of bygone days.

88. Wohlhage, "Aachen im Dreissigjährigen Kriege," pp. 14 and 62–64.

89. According to Seidl, "Die Aachener Wollenindustrie," p. 24, annual output of cloth in the imperial city had declined by 1663 (a depression year) to 2,500 pieces from a peak of 7,000 in the fourteenth century.

90. For an account of this newly emerging network of international trade, see the following two important essays: F. J. Fisher, "London's Export Trades in the Early Seventeenth Century," *Economic History Review*, 2nd series, 3/2 (1950), 154–61, and Wilson, "Cloth Production," pp. 209–21.

91. Seidl, "Die Aachener Wollenindustrie," pp. 44–45 and 57. See also Hermandung, *Das Zunfswesen*, pp. 92–95.

92. Dahmen, *Das Aachener Tuchgewerbe*, p. 85.

93. Seidl, "Aachener Wollenindustrie," pp. 49–50.

94. For English developments, see Heaton, *Yorkshire Woolen Industrie*, chap. 3 and George Unwin, *Industrial Organization in the 16th and 17th Centuries*, 2nd ed. (London: Frank Cass, 1963), pp. 41–61 and 84–102.

95. Dahmen, *Die Aachener Tuchgewerbe*, p. 86.

96. Anton Johann Roth, "Die Aachener Farbindustrie von ihren Anfängen bis zur Gewenwart—Ein Beitrag zur Aachener Industriegeschichte" (diss., Cologne University, 1924), pp. 7 and 9.

97. Black was the most important color of Aachen cloth; besides all black cloth had a blue base. See Roth, "Die Aachener Farbindustrie," p. 13.

98. Seidl, "Die Aachener Wollenindustrie," p. 50.

99. *Ibid.*, p. 56.

100. *Ibid.*, pp. 51–52 and 55. The duty amounted to one-half taler. At the time the

cost of dyeing black cloth in the city came to about twelve talers. Actually, only the dyeing of black cloth was specifically forbidden. (Kley, *Aachener Wollenambacht*, p. 156).

101. Roth, "Die Aachener Farbindustrie," pp. 7 and 19.

102. Seidl, "Die Aachener Wollenindustrie," p. 51, n.

103. Dahmen, *Die Aachener Tuchgewerbe*, pp. 84–85. By 1705 there were about thirty *Verleger* in this city. See Asten, "Die religiöse Spaltung," pp. 169–70, regarding Aachen's efforts to curtail the industrial expansion of Burtscheid.

104. These seventeenth-century tendencies have been stressed by Wilson, "Cloth Production," pp. 217–18.

105. Seidl, "Die Aachener Wollenindustrie," p. 46. The individual master weaver was limited to three looms. A master shearman could employ no more than four journeymen and his own children.

106. *Ibid.*, p. 49.

107. *Ibid.*, pp. 49 and 65–66.

108. Cippola has shown that under similar circumstances the guild-dominated textile centers of seventeenth-century Italy were equally unable to compete (especially in the Levant) against the "new draperies" produced by the domestic industries of England, Holland, and France. The inflexibility of corporate regulations were the cause of these difficulties; the Italians were neither in a position to lower their costs of production nor were they capable of adjusting their output to the "new types of textiles, lighter, less durable, brighter and lovelier in colour" ("The Decline of Italy—The Case of a Fully Matured Economy," pp. 182–84).

109. Haagen, *Geschichte Aachens*, II, pp. 281–82.

110. Asten, "Die religiöse Spaltung," pp. 168ff. Also see Max Barkhausen, "Staatliche Wirtschaftslenkung und freies Unternehmertum im westdeutschen und im nord- und südniederländischen Raum bei der Entstehung der neuzeitlichen Industrie im 18. Jahrhundert," *Vierteljahrsschrift für Sozial- und Wirtschaftsgeschichte*, 45 (1958), 188–89.

111. Fritz Schulte, *Die Entwicklung der gewerblichen Wirtschaft in Rheinland-Westfalen im 18. Jahrhundert—Eine wirtschaftsgeschichtliche Untersuchung* (Schriften zur Rheinisch Westfälischen Wirtschaftsgeschichte, I) (Cologne: Rheinisch Westfälisches Wirtschaftsarchiv, 1959), pp. 39–42.

112. Regarding Aachen's overlordship in Burtscheid, see Albert Huyskens, *Aachener Leben im Zeitalter des Barock und Rokoko* (Bonn: Fritz Klopp, 1929), pp. 83–84.

113. Asten, "Die religiöse Spaltung," pp. 168–69.

114. Some of the most well-known Protestant manufacturers found a home here: von Cöllen, Römer, von Loevenich, Pastor, and the Clermont family. See Macco, *Zur Reformations-Geschichte Aachens während des 16. Jahrhunderts—Eine Kritische Studie* (Aachen: Aachener-Verlags- und Druckerei-Gesellschaft, 1907), p. 90.

115. Christian Quix, *Historisch-topographische Beschreibung der Stadt Burtscheid* (Aachen and Leipzig: Jacob Anton Mayer, 1832), pp. 81–83. Burtscheid was about a fifteen-minute walk from the city.

116. Asten, "Die religiöse Spaltung," p. 169.

117. *Ibid.* and Heinrich Schnock, "Über gewerbliche Verhältnisse in der ehemaligen 'Herrlichkeit Burtscheids,'" *Aus Aachens Vorzeit*, 18 (1905), 36–37.

118. Asten, "Die religiöse Spaltung," p. 169.

119. Hammer, *Geographische Betrachtung*, pp. 18–19, and Eduard Bühl, "Die Aachener Textilveredlungsindustrie und die Monschauer Tuchindustrie—Eine

- wirtschaftskundlich-geschichtliche Gegenüberstellung" (diss., Cologne University, 1950), pp. 147–48.
120. Fürth, *Beiträge und Material*, III, p. 325, and Schnock, "Herrlichkeit Burtscheid," pp. 38–40.
121. Asten, "Die religiöse Spaltung," pp. 170–71.
122. Ibid.
123. Georg Forster, *Ansichten von Niederrhein, von Brabant, Flandern, Holland, England und Frankreich im April, Mai und Juni 1790*, ed. Wilhelm Buchner (Leipzig: F. A. Brockhaus, 1868), pp. 88–90. See a noteworthy contribution on the industrial rise of Burtscheid and the prospering of the Family Loevenich as Lower Rhine merchants: F. A. Ebrard, "Die Fabrikantenfamilie von Loevenich und ihre Herkunft," *Die Heimat: Zeitschrift für die niederrheinische Heimatpflege*, 16 (1937), 128–43.
124. Forster, *Ansichten vom Niederrhein*, pp. 88–90. In the Verviers district, they dyed raw wool, enabling them to produce multicolored fabrics.
125. Laurent Dechesne, *Industrie drapière de la Vesdre avant 1800* (Paris: Librairie du Recueil Sirey, 1926), pp. 38–40.
126. Sylv. Meinard de Golbery, *Considérations sur le Département de la Roer suivies de la Notice d'Aix-la-Chapelle et de Borcette* (Aachen: J. G. Beaufort, 1811), pp. 526–28, and Ebrard, "Die Fabrikantenfamilie," pp. 131–33.
127. Hammer, *Geographische Betrachtung*, pp. 20–21, and Dechesne, *Industrie drapière*, pp. 35–36.
128. Ernst Barkhausen, *Die Tuchindustrie in Montjoie, ihr Aufstieg und Niedergang* (Aachen: Aachener Verlags- und Druckerei-Gesellschaft, 1925), pp. 12–15.
129. Initially, new clothiers continued the traditional practice of trying to sell their wares through peddlers within the wider region. But they soon ran afoul of the various ordinances regulating such trade in Jülich and in neighboring principalities. See Barkhausen, *Die Tuchindustrie in Montjoie*, p. 30.
130. For a contemporary account (written sometime in the late eighteenth century by a local physician) regarding the impassable nature of the Aachen-Montjoie road, especially in the winter, see Peter Schönhofen, "Geographische und naturhistorische Beschreibung des Amtes Montjoie," *Heimatblätter des Kreises Montjoie*, 3/8 (May 1928), 124, and Hammer, *Geographische Betrachtung*, pp. 28–29.
131. The exports of the Verviers region experienced the same transformation. For an account of the various export markets, see Dechesne, *Industrie drapière*, pp. 83–84, and Alfred Engels, *Die Zollgrenze in der Eifel für die Zeit von 1740 bis 1834—Schriften zur Rheinisch-Westfälischen Wirtschaftsgeschichte* (Cologne: Rheinisch-Westfälisches Wirtschaftsarchiv, 1959), II, p. 32. At its peak during the 1780s, one-third of Montjoie's total output was exported to Russia. For a summary account of the growth of English woolen exports, particularly of worsted, see T. S. Ashton, *Economic Fluctuations in England 1700–1800* (Oxford: Clarendon Press, 1959), pp. 75–78.
132. Barkhausen, *Die Tuchindustrie in Montjoie*, p. 36.
133. Ibid.
134. M. Barkhausen, "Der Aufstieg der rheinischen Industrie im 18. Jahrhundert und die Entstehung eines industriellen Grossbürgertums," *Rheinische Vierteljahrsblätter*, 19 (1954), 152ff.
135. Bühl, *Die Aachener Textilveredelungsindustrie*, pp. 190–91.
136. Ibid.
137. Barkhausen, "Der Aufstieg der rheinischen Industrie," pp. 152–54.
138. Barkhausen, *Die Tuchindustrie in Montjoie*, p. 37.

139. *Ibid.*, p. 40.

140. Barkhausen, "Der Aufstieg der rheinischen Industrie," p. 156, and Barkhausen, *Die Tuchindustrie in Montjoie*, pp. 64–66. Also see Philipp Andreas Nemnich, *Tagebuch einer der Kultur und Industrie gewidmeten Reise* (Tübingen: T. C. Totta, 1809), I, p. 343, who refers to "the several thousand hands working in the Limburg lands for this town" (i.e., Montjoie).

141. Dechesne, *Industrie drapière*, pp. 35–36 and 166–68. The clothiers suggested that the bad treatment meted out to the peasant workers by the local manufacturers prompted the former to work for the Montjoie firms. This, Dechesne suggests, is a doubtful reason. More probably, the virtual absence of import duties enjoyed by the inhabitants of the duchies of Jülich and Berg, and above all their "harder" currency, enabled the Scheiblers and their lesser colleagues to offer better remuneration than had so far prevailed there.

142. W. Gebhard, "Bericht des Hof-Kammerrats Friedrich Heinrich Jacobi über die Industrie der Herzogtümer Jülich und Berg aus den Jahren 1773 and 1774," *Zeitschrift des Bergischen Geschichtsvereins*, 18 (1882), 113–18. Specifically, Jacobi calculates that out of 2,700 *Kümpfen* (vats) of Spanish wool (1 *Kümpfen* = 120 pounds), 1,500 were sent for spinning and weaving into the Limburg countryside, where in 1773–74 the total "value added" reached about 164,000 talers.

143. Barkhausen, *Die Tuchindustrie in Montjoie*, pp. 60–62.

144. *Ibid.*, pp. 48, 60–62, and 114–15. Also see Hans Friedrich Weingarten, "Die Tuchindustrie in Montjoie—Ein Beitrag zur Geschichte der rheinischen Textilindustrie" (diss., Cologne University, 1922), pp. 10–11.

145. Heaton, *Yorkshire Woolen Industries*, pp. 296 and 351. Pierre Lebrun, *L'industrie de la laine à Verviers pendant le XVIII^e et le début du XIX^e siècle—Contribution à l'étude des origines de la révolution industrielle* (Paris: Les Belles Lettres, 1948), pp. 285–87. This type of production had little in common with that of a modern factory. Regarding the advantages of centralized production, see Supple, *Commercial Crisis and Change*, pp. 143–44. Following William J. Ashley, P. Lebrun distinguishes three forms of organization in the seventeenth- and eighteenth-century woolen trades: a manufacture composed of independent woolen masters, the factory system of the preindustrial revolution kind, and domestic industry. According to Lebrun, the mode of production in Verviers and Montjoie was an amalgam of the first two types (*L'industrie de la laine*, pp. 282–87). Perhaps one might argue that this concentrated mode of production was an attempt at vertical integration by entrepreneurs who had visions of unlimited expansion and who felt impatient with the relatively backward environment; therefore, they tried to "internalize" some of the "external economies" they would have needed and which locally were not available. Also see Barkhausen, *Die Tuchindustrie in Montjoie*, pp. 48 and 60–62.

146. *Ibid.*, pp. 60–62, and Nemnich, *Tagebuch*, 1, p. 344.

147. The emergence of the leading entrepreneurial families in eighteenth-century Rhineland is discussed in an illuminating study by Friedrich Zunkel, *Der Rheinisch-Westfälische Unternehmer 1834–1879—Dortmunder Schriften zur Sozialforschung*, XIX (Cologne and Opladen: Westdeutscher Verlag, 1962), pp. 13–33.

148. Barkhausen, *Die Tuchindustrie in Montjoie*, pp. 37–42, and Elly Mohrmann, "Studie zu den ersten organisatorischen Bestrebungen der Bourgeoisie in einigen Städten des Rheinlandes," eds. E. Giersipen and D. Losche, in *Beiträge zur deutschen Wirtschafts- und Sozialgeschichte des 18. und 19. Jahrhunderts* (Berlin: Akademie Verlag, 1962), pp. 217–18.

149. Mohrmann, "Die ersten . . . Bestrebungen," p. 205.
150. Barkhausen, *Die Tuchindustrie in Montjoie*, pp. 41–42. In 1780 the commander of the local garrison (consisting of invalid soldiers) petitioned his superiors to increase his salary "because the industrial boom, with its concentration of a multitude, has raised the price of foodstuffs to such an extent that by comparison to the preceding period some items cost one-third more, others one-half more. And a few items have reached even higher prices" (W. Vogt, "Etat der Schlossbesatzung im Jahre 1772," *Heimatblätter des Kreises Montjoie*, 3, 10 [July 1928], 148).
151. For an evaluation of the role of the *Feine Gewandschaft* as a means of advancing the interests of the fine-cloth manufacturers, see Barkhausen, *Die Tuchindustrie in Montjoie*, pp. 55–57. Mohrmann, "Die ersten . . . Bestrebungen," p. 202, n. . . stresses that the *Feine Gewandschaft* was in fact an early version of an employers' association promoting the class interests of its membership.
152. Barkhausen, *Die Tuchindustrie in Montjoie*, p. 58.
153. *Ibid.*, p. 42, notes the "ruthlessness" with which Scheibler used the power of his wealth. Also see Barkhausen, "Staatliche Wirtschaftslenkung und freies Unternehmertum," p. 194.
154. For the terms of the agreement, see Barkhausen, *Die Tuchindustrie in Montjoie*, pp. 81–82.
155. *Ibid.*; also see Bühl, *Die Aachener Textilveredelungsindustrie und die Monschauer Tuchindustrie*, pp. 204–6, where the terms of the accord are given in High German.
156. Bühl, *Die Aachener Textilveredelungsindustrie*, pp. 204–6. In 1743, fifty-six shearmen signed a contract renouncing all claims upon a corporation.
157. Barkhausen, *Die Tuchindustrie in Montjoie*, pp. 83–84.
158. *Ibid.*
159. *Ibid.*
160. *Ibid.*
161. Mohrmann, "Die ersten . . . Bestrebungen," pp. 202–3.
162. Barkhausen, *Die Tuchindustrie in Montjoie*, p. 85.
163. Mohrmann, "Die ersten . . . Bestrebungen," p. 203.
164. Eric Hobsbawm, "The Machinebreakers," *Past and Present*, 1 (February 1952), 57–70.
165. Barkhausen, *Die Tuchindustrie in Montjoie*, pp. 87–88.
166. *Ibid.*, pp. 96–97.
167. *Ibid.*, pp. 97–99.
168. *Ibid.*
169. Engels, *Die Zollgrenze in der Eifel*, pp. 34–35, suggests that the amount of raw wool distributed by the Montjoie clothiers among the Limburg population was larger than the statistics indicate, for the Scheiblers eventually opened branch plants in Dolhain and Visé.
170. Barkhausen, *Die Tuchindustrie in Montjoie*, pp. 101–2.
171. *Ibid.*, pp. 102–4.
172. Barkhausen, *Die Tuchindustrie in Montjoie*, *Ibid.*, pp. 109–11.
173. *Ibid.*
174. Lebrun, *L'industrie de la laine*, pp. 257ff.
175. Barkhausen, *Die Tuchindustrie in Montjoie*, pp. 112–13.
176. Particularly in Sedan and in the Yorkshire district.
177. Lebrun, *L'industrie de la laine*, pp. 264–65.

178. Barkhausen, *Die Tuchindustrie in Montjoie*, pp. 59 and 73.

179. W. Schönhofer, "Geographische und historische Beschreibung des Amtes Montjoie," p. 126. According to Dr. Jonas's account written around 1800, the township of Montjoie then had a population of 2,777. It had "about 1,000 more souls" a few years before.

180. Barkhausen, *Die Tuchindustrie in Montjoie*, p. 70. The peak year was probably 1787. Also W. Gebhard, "Bericht des Hof-Kammerrates Fried. Heinr. Jacobi," pp. 113–16, and S. Ricard, *Traité général du commerce* (Paris: H. Nicolle, An VII), I, pp. 419–20.

181. Barkhausen, *Die Tuchindustrie in Montjoie*, p. 71. According to M. Barkhausen, "Der Aufstieg der rheinischen Industrie im 18. Jahrhundert," p. 158, investment in fixed assets amounted at the time to only 5 percent of their total output. On the general unimportance of fixed capital in the eighteenth century, see Alfred Marshall's comment in *Industry and Trade* (London: Macmillan, 1927), p. 68; and the interesting article by S. Pollard, "Fixed Capital in the Industrial Revolution in Britain," *Journal of Economic History*, 24/3 (September 1964), esp. pp. 301–2.

182. Also see Lebrun, *L'industrie de la laine*, pp. 374–75.

183. Even in eighteenth-century England, the most developed country, "much lending and borrowing was small-scale, to oblige friends and relatives and neighbors" (L. S. Pressnell, "The Rate of Interest in the 18th Century," *Studies in the Industrial Revolution*, ed. L. S. Pressnell [London: Athlone Press, 1960], p. 185).

184. For a discussion of the importance of the Amsterdam wool market and its low prices, see Engels, *Die Zollgrenze in der Eifel*, p. 32, and Dechesne, *Industrie drapière*, pp. 143–44. See also Wilson, "Cloth Production," p. 217.

185. The wool merchants also hoped that by providing their customers with long-term credits, the latter would be less likely to seek direct contacts with the Spanish wool growers, thereby eliminating Amsterdam as the intermediary. See Lebrun, *L'industrie de la laine*, p. 142, n. 4.

186. Barkhausen, *Die Tuchindustrie in Montjoie*, pp. 71–74. Credits outstanding amounted to half of the total capital.

187. *Ibid.*

188. For a vigorous description of the benefits of freedom as compared to the abuses of corporate control, see Forster, *Ansichten vom Niederrhein*, esp. pp. 85–87.

189. Mohrmann, "Die ersten . . . Bestrebungen," pp. 206–07.

190. Barkhausen, *Die Tuchindustrie in Montjoie*, pp. 112–13.

191. Mohrmann, "Die ersten . . . Bestrebungen," p. 207.

192. Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations*, ed. R.H. Campbell, I (The Glasgow Edition of the Works and Correspondence of Adam Smith, 2) (Oxford: Clarendon Press, 1976), p. 267.

193. Dechesne, *Industrie drapière*, pp. 26, 35–37, and Lebrun, *L'industrie de la laine*, p. 65, n. 1.

194. C. Rutsch, *Die Umgebung von Eupen in wirtschaftlicher und geschichtlicher Beziehung mit einem Auszug aus der Geschichte des ehemaligen Herzogtums Limburg* (Eupen: C. Jul. Mayer, 1879), pp. 127–29.

195. Johann Gerhard Heinen, *Pfarrgeschichte Eupens* (Eupen: C. Jul. Mayer, 1896), pp. 30–31.

196. *Ibid.*

197. Dechesne, *Industrie drapière*, pp. 33–34.

198. *Ibid.*

199. Heinen, *Pfarrgeschichte Eupens*, p. 31, and Dechesne, *Industrie drapière*, pp. 83–85. On the seventeenth-century expansion of the Spanish cloth industries in Europe, see also Wilson, “Cloth Production,” pp. 217–21.
200. Rutsch, *Umgebung von Eupen*, pp. 21 and 131.
201. Heinen, *Pfarrgeschichte Eupens*, p. 31.
202. Engels, *Die Zollgrenze in der Eifel*, p. 35; Rutsch, *Umgebung von Eupen*, pp. 132–33; Ricard, *Traité général du commerce*, I, pp. 419–420.
203. Engels, *Die Zollgrenze in der Eifel*, p. 35, and Rutsch, *Umgebung von Eupen*, pp. 132–33.
204. Rutsch, *Umgebung von Eupen*, pp. 132–33, and Lebrun, *L'industrie de la laine*, pp. 270–72.
205. Dechesne, *Industrie drapière*, p. 42, and Lebrun, *L'industrie de la laine*, p. 206.
206. Anonymous, *Die feine Tuchmanufaktur zu Eupen*, p. 180.
207. *Ibid.*, p. 22.
208. *Ibid.*, pp. 35–36, for a description of the Amsterdam raw wool market.
209. *Ibid.*, pp. 64–65.
210. *Ibid.*, pp. 64–66, for an account of the local *Verlag* system.
211. Dechesne, *Industrie drapière*, pp. 205–6 and 209–12.
212. *Ibid.*
213. Lebrun, *L'industrie de la laine*, p. 259, and Dechesne, *Industrie drapière*, pp. 205–6 and 209–12.
214. Dechesne, *Industrie drapière*, pp. 213–14.
215. *Ibid.*, pp. 75–77.
216. Anonymous, *Die feine Tuchmanufaktur zu Eupen*, pp. 181–82.
217. Dechesne, *Industrie drapière*, pp. 33 and 225ff.
218. Barkhausen, “Staatliche Wirtschaftslenkung und freies Unternehmertum,” pp. 224–27.
219. Heinen, *Pfarrgeschichte Eupens*, p. 33.
220. Thun, *Die Industrie am Niederrhein*, I, pp. 18–19.
221. According to Seidl, “Die Aachener Wollenindustrie,” p. 29, the number of *Verleger* in the city rose from twelve in 1700 to thirty in 1705. Regarding technical improvements during the eighteenth century, see Maria Paffen, *Die gewerbliche Verwendung der Wasserkraft in Aachen vom späteren Mittelalter bis Anfang des 19. Jahrhunderts* (Aachen: Wilhelm Siemens, 1928), pp. 82–83, 102–3, and Roth, “Die Aachener Farbindustrie,” p. 23.
222. Efforts to improve the finishing operations were synonymous with the drive toward concentration of production. This is stressed by the anonymously published *Beytrag zu den Verbesserungs-Vorschlägen in Betreff der Kaiserlichen Freyen Reichsstadt Aachen besonders ihrer Tuchmanufakturen* (n.p., 1789), p. 20.
223. Dahmen, *Die Aachener Tuchgewerbe*, p. 85. Regarding some of the clothiers and the size of their operations as *Verleger*, with workshops of their own to complete the various finishing operations on their premises, see the debate, “War Johannes Wespian Tuchfabrikant?,” between H.F. Macco and M. Schollen in vol. 33, no. 1, *Zeitschrift des Aachener Geschichtsvereins* (1911), pp. 83–99. That some of the clothiers disregarded the limitations with respect to the number of journeymen employed in one plant, see Fürth, *Beiträge und Material*, III, p. 383. It is worth noting that the *Wollenambacht* tried to uphold this limitation even though the imperial decree of 1732 prohibited the enforcement of this particular restriction within the Holy Roman Empire.

224. The firm of Nellessen had all its cloth woven and fulled outside the city. See Seidl, "Die Aachener Wollenindustrie," p. 67 and 51.

225. The father of Mayor Wesprien operated shearing and dye plants in neighboring Cornelimünster. Yet he had his cloth spun and woven in Aachen (Huyskens, *Aachener Leben*, p. 117).

226. Seidl, "Aachener Wollenindustrie," pp. 54–55.

227. Karl Franz Meyer, *Meine historischen Gedanken über die Stadt Aachenschen Fabriken in Hinsicht des Altherthums* (Aachen: Johann Joseph Plum, 1807), pp. 45–47.

228. The importance of the Russian market at that time is also stressed by Lebrun, *L'industrie de la laine*, pp. 155ff.

229. Friedrich Stuhlmann and Martin Scheins, "Zwei Geschäftsreisen Aachener Grosskaufleute in das östliche und nördliche Europa im 18. Jahrhundert," *Zeitschrift des Aachener Geschichtsvereins*, 35 (1913), 272–73. Among the clothiers mentioned in the Russian export business: Pastor, Strauch, Clermont, Bramerts, von Loevenich, Fabricius, H. Isaac, and B. Scheibler.

230. For an account of St. Petersburg's foreign business community and for comments on their business practices, see Stuhlmann and Scheins, "Zwei Geschäftsreisen," p. 261; and Ricard, *Traité général du commerce*, I, pp. 280–81.

231. A careful examination of Amsterdam's role as financial center of eighteenth-century world trade is given by Ricard, *Traité général du commerce*, I, pp. 195ff.

232. Meyer, *Meine historischen Gedanken*, p. 46, and Fürth, *Beiträge und Material*, III, p. 38.

233. Stuhlmann and Scheins, "Zwei Geschäftsreisen," p. 292.

234. *Ibid.*

235. *Ibid.*

236. *Ibid.*, pp. 294ff.

237. "The quality and finish as well as most of the colors of our cloth are greatly appreciated here. However, there are bitter complaints about our *Konso* [scarlet red], our white and our *Paille* [straw yellow]. There is also dissatisfaction with the thickness of the material and on several occasions I was advised to practice greater economy in the use of wool. The complaints about numerous holes in our fabrics, which incidentally are very poorly repaired, I have unfortunately found, after inspection of many pieces, only too justified. As regards the hue and cry about short measure, there may be cause for it in individual instances, but for the most part, we are being done an injustice" (Stuhlmann and Scheins, "Zwei Geschäftsreisen," p. 297).

238. *Ibid.*, pp. 299–300, and 307. "Finishing operations, in particular, must be improved if the firm wishes to withstand the competition of the Clermonts in Vaels, the Simonis in Verviers and, above all, the pressures of the English."

239. Stuhlmann and Scheins, "Zwei Geschäftsreisen," pp. 292–93 and esp. 305–6. Because of the high interest rates (about 12 percent per annum for short-term loans) prevailing in Russia at that time, several commission houses tried to relend the money they had collected from the Russian drapers before transferring it to the Aachen producer. This, of course, was quite out of order and caused the prolongation of credit the Aachen clothiers were forced to extend.

240. Mayer, *Meine historischen Gedanken*, p. 47.

241. Huyskens, *Aachener Leben*, pp. 44–49, for an account of the construction activity in Aachen during the eighteenth century. It was customary for the rich clothiers to build storage rooms and workshops onto their palatial residences. J. J. Couven was the city's most important architect of this period. For a description of the way of life practiced by one of the wealthiest clothiers, J. A. von Clermont, see Jos. Liese, *Das*

klassische Aachen I—Aachener Beiträge zur Heimatkunde (Aachen: J. A. Mayersche Buchhandlung, 1936), 17, pp. 71ff. Clermont's mother died in 1776 worth 560,000 talers (*ibid.*, p. 63).

242. Note the bitter complaint voiced by the master shearmen: that if a few were allowed to concentrate all production and all workmen in their hands, then the earnings of a few men would rise but the rest of "the small masters and their families would be reduced to mendicancy" (Cl. Bruckner, *Aachen und seine Tuchindustrie* [Horb am Neckar: Mushakesche Verlagsanstalt, 1949], p. 39).

243. Bruckner, *Aachen und seine Tuchindustrie*, p. 39.

244. At the beginning of the eighteenth century, the admission fee for master status was 87.5 gulden for a master's son and 133 gulden for an ordinary candidate. By 1773 the latter's fee was 198 gulden, and a year later as much as 210 gulden. Since the journeyman's weekly wage was at best 8 gulden—and in normal times a 7-pound loaf of bread cost 0.6 gulden, and one pound of ox meat cost 1 gulden, his chance to accumulate the funds necessary to pay his admission fee was slight. See Hans Friedrich Heizmann, "Die wirtschaftliche und rechtliche Lage der arbeitenden Klassen in Aachen um die Wende des 18. Jahrhunderts" (diss., Tübingen University, 1922), pp. 35–36 and 85.

245. For a critique of the abuses inherent in guild power, see the anonymous pamphlet (actually written by J. A. von Clermont), *Freyemüthige Betrachtungen eines Weltbürgers zum Wohle von Aachen, bey Gelegenheit der bevorstehenden Constitutions-Verbesserung dieser Reichsstadt* (Frankfurt and Leipzig: n.p., 1788), p. 12. Lujo Brentano describes this tendency as "the degeneration of the guilds into family coteries" (*On the History and Development of Guilds and the Origin of Trade Unions* [London: Trübner and Co., 1870], p. 68).

246. Seidl, "Aachener Wollenindustrie," p. 67.

247. Jansen observed that Clermont's move caused considerable unemployment "among weavers, shearmen, spinners, and the like, who previously had worked for him . . . also the Calvinist Schmitz is leaving to start a cloth manufacture in Berlin and is taking along a large number of Catholics as shearmen and weavers." Note Jansen's anti-Calvinist and anticapitalist sentiments and his dire predictions regarding Aachen's trade and industry if Burtscheid and Vaels were permitted to expand (Fürth, *Beiträge und Material*, III, p. 321).

248. Seidl, "Aachener Wollenindustrie," p. 76. Heizmann, "Die wirtschaftliche und rechtliche Lage," pp. 80–85.

249. Seidl, "Die Aachener Wollenindustrie," pp. 66–67, documents the violent fluctuations in the Aachen woolen industry during the eighteenth century. He provides the following figures: during the boom of the 1680s, the amount of raw wool used in the city increased by 30 percent; at the time the shearmen were supposed to have produced a larger output in a single year than previously in five. In 1705 Aachen claimed 80 master shearmen and 100 master weavers plying 300 looms. By 1735 the number of master weavers had risen to 200 (and 600 looms), while in 1765 the number of master shearmen stood at 140 (a doubling since 1705). During the depression of the 1770s, about one-fifth of those traditionally working in the woolen trades were unemployed.

250. Seidl, "Die Aachener Wollenindustrie," pp. 66–67. For an account of craft misery during the 1768 depression, see Jansen's diary in Fürth, *Beiträge und Material*, III, p. 341.

251. For a description of the plight during the 1771 famine, see Jansen's diary in Fürth, *Beiträge und Material*, III, pp. 365–66. For a general account of the unskilled labor force, see Heizmann, "Die wirtschaftliche und rechtliche Lage," pp. 77–78.

252. J. F. C. Grimm, *Bemerkungen eines Reisenden durch Deutschland, Frankreich, England und Holland in Briefen an seine Freunde* (Altenberg: Richterische Buchhandlung, 1775), III, p. 484.

253. According to A. Seidl, the installation of a weaving shop cost several hundred talers during the early part of the eighteenth century. The equipment necessary for a shear shop came to at least 1,000 talers (*Aachener Wollenindustrie*, p. 49). See also Heizmann, "Die wirtschaftliche und rechtliche Lage," pp. 35 and 48–66.

254. Fürth, *Beiträge und Material*, III, pp. 86–89.

255. Jansen contends that a few clothiers and master shearmen who were envious of Heupgens had instigated the strike (Fürth, *Beiträge und Material*, III, pp. 197–99).

256. This was a boom period (1765) and the journeymen enjoyed the advantage of labor scarcity (Fürth, *Beiträge und Material*, III, pp. 325–27. With respect to the attack upon the Lutheran artisan, it is worth noting that, as in the case of Montjoie, animosity between Protestant clothiers and Catholic masters and journeymen was widespread.

257. Restiveness among journeymen was not confined to Aachen. Journeymen riots seemed to have been a very general phenomenon of this era. See Heizmann, "Die wirtschaftliche und rechtliche Lage," p. 69.

258. See Philomene Beckers, *Parteien und Parteienkampf in der Reichsstadt Aachen im letzten Jahrhundert ihres Bestehens* (Aachen: La Ruelle, 1936), pp. 56–58, and Fürth, *Beiträge und Material*, III (Jansen's diary for 1754), pp. 208 and 219. Eventually Heupgens won. These litigations, to which the masters frequently resorted, not only achieved little, but actually hastened the disintegration of the guilds by dissipating their resources.

259. Beckers, *Parteien und Parteienkampf*, pp. 56–58, and Fürth, *Beiträge und Material*, III, pp. 208 and 219.

260. *Ibid.*

261. Beckers, *Parteien und Parteienkampf*, pp. 56 and 62.

262. *Ibid.*, pp. 1, 10, and 29–31.

263. Walter Corsten, "Die Aachener Wirtschaft im ersten Drittel des 19. Jahrhunderts von der Französischen zur Preussischen Herrschaft" (diss., Cologne University, 1925), p. 23. Also see Beckers, *Parteien und Parteienkampf*, p. 60.

264. Thun, *Die Industrie am Niederrhein*, vol. 1, part 2, section 2, p. 16, and Corsten, "Die Aachener Wirtschaft," p. 26.

265. Gustav Bausch, *Die Mäkelei in der Reichsstadt Aachen* (Aachen: Creutzer and Lempertz, 1910), pp. 7–10.

266. Forster, *Ansichten vom Niederrhein*, pp. 84–85, instances some of the guilds with a membership of less than a dozen.

267. Bausch, *Die Mäkelei*, pp. 10ff.

268. See Jansen's account of the riots preceding the 1755 election in Fürth, *Beiträge und Material*, III, pp. 224–26. Note that Jansen was a staunch follower of Mayor Lonneux. Also see Bausch, *Die Mäkelei*, p. 13.

269. According to M. D. B. (de Barjoles), *Lettres sur la ville et les eaux d'Aix-la-Chapelle* (n.p., 1786), pp. 133–34, Aachen "produced and exported eighteen to twenty thousand pieces of cloth . . . at an average value of 275 French livres . . . which comes to 5,600,000 livres in one year." Of this sum, two-fifths or 2,400,000 livres are "value-added," to be distributed among "about forty cloth manufacturers and their dyers and workers." M.D.B. seems to have included Montjoie in his calculations. And Ricard, *Traité général du commerce*, I, pp. 419ff., estimated Aachen's total woolen cloth production (including Burtscheid and Vaels) at 15,000 pieces. Very probably, a major share of this total output was manufactured outside Aachen proper.

270. *Freymüthige Betrachtungen*, pp. 17–18 and 23–29. Also Heizmann, “Die wirtschaftliche und rechtliche Lage,” p. 93.
271. Forster, *Ansichten vom Niederrhein*, p. 87.
272. E. J. Hobsbawm. *Primitive Rebels—Studies in Archaic Forms of Social Movement in the 19th and 20th Centuries* (Manchester: University Press, 1959), pp. 114–16. Translated into German as *Sozialrebelln—Archaische Sozialbewegungen im 19. und 20. Jahrhundert* (Sammlung Luchterhand, 16) (Neuwied, 1971), pp. 146ff.
273. Mayor Kahr is supposed to have said “that here we [the mayors] are as sovereign as the Emperor in his lands” (Huyskens, *Aachener Leben*, p. 89).
274. Christian Wilhelm von Dohm, *Entwurf einer verbesserten Constitution der Kaiserl. freyen Reichsstadt Aachen* (Aachen: J. W. F. Müller, 1790), p. xii, n.
275. Bausch, *Die Mäkelei*, pp. 10–28, and Frans Peter Eduard Cronenberg, *Die Mäkelei oder Stadtrathswahlgeschichten aus dem vorigen Jahrhundert* (Aachen: J. Stercken, 1884), pp. 11–24.
276. There are several contemporaneous accounts of the 1786 disturbances including: *Aktenmässige Geschichte derer im Jahre 1786 in der Reichsstadt Aachen entstandenen und noch immer fortdauernden Tumultsunruhen . . .* (Wetzlar: n.p., 1787). This is an account prepared by the deposed *Rat* for the high court at Wetzlar. An appendix, “Unterthänigstes Pro Memoria,” provides the arguments of the rebels: *City Archives Aachen*, no. 243 and 243A. Also see the report prepared by C.W. von Dohm for Frederick the Great in August Pauls, “Friedrich der Grosse und die Aachener Mäkelei,” *Zeitschrift des Aachener Geschichtsvereins*, 48 49 (1926 27), 3–5. Finally, “Handschriftliche Chronik 1770–1796,” edited by W. Brüning in *Aus Aachen Vorzeit*, 9 (1896), 32–34, and Fürth, *Beiträge und Material*, I, pp. 389ff.
277. R. von Kempen, “Die Streitigkeiten zwischen dem Kurfürsten von der Pfalz als Herzog von Jülich und der Reichsstadt Aachen wegen der Vogtmeierei im 18. Jahrhundert,” *Zeitschrift des Aachener Geschichtsvereins*, 35 (1913), 101.
278. Gerhard Heusch, *Die Aachener Verfassungskämpfe von 1786 bis 1792* (Borna-Leipzig: Robert Noske, 1927), pp. 8–12.
279. Cronenberg, *Die Mäkelei*, esp. pp. 11–26.
280. Wilhelm Brüning, “Ein Beitrag zur Würdigung des Bürgermeisters Dauven,” *Zeitschrift des Aachener Geschichtsvereins*, 20 (1898), 265.
281. *Ibid.*, pp. 266–67.
282. There is an excellent collection of contemporaneous documents pertaining to the *Mäkelei* in Fürth, *Beiträge und Material*, I.
283. Beckers, *Parteien und Parteienkampf*, pp. 10–12 and 60–64. Corsten, “Die Aachener Wirtschaft,” p. 23, also subscribes to this particular view.
284. Jansen’s diary for 1755, in Fürth, *Beiträge und Material*, III, pp. 217–19, refers to the “new and bad party of merchants” supporting the machinations of Heupgens to become mayor. See also Beckers, *Parteien und Parteienkampf*, pp. 26–31.
285. Bausch, *Die Mäkelei*, pp. 13–14, and Beckers, *Parteien und Parteienkampf*, pp. 31–36.
286. Beckers, *Parteien und Parteienkampf*, p. 27.
287. Liese, *Das klassische Aachen*, I, p. 100ff., has quite conclusively shown that J. A. von Clermont is the author. Besides, Liese mentions two pamphlets published in 1789 and no longer extant, which take issue with Clermont’s views from the standpoint of a Catholic and a guild supporter.
288. *Freymüthige Betrachtungen*, pp. 11–12 and 14. Also see the excerpts of Clermont’s writing in Liese, *Das klassische Aachen*, I, p. 100ff.

289. *Freymüthige Betrachtungen*, pp. 16–36.

290. *Beytrag zu den Verbesserungs-Vorschlägen*, pp. 21–23.

291. *Ibid.*, pp. 31–39.

292. J. A. von Clermont was one of those eighteenth-century merchant-patricians forever in search of new ideas and new contacts. See Liese, *Das klassische Aachen*, I, pp. 100–163, and II, (1939), pp. 1–12. For an illuminating account regarding this shift toward a belief in the “productivity” of higher wages among mercantilist writers (prior to Adam Smith), see A. W. Coats, “Changing Attitudes to Labour in the Mid-Eighteenth Century,” *Economic History Review* (1958), 2nd series, vol. 11, pp. 35–51.

293. F. F. Jacobi, *Versuch eines Planes zur Errichtung eines Arbeitshauses in der freyen Reichsstadt Aachen* (n.p., 1791), pp. 15–17. The founding of this workhouse was supposed to have been an essential part of the contemplated reforms regarding urban life in Aachen. The author mentions that in the preparation of this plan he was influenced by some of the English experts in poor law reform, notably Macfarlan and Howard.

294. *Ibid.*, pp. 23–29.

295. *Ibid.*, pp. 43–47 and 49–57. At least Clermont’s view of the “lower order” is refreshingly free from that unctuous cant that marks employer pronouncements on this topic during subsequent centuries.

296. Anonymous, *Beytrag*, pp. 17–18, and Dohm, *Entwurf*, pp. xv–xvi, and 12–23.

297. P. J. Franz Dautzenberg, *Meine Gedanken über die in unserer Vaterstadt vorzunehmende Verbesserung, vermittelt Abschaffung wirklicher Missbräuche insbesondere, und Befestigung unserer demokratischen Verfassung im ganzen Umfang* (n.p., 1788), pp. 4–12. See also W. Hermans, “P. J. Franz Dautzenberg und sein ‘Aachener Zuschauer’ 1790–1798,” *Zeitschrift des Aachener Geschichtsvereins*, 52 (1931), 39ff.

298. Heusch, *Aachener Verfassungskämpfe*, pp. 33–34.

299. Bausch, *Die Mäkelei*, pp. 50–51.

CHAPTER 5

1. C. H. Wilson, “The Growth of Overseas Commerce and European Manufacture,” in *The New Cambridge Modern History—The Old Regime 1713–1763*, ed. J. B. Lindsay, VII (Cambridge: University Press, 1957), pp. 28–38, and H. J. Habakkuk, “Population, Commerce and Economic Ideas,” in *The New Cambridge Modern History—The American and French Revolutions 1763–1793*, ed. A. Goodwin, vol. 8 (Cambridge: University Press, 1968), esp. pp. 32–33 and 42–44.

2. Aloys Schulte, “Gewerbe, Handel, Verkehr und Wirtschaftspolitik bis zur Mitte des 18. Jahrhunderts,” in *1000 Jahre deutscher Geschichte und deutscher Kultur am Rhein* (Düsseldorf: L. Schwenn, 1925), p. 305.

3. Bruno Kuske, “Die Rheinischen Städte,” in *Geschichte des Rheinlands von der ältesten Zeit bis zur Gegenwart*, ed. H. Aubin et al., vol. 2, part 2 (Essen: G. D. Baedeker, 1922), p. 70.

4. E. F. Wiebeking, *Beiträge zur Kurpfälzischen Staatengeschichte vom Jahre 1742 bis 1792 vorzüglich in Rücksicht auf die Herzogtümer Jülich und Berg* (Heidelberg and Mannheim: Schwan and Götz, 1793), p. 20. For some interesting comments regarding the expansion of Wupper valley industry during the two decades prior to the French Revolution, see *Bemerkungen über Düsseldorf und Elberfeld auf einer Reise*

von Köln nach Hamm (Eyrichsche Buchdruckerei, n.d.). This was partially reprinted in the *Monatsschrift des Bergischen Geschichtsvereins*, 15 (1908) esp. pp. 62–64. This book was probably written during the years 1792 and 1793.

5. R. Isenberg, *Untersuchungen über die Entwicklung der bergischen Wollenindustrie* (Heidelberg: n.p., 1906), pp. 15–16.

6. Kuske, "Die Rheinischen Städte," p. 70.

7. The secularized monastic lands were, in large part, acquired by well-to-do peasants and tenant operators and by affluent merchants and manufacturers who were making the most of the Napoleonic boom. The long-run effect of this trend is obvious: it enhanced the role of the bourgeois elements in society and thereby strengthened the foundations of Rhenish capitalism for decades to come. See Rudolf Morsey, "Wirtschaftliche und soziale Auswirkungen der Säkularisation in Deutschland," in *Dauer und Wandel in der Geschichte—Festschrift für Kurt von Raumer*, ed. Rudolf Vierhaus and Manfred Botzenhart (Münster: Verlag Aschendorff, 1966), esp. pp. 365–69.

8. From 1794 to 1801 the methods of administering the Rhineland territories were subject to vicissitudes. The governments which followed each other in Paris did not share the same views with respect to administrative principles. Besides, these principles were bound to change with national policy. See Alfred Rambaud, *La domination française en Allagne—Les français sur le Rhin 1792–1804* (Paris: Didier and Co., 1873), p. 299.

9. Regarding the poor quality of the French administrators in the period 1792–97, see L. Lévy-Schneider, *Le Conventionnel Jeanbon Saint-André* (Paris: Felix Alcan, 1901), p. 1110: "These [the Rhineland territories] were to receive from the Directory and the Consulate as officials and administrators all those individuals who were tainted and incompetent and who were no longer wanted in France."

10. Jacques Godechot, *Les commissaires aux armées sous le Directoire* (Paris: Editions Fustier, 1937), I, pp. 110ff. Also see some of the comments by Walter Grab, "La réaction de la population de la Rhénanie face à l'occupation révolutionnaire française" in *Occupants-Occupés 1792–1815*, a conference held in Brussels January 29–30, 1968, and issued for the *Centre d'histoire économique et sociale* by the Institut de Sociologie, Université libre de Bruxelles (1969), esp. pp. 126–30.

11. See Franz Schnabel, *Deutsche Geschichte im neunzehnten Jahrhundert* (Freiburg i.B.: Herder and Co., 1934), III, pp. 271–72, and Karl-Georg Faber, "Verwaltungs- und Justizbeamte auf dem linken Rheinufer während der französischen Herrschaft—Eine personengeschichtliche Studie," in *Aus Geschichte und Landeskunde (Festschrift für Franz Steinbach)* (Bonn: L. Röhrscheid, 1960), pp. 350–51.

12. Justus Hashagen, "Das Rheinland beim Abschlusse der französischen Fremdherrschaft," in *Die Rheinprovinz 1815–1915—Hundert Jahre preussischer Herrschaft am Rhein*, ed. Joseph Hansen (Bonn: A. Marcus and W. E. Webers, 1917), pp. 1 and 21.

13. F. Engels, "Die deutsche Reichsverfassungs-Campagne," in *Neue Rheinische Zeitung—Politisch-ökonomische Revue*, ed. Karl Marx (London: 1850); reedited by Karl Bittel (Berlin: Rütten and Loening, 1955), p. 42.

14. Hashagen, "Das Rheinland beim Abschlusse," p. 3.

15. For an account of these reforms, see Philippe Sagnac, "L'organisation française et réunion des pays rhénans (1797–1802)," *Revue des études napoléoniennes*, 5:1 (Paris: March–April 1916), 145–53, and Grab, "La réaction de la population de Rhénans," pp. 137–38.

16. Joseph Hansen, "Von der französischen Revolution bis zur Gegenwart,"

Geschichte des Rheinlands, II, p. 263. For a vivid description of the affluence enjoyed by this new Kulak group, see Clemens Theodor Perthes, *Politische Zustände und Personen in Deutschland zur Zeit der französischen Herrschaft* (Gotha: F. A. Perthes, 1862), p. 269.

17. Philippe Sagnac, *Le Rhin français pendant la révolution et l'empire* (Paris: Felix Alcan, 1917), p. 173.

18. Hashagen, "Das Rheinland beim Abschlusse," pp. 12–16.

19. Sagnac, *Le Rhin français*, p. 174.

20. Richard Zeys. *Die Entstehung der Handelskammern und die Industrie am Niederrhein während der französischen Herrschaft. Ein Beitrag zur Wirtschaftspolitik Napoleons I* (Leipzig: Duncker and Humblot, 1907), esp. chap. 2, 3, and 7. On the plutocratic character of the Rôer department administration, see the interesting article by Roger Dufraisse, "Les notables de la rive gauche du Rhin à l'époque napoléonienne," for the symposium "La France à l'époque napoléonienne" published in *Revue d'histoire moderne et contemporaine*, 17 (1970), 764–67.

21. Engels, "Die deutsche Reichsverfassungs-Campagne," pp. 42–43. These wealthy merchants increasingly assumed most of the offices in the city, county, and regional administrations. Until that time, these offices had been the virtual monopoly of the aristocratic estate. See M. Braubach, "Die linksrheinischen Lande unter Napoleon I," in *1000 Jahre deutscher Geschichte*, book 6, p. 322.

22. Alphons Thun. *Die Industrie am Niederrhein und ihre Arbeiter—Staats- und socialwissenschaftliche Forschungen*, ed. Gustav Schmoller, part 2, section 2 (Leipzig: Duncker and Humblot, 1879), p. 22. But there was some kind of disturbance (the reasons for it are not clear) by a few Elberfeld journeymen on November 15, 1804. See "Der Handwerksburschenaufstand zu Elberfeld im Jahre 1804," *Monatsschrift des Bergischen Geschichtsvereins*, 11 (August–September 1904), 187–93.

23. Hashagen, "Das Rheinland beim Abschlusse," p. 23.

24. "Bericht über die Regierungs-Departements von Trier, Coblenz, Cöln, Aachen und Düsseldorf vom 12. Oktober 1816," in Friedrich and Paul Goldschmit, *Das Leben des Staatsrath Kunth* (Berlin: Julius Springer, 1888), Appendix, p. 256.

25. Ch. Schmidt, "L'industrie dans le Grand Duché de Berg en 1810—Addition aux mémoires de Beugnot," *Revue d'histoire moderne et contemporaine*, 5/8 (May 1904), 536. Maromme and Deville are small textile towns in the Rouen area. Beugnot was well acquainted with the textile industry in general and that of the Rouen district in particular, for he had been prefect in that area (Département de la Seine Inférieure) prior to assuming his duties in the duchy of Berg.

26. Schmidt, "L'industrie dans le Grand Duché de Berg," p. 537.

27. That, in the short-run, economic realities impose definite limits upon economic planners was forcefully argued by Strumilin in the Soviet industrialization debate of the 1920s. See Maurice Dobb, *Soviet Economic Development Since 1917* (New York: International Publishers, 1948), p. 326.

28. For this particular view, see Bruno Kuske, "Gewerbe, Handel und Verkehr," *Geschichte des Rheinlands*, II, p. 190, and Max Barkhausen, "Der Aufstieg der rheinischen Industrie im 18. Jahrhundert und die Entstehung eines industriellen Grossbürgertums," *Rheinische Vierteljahrsblätter*, 19 (1954), 191.

29. Hermann Aubin, "Agrargeschichte," *Geschichte des Rheinlands*, II, pp. 137–38, and F. Steinbach, "Die Veränderungen der Agrarverhältnisse im 18. Jahrhundert unter der Fremdherrschaft und im 19. Jahrhundert," in *1000 Jahre deutscher Geschichte*, book 8, pp. 456–57.

30. Kuske, "Gewerbe, Handel und Verkehr," p. 246.

31. For a discussion of the potentialities and aims of different government planning systems, see Bert F. Hoselitz, "Economic Policy and Economic Development," in *The State and Economic Growth*, ed. Hugh G. J. Aitken (New York: Social Science Research Council, 1959), esp. pp. 325–36 and 349–52.

32. *Bemerkungen über Düsseldorf und Elberfeld*, pp. 65–66: "The silk manufacture, which had been started here [in Elberfeld] some twenty years ago, is doing best of all because neither Lyons nor the other French cities are able to export silk fabrics and other goods."

33. See Wolfgang Köllmann, *Sozialgeschichte der Stadt Berman im 19. Jahrhundert* (Soziale Forschung und Praxis, vol. 21) (Tübingen: J. C. B. Mohr, 1960), p. 8. Also see the 1794 report of the Prussian Ambassador von Dohm regarding the boom conditions in the Aachen, Montjoie, and Eupen cloth manufacture. "Der preussische Gesandte von Dohm an König Friedrich Wilhelm II . . ." in *Quellen zur Geschichte des Rheinlands im Zeitalter der französischen Revolution 1780–1801*, ed. Joseph Hansen (Bonn: P. Haustein, 1935), 3, p. 323. Also see Wilhelm Schumacher, *Untersuchungen über die Entwicklung der bergischen Seidenindustrie* (Heidelberg: Rössler and Herbert, 1919), p. 19.

34. Otto R. Redlich, "Napoleon I und die Industrie des Grossherzogtums Berg—Eine historische Skizze," in *Beiträge zur Geschichte des Niederrheins—Jahrbuch des Düsseldorfer Geschichtsvereins*, XVII (Düsseldorf, 1902), 189–90.

35. *Ibid.*, pp. 189–90.

36. Franz Josef Gemmert, *Die Entwicklung der ältesten Kontinentalen Spinnerai—Eine betriebswirtschaftlich-historische Skizze* (Leipzig: Max Jänecke Verlag Buchhandlung, 1927), pp. 7–12.

37. W. O. Henderson, *Britain and Industrial Europe 1750–1850—Studies in British Influence on the Industrial Revolution in Western Europe* (Liverpool: University Press, 1954), p. 142.

38. Konrad Frohn, "Ansichten der bergischen Industrie," in *Niederrheinische Blätter für Belehrung und Unterhaltung*, IV (Dortmund, 1803), 571. At this time the *Garnnahrung* was for all purposes a "merchant corporation" enjoying the monopoly on bleaching linen within the duchy of Berg.

39. Frohn, "Ansichten der bergischen Industrie," p. 547.

40. Wiebeking, *Beiträge zur Kurpfälzischen Staatengeschichte*, pp. 18–19 and Appendix, Table 5.

41. "Ungefährer Zustand der Cultur und des Commerzes in jedem Amte," in *Beiträge zur Statistik des Herzogthums Berg*, ed. Th. J.J. Lenzen (Düsseldorf, 1802), pp. 37–40 and 42–48. On the role of the Wupper valley merchants in promoting a cotton manufacture in the Gladbach-Rheydt area as early as the 1740s, see Willy Fränken, *Die Entwicklung des Gewerbes in den Städten Mönchengladbach und Rheydt im 19. Jahrhundert—Schriften zur Rheinisch-Westfälischen Wirtschafts-geschichte*, (Cologne: Rheinisch-Westfälisches Wirtschaftsarchiv, 1969), XIX, pp. 32–33.

42. Carl Ganser, "Die Wirkungen der französischen Herrschaft, Gesetzgebung und Verwaltung auf das Aachener Wirtschaftsleben" (diss., Tübingen University, 1922), p. 20, and Curt Eder, *Die Tätigkeit der Aachener Behörden während der ersten Jahre der französischen Fremdherrschaft unter besonderer Berücksichtigung ihrer Wirtschafts- und Finanzpolitik 1792–1796* (Marburg i.H.: Philosophy Faculty Press of Marburg University, 1917), pp. 24–38.

43. See "Der preussische Gesandte von Dohm," p. 323.

44. Barkhausen, "Der Aufstieg der rheinischen Industrie," p. 151.

45. When the French occupied the Netherlands, trade with that country was

interrupted. For the time, the Rhine, the main trading artery of the Rhineland, was virtually closed. See Gustav von Gülich, *Geschichtliche Darstellung des Handels, der Gewerbe und des Ackerbaus* (Jena: Friedrich Frommann, 1839), II, p. 334.

46. Wilhelm Kurschat, *Das Haus Friedrich und Heinrich von der Leyen in Krefeld—zur Geschichte des Rheinlands in der Zeit der Fremdenherrschaft 1794–1814* (Frankfurt a.M.: Vittorio Klostermann, 1939), pp. 56–58. The Bredts, “one of the largest businesses in Düsseldorf,” fled to Schwelm in 1794. See “Auszüge und Berichte aus einem alten Tagebuch” (Carl Bredt, ed.), *Monatsschrift des Bergischen Geschichtsvereins*, 12/1 (January 1905), 17–18.

47. Gottfried Buschbell and Karl Heinzelmann, *Geschichte der Stadt Krefeld von der Franzosenseit (1794) bis um das Jahr 1870* (Krefeld: Staufen Verlag, 1954), II, pp. 14–19, and Wilhelm Steffens, “Die linksrheinischen Provinzen unter französischer Herrschaft 1794–1802,” *Rheinische Vierteljahrsblätter*, 19 (1954), 414.

48. Otto Schell, *Geschichte der Stadt Elberfeld* (Elberfeld: Baedersche Buch- und Kunsthandlung und Buchdruckerei, 1900), p. 253.

49. Rambaud, *La domination française en Allemagne*, pp. 303ff.

50. Eder, *Die Tätigkeit der Aachener Behörden*, pp. 65–72 and 93–96.

51. Godechot, *Les commissaires aux armées*, I, pp. 109, 121–24, and 126–28. Also “Handschriftliche Chronik 1770–1796,” ed. W. Brüning, in *Aus Aachens Vorzeit—Mitteilungen des Vereins für Kunde der Aachener Vorzeit*, II (1898), 65, and Ganser, “Die Wirkungen der französischen Herrschaft,” pp. 34–37.

52. See W. Brüning, “Aachen während der Fremdherrschaft und der Befreiungskriege,” *Zeitschrift des Aachener Geschichtsvereins*, 19 (1897), 181.

53. Godechot, *Les commissaires aux armées*, I, pp. 125–26.

54. Brüning, “Aachen während der Fremdherrschaft,” p. 182, and August Pauls, “Die Haltung der Aachener Bevölkerung während der Fremdherrschaft,” *Zeitschrift des Aachener Geschichtsvereins*, 63 (1951), 55 and 77. These two essays treat at length the attitude of the Aachen population. For the most part, the Aachen citizenry was not enthusiastic about the French occupation. However, it was even less sympathetic toward Prussia.

55. On the conditions prevailing in Aachen, see Hans Friedrich Heizmann, “Die wirtschaftliche und rechtliche Lage der arbeitenden Klasse um die Wende des 18. Jahrhunderts” (diss. Tübingen University, 1922), pp. 101ff. For Krefeld, see Buschbell and Heinzelmann, *Geschichte der Stadt Krefeld*, 2, pp. 21ff.

56. Brüning, “Handschriftliche Chronik,” pp. 62–63.

57. Eder, *Die Tätigkeit der Aachener Behörden*, pp. 72–76.

58. Heizmann, “Die wirtschaftliche und rechtliche Lage,” p. 133, and “Der preussische Gesandte von Dohm,” p. 323.

59. Eder, *Die Tätigkeit der Aachener Behörden*, pp. 78–80.

60. Buschbell and Heinzelmann, *Geschichte der Stadt Krefeld*, 2, pp. 21–23.

61. Eder, *Die Tätigkeit der Aachener Behörden*, p. 78, and Buschbell and Heinzelmann, *Geschichte der Stadt Krefeld*, 2, p. 29.

62. The contemporaneous observer was a local merchant. See “Tagebuch von Adam and Caroline Scheuten, geb. Bunge,” in *Stadtarchiv Krefeld Inventar Abt. A. no. 52* (typescript), esp. p. 6.

63. On December 24, 1794, in metropolitan France and on February 10, 1795, in the Rhineland: Eder, *Die Tätigkeit der Aachener Behörden*, pp. 91 and 100.

64. Brüning, “Handschriftliche Chronik,” pp. 63ff.

65. This memorandum, “Denkschrift der drei zu Verhandlungen mit dem Directorium nach Paris entsandten Mitglieder der Aachener Zentralverwaltung Bouget,

Cromm und Vossen," is reprinted in J. Hansen, ed., *Quellen zur Geschichte des Rheinlands (1780–1801)*, III, pp. 758–61.

66. Eder, *Die Tätigkeit der Aachener Behörd* . pp. 82–83.

67. Brüning, "Handschriftliche Chronik," p. 63.

68. Buschbell and Heinzelmann, *Geschichte der Stadt Krefeld*, II, p. 29. For a day-to-day account and one full of venom against the von der Leyens, see the comments in "Tagebuch von Adam und Caroline Scheuten," pp. 14–38.

69. *Journal de marche d'un volontaire de 1792 (journal de marche du sergent Fricasse)*, published by Loredan Larchey (Paris: A la librairie, 1882), p. 59.

70. "Kleine Gemälde aus den Feldzügen von 1794, 1795 and 1796," *Nieder-rheinische Blätter für Belehrung und Unterhaltung*, III (1803), 96.

71. *Journal du canonnier Bricard*, published by (grandsons) Alfred and Jules Bricard (Paris: Ch. Delagrave, 1891), p. 162.

72. *Journal du canonnier Bricard*, pp. 164–65 and 170–73, and Brüning, "Handschriftliche Chronik," p. 63.

73. Heizmann, "Die wirtschaftliche und rechtliche Lage," p. 108, and Eder, *Die Tätigkeit der Aachener Behörden*, pp. 103–5: 81 marks = 1 taler.

74. The territory on the left bank of the Rhine was made part of metropolitan France in November 1797. The incorporation was not formalized according to international law until April 1801.

75. See Alfred Engels, *Die Zollgrenze in der Eifel—Eine wirtschaftsgeschichtliche Untersuchung für die Zeit von 1790 bis 1834 (Schriften zur Rheinisch-Westfälischen Wirtschaftsgeschichte)* (Cologne: Rheinische-Westfälisches Wirtschaftsarchiv, 1959), 2, p. 55.

76. Anticipating these advantages, the central administration of Aachen (a body primarily composed of local industrialists) clamored for annexation with metropolitan France as early as December 1794: Ganser, "Die Wirkungen der französischen Herrschaft," p. 22, and Hansen, *Quellen zur Geschichte des Rheinlands 1780–1801*, IV, p. 898.

77. On March 26, 1798, the French 1791 law "relatif aux assemblés d'ouvriers et d'artisans de même état et profession" was extended to the newly annexed territory: Herrmann Weinberg, *Die wirtschaftliche Entwicklung der Stadt Aachen von der Einführen der Gewerbefreiheit (1798) bis zur Gegenwart (Aachener Beiträge zur Heimatkunde)*, X (Aachen: J. A. Mayer'sche Buchhandlung, 1931), p. 9. As regards some of the liberal reforms in the Berg area, see W. Meiners, "Die Franzosenzeit" in *Monatschrift des Bergischen Geschichtsvereins*, 10/6 (June 1903), 117–18.

78. Hashagen, "Das Rheinland beim Abschlusse," p. 36, and Sylv. Reinard-Xavier de Golbery, *Considérations sur le Département de la Rôer suivies de la notice d'Aix-la Chapelle et de Borcette* (Aachen: G. Beaufort, 1811), pp. 146–47.

79. Ganser, "Wirkungen der französischen Herrschaft," pp. 38–41.

80. *Ibid.*, p. 41.

81. J. B. Poissonet, *Coup-d'oeil historique et statistique sur la ville d'Aix-la-Chapelle et ses environs* (Aachen: D. D. La Rouelle, 1808), pp. 120–22.

82. See Joseph Dahmen, *Das Aachener Tuchgewerbe bis zum Ende des 19. Jahrhunderts—Ein Beitrag zur Wirtschaftsgeschichte der Stadt Aachen* (Berlin, Leipzig, and Vienna: Leopold Weiss, 1930), pp. 94–97.

83. *Annuaire de Département de la Rôer 1809*, 5th year, pp. 64–65. The economic preeminence of such large entrepreneurs as van Houten, Pastor, and Jecker was accentuated. They alone had the capital necessary to benefit from the sales of these secularized estates on such favorable terms. Also see Martin Schumacher, "Wirtschafts- und

Sozialverhältnisse der rheinischen Textilindustrie im frühen 19. Jahrhundert," *Rheinische Vierteljahrsblätter*, 35 (1971), 1–4 and 304.

84. Clemens Bruckner, *Aachen und seine Tuchindustrie* (Horb am Neckar: Mushakesche Verlagsanstalt, 1949), p. 44, and Golbery, *Considérations sur le Département de la Röer*, p. 369.

85. Joseph Strauch, *Die Aachener Tuchindustrie während der französischen Herrschaft (1794–1814)* (n.p., 1922), p. 34. In addition, thousands of women in the adjacent villages as well as in the Jülich and Limburg areas spun woolen yarn for Aachen industry.

86. Bruckner, *Aachen und seine Tuchindustrie*, p. 43. Of these firms, seven were medium-sized and two were small. It is believed that the report of the municipal council ignored the petty establishments in operation.

87. A. J. Dorsch, *Statistique du Département de la Röer* (Cologne: Oedenkoven and Thiriart, 1804), p. 376.

88. Poissonet, *Coup-d'oeil historique et statistique*, p. 150.

89. Golbery, *Considérations sur le Département de la Röer*, pp. 364–68.

90. Phillip Andreas Nemnich, *Tagebuch einer der Kultur und Industrie gewidmeten Reise* (Tübingen: T.C. Cotta, 1809), I, pp. 302–6.

91. A. J. Dorsch, *Statistique du Département de la Röer*, p. 636, and J. C. F. Ladoucette, *Voyage fait en 1813 et 1819 entre Meuse et Rhin* (Paris: Alexis Eymery and Aachen: Larulle fils, 1818), pp. 30–31.

92. Aachen fabrics were recognized by being awarded prizes at the Paris Exhibition of 1806. In subsequent years, local prize distributions extolled the high quality of these textile products. See *Annuaire du Département de la Röer, 1809*, pp. 66–67.

93. Dorsch, *Statistique du Département de la Röer*, p. 397, and Golbery, *Considérations sur le Département de la Röer*, pp. 370–80. The glowing descriptions by these French officials of the textile trades in the Röer department, and particularly the Aachen wool industry, should be taken with a grain of salt. There was progress, but these officials were inclined at times to make extravagant claims about advances in areas under their tutelage.

94. Bruckner, *Aachen und seine Tuchindustrie*, p. 44.

95. Thun, *Die Industrie am Niederrhein*, part 2, section 2, p. 19.

96. Nemnich, *Tagebuch einer der Kultur und Industrie*, I, pp. 311–12.

97. Golbery, *Considérations sur le Département de la Röer*, pp. 368–69.

98. Contemporaries were aware that the new machines were not only generally labor saving, but that they also led to a reduced demand for skilled labor: "The need to train people is limited to those who build and operate these machines . . . and difficulties connected with apprenticeship are considerably eased." Finally, these new machines "have the great advantage of providing employment to children, women, old men, and cripples." See *Annuaire du Département de la Röer, 1809*, p. 64, n. 1.

99. Nemnich, *Tagebuch einer der Kultur und Industrie*, I, pp. 311–12.

100. Korr, "Die Einführung der Dampfkraft in die Aachener Industrie bis zum Jahre 1831" (diss., Tübingen University, 1921), p. 36, and Strauch, *Die Aachener Industrie*, pp. 27–28.

101. The technological implications of these new machines are described in the very fine essay by Julia de L. Mann, "The Textile Industry: Machinery for Cotton, Flax, Wool, 1760–1850," in *A History of Technology*, ed. Charles Singer et al., *The Industrial Revolution c. 1750–c. 1850*, vol. 4, part 1 (New York and London: Oxford University Press, 1958), esp. pp. 280–88 and 298–300. According to the same author, the French were ahead of the English in the construction of shearing machinery.

102. Ganser, "Die Wirkungen der französischen Herrschaft," pp. 47–48. Only the Pastor mill in Burtscheid, one of the largest in the area, had a steam engine that was used temporarily whenever water power failed: F. and P. Goldschmidt, *Das Leben des Staatsrath Kunth*, Appendix, p. 257.

103. For an account of Cockerill's life and activities in the Verviers-Liège area, see Ernest Mahaim, "Les débuts de l'établissement John Cockerill à Seraing," *Vierteljahrsschrift für Social- und Wirtschaftsgeschichte*, III (1905), 627–48, and Pierre Lebrun, *L'industrie de la laine à Verviers pendant le XVIII^e et le début du XIX^e siècle—Contribution à l'étude des origines de la révolution industrielle* (Paris: Les Belles Lettres, 1948), pp. 234–40.

104. Ganser, "Die Wirkungen der französischen Herrschaft," p. 49, emphasizes the Western orientation of Aachen industry during this period. Regarding the incipient stage of the industrial revolution in Verviers, see Lebrun, *L'industrie de la laine à Verviers*, pp. 241–54.

105. Ganser, "Die Wirkungen der französischen Herrschaft," p. 49.

106. Golbery, *Considérations sur le Département de la Rôer*, pp. 157 and 363–64; J. Strauch, *Die Aachener Tuchindustrie*, p. 28, quotes the *Allgemeine Handelszeitung* (Nuremberg) for May 19, 1807, regarding the absence of competent craftsmen and mechanics in the area.

107. Korr, "Die Einführung der Dampfkraft," p. 34.

108. Joh. Schmidt, "Über die Fabriken, Manufakturen, den Handel und die Gewerbe des Rôerdepartements und besonders des ehemaligen Herzogthums Jülich," *Niederrheinisch-Westfälische Blätter*, I (1802), 258–59.

109. Hashagen, "Das Rheinland beim Abschlusse," p. 12.

110. Engels, *Die Zollgrenze in der Eifel*, pp. 56–57.

111. These "manufacturers" were master craftsmen. The number of actual merchant-manufacturers was eight.

112. Ladoucette, *Voyage fait en 1813 et 1814*, p. 46.

113. Golbery, *Considérations sur le Département de la Rôer*, pp. 195–97.

114. Nemnich, *Tagebuch einer der Kultur und Industrie*, 1, pp. 344–45.

115. Engels, *Die Zollgrenze in der Eifel*, pp. 55–56.

116. E. Barkhausen, *Die Tuchindustrie in Monschau, ihr Aufstieg und ihr Niedergang* (Aachen: Aachener Verlags- und Druckerei Gesellschaft, 1925), pp. 123–46.

117. Ladoucette, *Voyage fait en 1813 et 1814*, pp. 36–37.

118. Bruckner, *Aachen und seine Tuchindustrie*, p. 44, and Poissonet, *Coup-d'oeil historique et statistique*, pp. 195–96.

119. Ladoucette, *Voyage fait en 1813 et 1814*, pp. 120–24. By 1813 twelve thousand persons were employed in the silk industry.

120. Thun, *Die Industrie am Niederrhein*, part 2, section 2, pp. 89–90.

121. This memorandum is reprinted in Zeys, *Die Entstehung der Handelskammern*, Appendix 11, pp. 272–78. The mode of argument betrayed quite clearly the old merchants as the principal sponsors of this petition. Having praised in a qualified manner the Frederican system of monopoly, the merchants recalled, as they usually did in the introductory parts of such communications, the great social services they had so far rendered to their employees. They then demanded the creation of an industrial court to deal specifically with employer-employee relations. Most important, they sought regulations stipulating that a weaver who had given notice could leave his job only after a period of three months. The employer, in turn, was to be limited in the same way, except that insubordination on the part of the employee was to be grounds for instant dismissal. In effect, the latter clause meant that employers wanted to

reserve for themselves a powerful, yet arbitrary, weapon in their dealings with the workers whose increased bargaining power they feared. Finally, the manufacturers were to be permitted to reduce wages in case of shoddy workmanship.

A petition of this nature is a document of its time. It indicates the prevailing pattern of the labor market and at least provides some clues to an understanding of the manufacturers' attitudes toward their workers. Hans Botzet, "Die Geschichte der sozialen Verhältnisse in Krefeld und ihre wirtschaftlichen Zusammenhänge" (diss., Cologne University, 1956), p. 60, refers to this memorandum as "the low ebb of social irresponsibility . . . evidence on the part of the petitioners of their complete lack of feeling for justice and responsibility . . . a far cry from the religious-ethical sentiments that had prompted the founding generation of manufacturers."

122. Botzet, "Die Geschichte der sozialen Verhältnisse in Krefeld," pp. 61–62, provides a summary of this decree.

123. In Aachen, the *Conseil prud'hommes* was set up by imperial decree on April 1, 1808. For its activities, see Ganser, "Die Wirkungen der französischen Herrschaft," pp. 103–13. When the *Chambre consultative*, representing Aachen's cloth manufacturers, petitioned for the establishment of a *Conseil prud'hommes*, they pleaded "on grounds we can sum up in a few words: the institution will be meant to combat both the numerous defraudations perpetuated by workers as well as the unbelievable impertinence of a horde of middlemen who carry on a very active trade in stolen raw materials."

124. See *Annuaire du Département de Rôer, 1809*, pp. 67ff. Judging by the numerous cases brought before these tribunals, their usefulness seems to have been beyond question, even in the Lower Rhine region. In Aachen, they continued after the collapse of the Napoleonic regime. In Krefeld they disappeared in 1813 and were not revived until 1834, when the Prussian authorities turned these tribunals into Industrial and Factory Courts. In any event, the historical importance of the *Conseils prud'hommes* in the Rhineland is assured. They constituted the forerunners of the labor courts, which subsequently were to be a distinct characteristic of German industrial relations: Zeys, *Die Entstehung der Handelskammer*, pp. 207–22.

125. Heizmann, "Die wirtschaftliche und rechtliche Lage," pp. 121–22; Zeys, *Die Entstehung der Handelskammer*, pp. 20–25 and 200.

126. The law specified that the worker was to relinquish his work book to his new employer, who in turn was to enter into it the work record and the debts incurred by the particular worker while in his service. Upon severing his employment, the wage earner was to be given back his work book, which was to include an appropriate testimonial. It was illegal for employers to issue bad reports, but they nevertheless managed, if they so desired, to damn a worker by silence or by faint praise. With such a black mark against him or with large debts recorded (for which any subsequent employer was held legally responsible), the search by a worker for a new job became rather difficult and at times even impossible: Heizmann, "Die wirtschaftliche und rechtliche Lage," pp. 126–36, and Ganser, "Die Wirkungen der französischen Herrschaft," pp. 115–17.

127. Heizmann, "Die wirtschaftliche und rechtliche Lage," pp. 135–36.

128. According to de Golbery, the social scene was rather grim: "There are few towns where the number of maimed, deformed, hunchbacked, and generally handicapped is as large, among both sexes, as it is in Aachen."

129. Nemnich, *Tagebuch einer der Kultur und Industrie*, I, pp. 389–91.

130. Poissonet, *Coup-d'oeil historique et statistique*, p. 122, n., and *Annuaire du Département de la Rôer 1809*, p. 66.

131. Friedrich Otto Dilthey, *Die Geschichte der niederrheinischen Baumwollindustrie* (Jena: Gustav Fischer, 1908), p. 5.

132. Nemnich, *Tagebuch einer der Kultur und Industrie*, 1, p. 396.

133. Hashagen, "Das Rheinland beim Abschlusse," pp. 37–38.

134. Nemnich, *Tagebuch einer der Kultur und Industrie*, I, pp. 417 and 405–06. For a flavor of that boom in Wupper valley textiles during the first seven years of the nineteenth century, see the contemporaneous observations in "Nachrichten aus meinem Leben—Von Johann Wilhelm Fischer aus Barmen" (Walther von Eyern, ed.), *Zeitschrift des Bergischen Geschichtsvereins*, 58 (1929), esp. pp. 49–52. Fischer was working for J. P. Schlickum, the Barmen entrepreneur for whom Italy, at the time, appears to have been the principal outlet. In Naples, according to Fischer, they referred to the Turkish-red cottons as *fazzoletti Schlickum*. The popularity of the Wupper valley wares was largely due to the difficulties (after 1802) of importing English goods. Because of this avalanche of orders, "the factory had once again to be doubled in size. . . . It [the factory] had been enlarged to boast of (ca. 1804) eight shearing frames and employed about 400 weavers; fourteen men worked in the red dye plant" (p. 52).

135. Redlich, "Napoleon I und die Industrie des Grossherzogtums Berg," pp. 189–90.

136. Buschbell and Heinzelmann, *Geschichte der Stadt Krefeld*, II, pp. 111–12, and Eugen Tarlé, "Deutsch-Französische Wirtschaftsbeziehungen zur Napoleonischen zeit," *Schmollers Jahrbuch für Gesetzgebung, Verwaltung und Volkswirtschaft im Deutschen Reich*, 38/1 (1914), 172. Also Zeys, *Die Entstehung der Handelskammern*, pp. 104ff. Berg manufacturers were subject to a 10 percent ad valorem duty.

137. Köllmann, *Sozialgeschichte der Stadt Barmen*, p. 38.

138. Thun, *Die Industrie am Niederrhein*, part 2, section 3, p. 189.

139. Schumacher, *Untersuchung über die Entwicklung der bergischen Seidenindustrie*, p. 22.

140. Between 1750 and 1810 the population increase in Barmen was of the order of 334 percent—i.e., from 3,790 to 16,289 inhabitants: Köllmann, *Sozialgeschichte der Stadt Barmen*, pp. 9 and 71 (Table 8).

141. Redlich, *Napoleon I und die Industrie des Grossherzogtums Berg*, p. 190. The special set of circumstances that gave the Elberfeld-Barmen producers a competitive advantage with respect to the *Siamosen* manufacture, prompted, according to W. Fränken, a "reverse flow" of labor and capital from the Gladbach-Rheydt area into the Wupper valley during the period 1796–1801; *Die Entwicklung des Gewerbes in den Städten Mönchengladbach und Rheydt*, p. 36.

142. Nemnich, *Tagebuch einer der Kultur und Industrie*, I, pp. 407–10. Nemnich also commented that the manufacture of Casper Engels' Söhne in Barmen was of "great importance and worthwhile seeing." This, of course, was Friedrich Engels' ancestral firm.

143. Thun, *Die Industrie am Niederrhein*, part 2, section 3, pp. 188–89 and 260–61. Appendix 7. By 1800 Elberfeld industry had 2,540 ribbon looms and 4,200 cotton looms in operation: "Ungefährer Zustand der Cultur und des Commerzes in jedem Amte," *Beyträge zur Statistik des Herzogtums Berg* (1802), p. 45.

144. According to Nemnich, about 3 million talers, of which one quarter was spent on wages: *Tagebuch einer der Kultur und Industrie*, 1, p. 421.

145. Thun, *Die Industrie am Niederrhein*, part 2, section 3, pp. 188–89.

146. "Ungefährer Zustand der Cultur," p. 39, and Nemnich, *Tagebuch einer der Kultur und Industrie*, I, pp. 420–28.

147. W. Harless, "Aus Hückeswagens Vorzeit," *Zeitschrift des Bergischen Geschichtsvereins*, 25 (1889), 92.

148. Thun, *Die Industrie am Niederrhein*, part 2, section 3, pp. 188–89. Nemnich noted that the two largest Elberfeld silk manufacturers—Simens Erben and Simons and Blank—employed “more than 2,000 workers in Elberfeld as well as in a [walking] radius of three to four hours.”

149. Albert Beugnot, ed. *Mémoires du Comte Beugnot, ancien ministre (1783–1815)* (Paris: E. Dentu, 1866), p. 291.

150. Schumacher, *Untersuchungen über die Entwicklung der Bergischen Seidenindustrie*, p. 25. For similar comments, also see *Correspondence de Joachim Murat*, ed. Albert Lumbroseo (Turin: Roux Frassati and Co., 1899), esp. letter cxli (March 1806) to Tallyrand, pp. 119–20.

151. G. Croon, “Über des Zunftwesen in Düsseldorf,” *Beiträge zur Geschichte des Niederrheins—Jahrbuch des Düsseldorfer Geschichtsvereins*, 18 (Düsseldorf, 1913), 153, and Meiners, “Die Franzosenzeit,” pp. 115–18.

152. Bernhard Schöneshöfer, *Geschichte des Bergischen Landes* (Elberfeld: Baederk'sche Buch- und Kunsthandlung und Buchdruckerei, 1895), p. 433. Regarding the popularity of these reform measures among some sections of the population, see *Mémoires du Comte Beugnot*, p. 363.

153. Schmidt, *Le Grande Duché de Berg 1806–1813* (Paris: 1905), pp. 208–47.

154. Eli F. Heckscher, *The Continental System—An Economic Interpretation* (Oxford: Clarendon Press, 1922), pp. 311–17.

155. For a discussion of the militancy manifested by the French manufacturing interests in maintaining and consolidating the chauvinistic aspects of Napoleon's commercial policy, see Eugen Tarlé, *Bonaparte* (translated from the Russian) (New York: Knight Publications, 1937), pp. 237ff. By the same writer, see “Napoleon I, et les intérêts économiques de la France,” in *Revue des études napoléoniennes*, 36 (January–June 1926), 125–27.

156. Paul Darmstädter, “Studien zur napoleonischen Wirtschaftspolitik,” *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte*, 3 (1905), 113ff.; Tarlé, “Deutsch-französische Wirtschaftsbeziehungen zur napoleonischen Zeit,” p. 692; idem, “L'union économique du continent européen sous Napoleon I,” *Revue historique*, 166 (March–April 1931), 245ff.

157. Heckscher, *The Continental System*, pp. 311–12.

158. For a summary of the events and decrees that led to the throttling of Berg exports, see Tarlé, “Deutsch-französische Wirtschaftsbeziehungen,” pp. 165–72, and Schmidt, *Le Grand Duché de Berg*, pp. 333–35 and 342–46.

159. Redlich, “Napoleon I und die Industrie des Grossherzogtums Berg,” pp. 190–93.

160. Both officials showed great sympathy for the plight of Berg industry. They supported the numerous local petitions. They also advised the various deputations that the Berg industrialists were continuously sending to Paris in the hope of reversing imperial policy. Moreover, Beugnot and Roederer did not shirk from exposing, with biting wit, the specious arguments advanced by the French interest groups, which pleaded for the maintenance of the status quo because they feared the competition of the low-cost industries in the duchy of Berg. See Tarlé, “Deutsch-französische Wirtschaftsbeziehungen,” p. 169, n. 1, and Schmidt, *Le Grand Duché de Berg*, pp. 381–86 and 397ff.

161. Schmidt, *Le Grande Duché de Berg*, pp. 344–46.

162. *Ibid.*, pp. 394–97, and Appendix E, where the petition of the Cologne Chamber of Commerce opposing incorporation of the Berg area is reprinted.

That these merchants and manufacturers in the western Rhineland should have been so indifferent to the fate of their fellow countrymen on the other side of the frontier (the tariff barrier) is as significant an index of the state of German nationalism as the fact that the Wupper valley merchants considered the duchy of Berg their fatherland: Hashagen, "Das Rheinland beim Abschlusse," pp. 38–39.

163. See Odette Viennet, *Napoléon et l'industrie française—La crise de 1810–1811* (Paris: Librairie Plon, 1947), esp. pp. 130–44.

164. On smuggling, see Heckscher, *The Continental System*, chap. 3. and Schmidt, *Le Grand Duché de Berg*, p. 344.

165. Hashagen, "Das Rheinland beim Abschlusse," pp. 38–39, and Schmidt, *Le Grand Duché de Berg*, pp. 399–400.

166. Tarlé, "Deutsch-französische Wirtschaftsbeziehungen," pp. 166–67, and Redlich, "Napoleon I und die Industrie des Grossherzogtums Berg," p. 204.

167. Schmidt, *Le Grand Duché Berg*, pp. 387 and 408–9.

168. Harless, "Aus Hückeswagen Vorzeit," p. 92.

169. Schmidt, *Le Grand Duché de Berg*, p. 386.

170. "Barmen," wrote Beugnot, "placed three-fourths of its products in France." Ch. Schmidt, "L'industrie dans le Grand Duché de Berg en 1810," pp. 608 and 534, n. 1.

171. Schmidt, "L'industrie dans le Grand Duché de Berg en 1810," pp. 606–9.

172. *Ibid.*, p. 533.

173. *Ibid.*, p. 408 and Schöneshöfer, *Geschichte des Bergischen Landes*, p. 436.

174. Harless, "Aus Hückeswagen Vorzeit," p. 47.

175. For an account of these riots, see Rudolf Goecke, *Das Grossherzogtum Berg unter Joachim Murat, Napoleon I und Louis Napoleon 1806–1813* (Cologne: DuMont Schauberg, 1877), pp. 84–85, and Schmidt, *Le Grand Duché de Berg*, pp. 461–64.

176. Goecke, *Das Grossherzogtum Berg*, p. 85, and Schmidt, *Le Grand Duché de Berg*, pp. 407 and 465–68.

177. See especially City Archives, Wuppertal, *Acten des Oberbürgermeister-Amtes der Stadt und Samtgemeinde Elberfeld, enthaltend: den hier im Jahre 1813 Stattgehabten Aufruhr der benachbarten Ortschaften*, and sent to the writer by the City Archives Director, Dr. Gerhart Werner, who has written a good account of that riot in *Wuppertal in Napoleonischer Zeit* (Wuppertal: Hans Putty Verlag, 1967), pp. 36–40.

178. Elly Mohrmann, "Johann Friedrich Benzenberg—Ein Sprecher der frühen rheinischen Bourgeoisie," *Jahrbuch für Wirtschaftsgeschichte*, 1 (1970), 81.

179. W. Meiners, "Christian Hasenclever aus Remscheid und der Aufstand der Knüppelrussen im 1813," *Monatsschrift des Bergischen Geschichtsvereins*, 12/8/9 (August–September 1905), 141–45.

180. For a contemporaneous account, see H. Vossnack, "Jugenderinnerungen aus der Russen- und Franzosenzeit," *Monatsschrift des Bergischen Geschichtsvereins*, 14/2 (February 1907), 36.

181. Otto Brandt, *Studien zur Wirtschafts- und Verwaltungsgeschichte der Stadt Düsseldorf im 19. Jahrhundert* (Düsseldorf: August Bagel, 1902), pp. 81–82.

182. For an eyewitness account of the horrors of conscription, "a veritable plague," see Vossnack, "Jugenderinnerungen," p. 32.

183. Mohrmann, "Johann Friedrich Benzenberg," pp. 80–81.

184. G. Werner, *Wuppertal in napoleonischer Zeit*, p. 60. Also, for another good account of the riot days, see W. Meiners, "Die Knüppelrussen in Elberfeld," *Monatsschrift des Bergischen Geschichtsvereins*, 10/12 (December 1903), 229–34.

185. Wilhelm Engels. "Massnahmen der bergischen Regierung gegen die Abwanderung der hiesigen Industrie in der zweiten Hälfte des 18. und zu anfang des 19. Jahrhunderts." *Zeitschrift des Bergischen Geschichtsvereins*, 64 (1936–1937), 14.
186. See specifically the observation of Johann Wilhelm Fischer, "Nachrichten aus meinem Leben," p. 112 (W. von Eynern, ed.).
187. Heckscher, *The Continental System*, p. 315.
188. *Ibid.*, chap. 3. Also Félix Ponteil. "La contrebande sur le Rhin au temps du premier empire," *Revue historique*, 175 (March–April 1935), 257ff.
189. See Edmund Strutz, "Bergische Wirtschaftsgeschichte," in J. Hashagen et al., *Bergische Geschichte* (Remscheid-Lennep: H. Mann, 1958), p. 397.
190. Beugnot commented that "the Grand Duchy of Berg is the only manufacturing country where the inevitable hardships of the Continental System remain uncompensated" (Schmidt, "L'industrie dans le Grand Duché de Berg en 1810," p. 527).
191. Reviewing the various stages of harassment to which Berg textiles were being subjected since 1801, W. Meiners made a point that should be taken into consideration when evaluating the Wupper valley economy in general and the textile trades in particular throughout the Napoleonic era: "[These difficulties] notwithstanding during the years 1808, 1809, and well into 1810, one cannot as yet speak of a total collapse of Berg industry. There was still the Dutch market. At the same time, Berg entrepreneurs sought, via Denmark, a new route to America. Also, new contacts were being established in Russia and new efforts were made to enlarge their German and Austrian markets. Besides, the Frankfurt, Braunschweig, and Leipzig fairs registered more Berg merchants in attendance. In short, the industry of the Grand Duchy found itself in a crisis and sought new ways out of it. There was still hope that the industry could recover and that the crisis could be overcome. . . . It was only in the summer of 1810 that total stagnation began" (W. Meiners, "Die bergische Industrie während der Fremdherrschaft [1806–1813] mit besonderer 'Berücksichtigung' Elberfelds," *Monatschrift des Bergischen Geschichtsvereins*, 13/1 and 2 [January and February 1906], 24 and 30).
192. L. Lévy-Schneider, "Les habitants de la rive gauche du Rhin et la France sous le Premier Empire," in *Révolution française*, 42 (January–July 1902), 157–59.
193. "Betrachtungen über das Gouvernement vom Niederrhein," *Journal des Nieder-Rheins*, no. 2 (Aachen: March 15, 1814).
194. Lévy-Schneider, "Les habitants de la rive gauche," pp. 157–59. The output of the textile industry alone accounted for 40 million francs.
195. Ladoucette, *Voyage fait en 1813 et 1814*, p. 234. The Krefeld silk manufacturers continued as the richest capitalists of the Département de la Rôer. See Max Barkhausen, "Die sieben bedeutendsten Fabrikanten des Rôer departements im Jahre 1810," originally published in the *Rheinische Vierteljahrsblätter*, 25 (1960), and reprinted in the author's collection of essays *Aus Territorial- und Wirtschaftsgeschichte* (published by the city of Krefeld, 1963), esp. pp. 298 and 304–7.
196. Willy Brendgens, *Die wirtschaftliche, soziale und kommunale Entwicklung von Viersen* (Viersen: Gesellschaft für Druck und Verlag, 1929), pp. 56–57.
197. Lévy-Schneider, "Les habitants de la rive gauche," pp. 157–59. See also Fränken, *Die Entwicklung des Gewerbes in den Städten Mönchengladbach und Rheydt*, pp. 19–21.
198. Ladoucette reports that after 1804 some 2,500 persons operated more than 250 spinning machines in the Krefeld area (Ladoucette, *Voyage fait en 1813 et 1814*, p. 124). Fränken, *Die Entwicklung des Gewerbes in den Städten Mönchengladbach und Rheydt*, pp. 37–38, 40, 42, and 45–47, document in detail the sudden growth of the

cotton manufacture and especially of cotton spinning from 1801 and particularly from 1806 on, until the collapse of the Napoleonic empire.

199. Dilthey, *Die Geschichte der niederrheinischen Baumwollindustrie*, pp. 8–9.

Population Increase in the Gladbach-Rheydt Districts

| Urban Boroughs | Year | Population |
|----------------|--------|------------|
| Rheydt | 1794 | 277 |
| | 1814 | 3,555 |
| Viersen | 1789 | 4,416 |
| | 1816 | 6,827 |
| Gladbach | 1802–3 | 2,304 |
| | 1812 | 6,932 |
| Odenkirchen | 1798 | 1,855 |
| | 1816 | 4,073 |
| Rural Boroughs | | |
| Schelsen | 1798 | 1,710 |
| | 1816 | 2,599 |
| Schiefbahn | 1798 | 1,081 |
| | 1816 | 1,791 |
| Liedberg | 1798 | 919 |
| | 1816 | 920 |

200. Zeys, *Die Entstehung der Handelskammer*, pp. 83–84. Chap. 4 of the Zeys study summarizes the industrial census of the Rôer department undertaken by the French in 1811 (see esp. pp. 80–81). Some wage statistics are also included (p. 89). The average wage in the Rôer department during 1811 ranged from 1 to 1.5 francs per day. Earnings in the spinning mills were somewhat lower; cotton and silk weavers received from 1 to 1.75 francs per day (3.75 francs = 1 taler).

201. Wilhelm Strauss, ed., *Geschichte der Stadt Rheydt* (Rheydt: W. R. Lange-wiesche, 1897), 2, pp. 380–81.

202. See Ladoucette, *Voyage fait en 1813 et 1814*, pp. 140–46.

203. Lebrun, *L'industrie de la laine à Verviers*, p. 98.

204. For some interesting comments on how in pre-1914 Germany a "narrowly conceived and frightened patriotism" inhibited a dispassionate assessment of the impact of the French era upon the Rhineland, see Korr, "Die Einführung der Dampfkraft," p. 30.

205. Ganser, "Die Wirkungen der französischen Herrschaft," p. 30.

206. Strauch, *Die Aachener Tuchindustrie*, p. 71.

207. Paul Darmstädter, "Studien zur napoleonischen Wirtschaftspolitik," *Viertel-jahrschrift für Sozial- und Wirtschaftsgeschichte*, 2 (1904), 614–15. As regards the *contradictions internes* of the French and European economies subject to the Continental System, see the interesting article by Louis Bergeron, "Problèmes économiques de la France napoléonienne" for the symposium "La France à l'époque napoléonienne" published in *Revue d'histoire moderne et contemporaine*, 17 (July–September 1970), esp. pp. 499–500.

208. For a clear and detailed account of British export patterns during this period, see the monumental study by François Crouzet, *L'économie britannique et le Blocus Continental* (Paris: Presses Universitaires de France, 1958), II, pp. 470–82. Even the

official *Annuaire du Département de la Rôer 1809*, p. 9, admits some possibly diversionary effects upon foreign trade because of the war and the various commercial restrictions.

209. Richard Wichterich, "Die Entwicklung der Aachener Tuchindustrie von 1815–1914" (diss., Cologne University, 1922), p. 75.

210. See *Werden und Wachsen eines Wirtschaftsgebietes am linken Niederrhein—Festschrift zur Feier ihres 100jährigen Bestehens*, published by the Industrie- und Handelskammer Gladbach-Rheydt-Neuss (Gladbach: Industrie und Handelskammer, 1937), pp. 33–34. See also Fränken, *Die Entwicklung des Gewerbes in den Städten Mönchengladbach und Rheydt*, p. 46, where the author emphasizes that the crude spinning machines could be utilized because there was a total prohibition on English yarn imports.

211. Henderson, *Britain and Industrial Europe*, p. 26, and Heckscher, *The Continental System*, p. 286. Nor was the industry subject to the healthy blasts of competition. The defects of the Continental System with respect to its limiting effects upon competition and thus upon the technological improvements of industry are shown especially in Jacob Aders (the Wupper valley merchant prince) in E. Mohrmann, "Johann Friedrich Benzenberg," p. 77.

212. Bruckner, *Aachen und seine Tuchindustrie*, p. 44.

213. Alfred Herrmann, "Die Stimmung der Rheinländer gegenüber Preussen 1814–1816," *Annalen des Historischen Vereins für den Niederrhein*, 115 (1929), 368–70. The Rhineland merchants were particularly apprehensive about the end of "protection" and the emergence of English competition, which was to them synonymous with "free trade."

214. For an account of the change in attitude towards the French by the Rhineland manufacturers, see the article by Franz Oppenhoff on the Jacobis and Clermonts, two of the most distinguished entrepreneurial families in the region at that time: "Die Beziehungen Friedrich Heinrich Jacobis und seiner Familie zu Aachen," *Zeitschrift des Aachener Geschichtsvereins*, 16 (1894), 150–58.

215. See Tarlé, *Bonaparte*, p. 131, and Lebrun, *L'industrie de la laine à Verviers*, pp. 103–4.

216. Hashagen, "Das Rheinland beim Abschlusse," p. 40.

217. Engels, "Die Reichsverfassungscampagne," p. 43.

218. Note the interesting comments, "interventions," by R. Dufraisse in *Occupants-Occupés 1792–1815*, p. 161: "Accordingly, the attitude of these people in 1813 and 1814 is clear-cut; they wanted, I believe, to preserve the advantages of the French regime without its inconveniences, i.e., without essentially the burdens of war and, very probably, the tribulations of despotism. Hence the aspiration of the Rhinelanders and, after 1815, their great preoccupation is how to maintain French institutions."

219. Justus Hasagen, *Das Rheinland und die französische Herrschaft—Beiträge zur Charakteristik ihres Gegensatzes* (Bonn: Peter Hanstein, 1908), p. 335. Also, on the lasting influence of the French era, see K. G. Faber, "Verwaltungs- und Justizbeamte auf dem Linken Rheinufer während der französischen Herrschaft," pp. 384–85.

CHAPTER 6

1. For one survey and an up-to-date evaluation of the literature from the first efforts at defining *Hausindustrie* to more recent investigations into protoindustriali-

zation, see the Introduction to Peter Kriedte, Hans Medick, and Jürgen Schlumbohm in *Industrialisierung vor der Industrialisierung. Gewerbliche Warenproduktion auf dem Land in der Formationsperiode des Kapitalismus*, (Göttingen: Max-Planck Institute for History, 1977), 53, pp. 13ff. Republished in English as *Industrialization Before Industrialization*, translated by Beate Schempp (Cambridge: University Press, 1981). See introductory comments, pp. 1–11.

2. See the introductory comments in Horst Krüger, *Zur Geschichte der Manufakturen und der Manufakturarbeiter in Preussen* (Berlin: Rütten and Loening, 1958), esp. pp. 12–15.

3. Hans Rosenberg, *Grosse Depression und Bismarkzeit. Wirtschaftsablauf, Gesellschaft und Politik in Mitteleuropa* (Berlin: de Gruyter, 1967).

4. For a short survey of the evolution of German economic history as a discipline, see the essay by Karl Hardach, "Some Remarks on German Historiography and Its Understanding of the Industrial Revolution in Germany," *Journal of European Economic History*, 1/1 (Spring 1972), 37–99.

5. S. B. Kan, *Dva vosstaniya silezskich ткачей (1793–1844) (Two Revolts of the Silesian Weavers)*. Here the Czech translation of the Russian original has been used (Prague: Rovnost, 1952). See pp. 15ff. This work was originally published in Moscow in 1948.

6. Werner Sombart, *Die Deutsche Volkswirtschaft im neunzehnten Jahrhundert* (Berlin: Georg Bondi, 1903), pp. 3–22.

7. Kan, *Dva vosstaniya*, pp. 20–25.

8. "Economic evolution," wrote Alfred Marshall in the introduction to his *Principles*, "is gradual. Its progress is sometimes arrested or reversed by political catastrophes; but its forward movements are never sudden; for even in the Western World and Japan it is based on habit, partly conscious, partly unconscious. And though an inventor or an organizer, or a financier of genius may seem to have modified the economic structure of a people almost at a stroke; yet that part of his influence, which has not been merely superficial and transitory, is found on inquiry to have done little more than bring to a head a broad constructive movement which had long been in preparation." Quoted by Bruce Glassburner, "Alfred Marshall on Economic History and Historical Development," *Quarterly Journal of Economics*, 69 (1955), 585.

9. Chap. 1 (introduction).

10. For a good summary of the discussion as to when German industrialization "started," see Hardach, "Some Remarks," pp. 65–71.

EPILOGUE

1. Herbert Kisch was an early encourager of the "Göttingen Three," as the preface to their book acknowledges. See Peter Kriedte, Hans Medick, and Jürgen Schlumbohm, *Industrialization Before Industrialization: Rural Industry in the Genesis of Capitalism* (Cambridge, 1981).

2. D.C. Coleman, "Protoindustrialization: A Concept Too Many," *Economic History Review*, 2nd series, 36 (August 1983), 435–48.

3. Coleman's rather severe critique need not be taken as the last word on the subject, and is drawn on here for the sake of convenience and because it probably represents the present majority view among economic historians on the subject. See also the skeptical assessments (for Scandinavia) in the *Scandinavian Economic History Review*, 30, 1 (1982). The entire issue is devoted to this topic. Also see the comprehen-

sive review of L. A. Clarkson, "Protoindustrialization: The First Phase of Industrialization?" in *Studies in Economic and Social History* (London, 1985).

4. To some extent, this development of capitalist social relations is at the center of the story the "Göttingen Three" were telling. In that sense, Eckhardt Schremmer's long review of their book is correct in suggesting that "Capitalism Before Capitalism" might be a more appropriate title than the one they chose. See E. Schremmer, "Industrialisierung vor der Industrialisierung. Anmerkungen zu einem Konzept der Protoindustrialisierung," *Geschichte und Gesellschaft*, 6 (1980), 444.

5. The phrase is Marx's but the Marxist historical discussion is by Maurice Dobb. See M. Dobb, *Studies in the Development of Capitalism* (London, 1963), chap. 5, esp. pp. 134–51. The idea is that where industrial capitalists evolved from an agrarian "yeoman" background, as opposed to the background of great mercantile wealth as concentrated in centers such as London, the bourgeois-capitalist transformation of society will have been more thoroughgoing.

6. For Great Britain, see the classic on Lancashire by A. R. Wadsworth and J. Mann, *The Cotton Trade and Industrial Lancashire 1600–1780* (Manchester, 1931), esp. pp. 25–51 and 78–96; R. G. Wilson, "The Supremacy of the Yorkshire Cloth Industry in the Eighteenth Century," in N. B. Harte and K. G. Ponting, eds., *Textile History and Economic History, Festschrift for Julia de Lacy Mann* (Manchester, 1973), pp. 225–46, esp. 238–45; A. Rogers, "Industrialization and the Local Community," in Sidney Pollard, ed., *Region und Industrialisierung. Studien zur Rolle der Region in der Wirtschaftsgeschichte der letzten zwei Jahrhunderte* (Göttingen, 1980), pp. 196–224, esp. 203–4; D. Levine, *Family Formation in an Age of Nascent Capitalism* (New York, 1977), and R. Mills, "Protoindustrialization and Social Structure: The Case of the Hosiery Industry in Leicestershire, England," paper submitted to the 8th International Conference of Economic History, Budapest, 1982. For Switzerland (Zurich region), see the classic by Rudolf Braun, *Industrialisierung und Volksleben. Veränderungen der Lebensformen unter Einwirkung der verlagsindustriellen Heimarbeit in einem ländlichen Industriegebiet (Zürcher Oberland) vor 1800* (Winterthur, 1960). For Saxony, see Gerhard Heitz, "Die Entwicklung der ländlichen Leinenproduktion Sachsens in der ersten Hälfte des 16. Jahrhunderts," *Schriften des Instituts für Geschichte*, IV (East Berlin, 1961); W. A. Boelcke, "Wandlungen der dörflichen Sozialstruktur während Mittelalter und Neuzeit," *Festschrift honoring G. Franz* (Frankfurt, 1967); and Karl Heinz Blaschke, *Bevölkerungsgeschichte von Sachsen bis zur Industriellen Revolution* (Weimar, 1967), pp. 159–95, esp. pp. 182–87. See also the wide-ranging survey by Robert Brenner, "Agrarian Class Structures and Economic Development in Pre-Industrial Europe," *Past and Present*, 70 (February 1976). Although this study does not mention "protoindustrialization" as a concept, it acknowledges the historical importance of the reality along "Kischian" lines. See also T. H. Aston and C. H. E. Philpin, eds., *The Brenner Debate: Agrarian Class Structure and Economic Development in Pre-Industrial Europe* (Cambridge, 1985).

7. Kisch acknowledged that Mendels's work was highly original, had the merit of calling attention to the pre-nineteenth-century contribution of rural industry to European industrialization, and was certainly more sophisticated than previous Malthusian interpretations. Most interpretations of German rural industry, for example, seem to view its development as a necessary response to population pressure, as an alternative to starvation, so to speak. See G. Adelman, "Die ländlichen Textilgewerbe des Rheinlandes vor der Industrialisierung," in G. Adelman, *Vom Gewerbe zur Industrie im Kontinentalen Nordwesteuropa* (Wiesbaden, 1986), esp. p. 33 and n. 54. See also F. W. Henning, "Industrialisierung und dörfliche Einkommensmöglichkeiten. Der Ein-

fluss der Industrialisierung des Textilgewerbes in Deutschland im 19. Jahrhundert auf Einkommensmöglichkeiten in der ländlichen Gebieten," in H. Kellebenz, ed., *Agrarisches Nebengewerbe und Formen der Reagrarisierung im Spätmittelalter und 19./20. Jahrhundert* (Stuttgart, 1975), esp. p. 155.

8. Coleman, "Protoindustrialization," pp. 437 and 442–43.

9. *Ibid.*, p. 443.

10. In addition to the studies cited in notes 6 and 7, see the literature discussed by P. Kriedte, H. Medick, and J. Schlumbohm in their reply to their critics: "Die Proto-Industrialisierung auf dem Prüfstand der historischen Zunft. Antwort auf einige Kritiker," *Geschichte und Gesellschaft*, 9 (1983), 87–105, esp. n. 60. See also Kriedte, Medick, and Schlumbohm, "Proto-Industrialization on Test with the Guild of Historians: Response to Some Critics," *Economy and Society* 15/2 (1986), 254–72.

11. Kisch returned to this question briefly and indirectly in his "Postskriptum," cited in the foreword to this volume.

12. David Landes, "What do Bosses Really Do," *Journal of Economic History*, 46 (1986), 585–623, and H. Kisch, "The Textile Industries in Silesia and the Rhineland: A Comparative Study in Industrialization" (with a Postscriptum), in Kriedte, Medick, and Schlumbohm, *Industrialization Before Industrialization*, pp. 178–200.

13. Landes, "What do Bosses Really Do," p. 595.

14. *Ibid.*, See also David Landes, *The Unbound Prometheus* (Cambridge, 1969), pp. 54–61. See also David Landes, *Revolution in Time: Clocks and the Making of the Modern World* (Cambridge, 1983), p. 227 and chap. 16.

15. There may be a contrast in this respect between Asian and Latin American experience. See David Felix, "Interrelationships Between Consumption, Economic Growth, and Income Distribution in Latin America Since 1800: A Comparative Perspective," in Henri Baudet and Henk Van der Meulen, eds., (London, 1982), pp. 131–78; also A. K. Bagchi, "De-industrialization in India in the 19th Century: Some Theoretical Implications," *Journal of Development Economics*, 6 (1976), 229–341; D. B. Gadgil, "Indian Economic Organization," in Simon Kuznets, Wilbert E. Moore, and Joseph Spengler, eds., *Economic Growth: Brazil, India, Japan* (Durham, N.C., 1955), pp. 448–63; K. Ohkawa and M. Shinohara, *Patterns of Japanese Economic Development* (New Haven, 1979); Dwight H. Perkins et al., *China's Modern Economy in Historical Perspective* (Stanford, Calif., 1975). These references and the idea of contrasting sequences are derived from an unpublished paper by David Felix, "Import Substitution and Late Industrialization: Latin America and Asia Compared" (1986).

16. Karl Heinrich Kaufhold has recognized this in his thoughtful review of the German edition of Kisch's essays in *Archiv für Sozialgeschichte*, 24 (1984), 752–56.

17. See Sidney Pollard, *Region und Industrialisierung* (cited in note 6) and *idem*, *Peaceful Conquest. The Industrialization of Europe, 1760–1970* (Oxford, 1981). For a recent review of the German literature, see P. Steinbach, "Zur Diskussion über den Begriff der 'Region'—Eine Grundsatzfrage der modernen Landesgeschichte," *Hessisches Jahrbuch für Landesgeschichte*, 31 (1981), 185–210.

18. In addition to sources cited in note 6, see (for the Westphalian Mark) K. H. Kaufhold, *Das Metallgewerbe der Grafschaft Mark im 18. und 19. Jahrhundert* (Dortmund, 1975) and G. Hohorst, *Wirtschaftswachstum und Bevölkerungsentwicklung in Preussen 1816–1914* (New York, 1977), esp. pp. 179–207 and chap. 5. For Saxony, see also Rudolf Forberger, *Die Manufaktur in Sachsen vom Ende des 16. bis zum Anfang des 19. Jahrhunderts* (East Berlin, 1958), esp. pp. 266–67.

19. Helga Schultz, *Landhandwerk im Übergang vom Feudalismus zum Kapitalismus* (East Berlin, 1984). Her use of a quantitative indicator of commercialization,

the ratio of artisans to population in regions of Germany around 1800, is interesting. What comes out most clearly is the backwardness of those areas—particularly the ones in East Elbia—with strong feudal elements as of 1800. These remained backward far into the nineteenth century. See also Karl Heinrich Kaufhold, *Das Gewerbe in Preussen um 1800* (Göttinger Beiträge zur Wirtschafts- und Sozialgeschichte), II (Göttingen, 1978).

20. In this connection, Kisch stressed not only the agricultural sector's ability to generate a surplus of food for protoindustrial labor but also—and especially—its failure to impose barriers to the mobility of labor and to entrepreneurial activity generally.

21. See, for example, Hans Pohl's survey of Cologne's economic and social history in the 1780–1870 period: H. Pohl, "Wirtschaftsgeschichte Kölns im 18. und beginnenden 19. Jahrhundert," in H. Kellenbenz, ed., *Zwei Jahrhunderte Kölner Wirtschaft* (Cologne, 1975), esp. II, pp. 18–20 and 38–39.

22. In the British case, there were obviously certain measures which might have had positive effects—e.g., the import restrictions on Indian cottons in the eighteenth century—and the argument can be made that the establishment of a stable national state contributed to public security and reduced "transaction costs" in the British economy, as Douglas North, *Structure and Change in Economic History* (New York, 1981), chap. 12, argues. But these are not state actions of the kind which can be interpreted as substituting for local deficiencies of entrepreneurship. For the Indian cotton restrictions, see Wadsworth and Mann, *The Cotton Trade*, pp. 125–28 and chap. 7.

23. The standard comparison has generally been Great Britain. See W. O. Henderson, *The State and the Industrial Revolution in Prussia, 1740–1870* (Liverpool, 1958) and the literature he cites. See also Wolfram Fischer, "Das Verhältnis von Staat und Wirtschaft in Deutschland am Beginn der Industrialisierung," in W. Fischer, *Wirtschaft und Gesellschaft im Zeitalter der Industrialisierung* (Göttingen, 1972), esp. p. 64. Early inspiration for this view of the role of the state came from Gustav Schmoller, "Studien über die wirtschaftliche Politik Friedrich des Grossen und Preussens überhaupt von 1680–1786," *Jahrbuch für Gesetzgebung, Verwaltung und Volkswirtschaft im Deutschen Reich*, vols. 8, 10, and 11 (1884, 1886, 1887). But for the nineteenth century, much attention focused on the need for concerted state action to offset British authority, especially through commercial policy. For a survey of the older German textbook views, see Richard Tilly, "Los von England. Probleme des Nationalismus in der deutschen Wirtschaftsgeschichte," *Zeitschrift für die gesamte Staatswissenschaft*, 124 (1968), 179–96. Reprinted in R. Tilly, *Kapital, Staat und sozialer Protest in der deutschen Industrialisierung* (Göttingen, 1980), pp. 197–206 and 290–95.

24. Differences of opinion persist on the choice of a turning point for the acceleration of economic growth, with the 1830s, 1840s, and 1850s as the three principal candidates. See F. W. Henning, *Die Industrialisierung in Deutschland 1800 bis 1914* (Paderborn, 1973), esp. p. 25; Knut Borchardt, *Die Industrielle Revolution in Deutschland* (Munich, 1972); and Walther G. Hoffmann, "The Take-Off in Germany" in W. W. Rostow, ed., *The Economics of Take-Off into Sustained Growth* (New York, 1963), pp. 95–118.

25. See Fischer, "Das Verhältnis von Staat und Wirtschaft," cited in note 19 above. See also Landes, *The Unbound Prometheus*, chap. 3.

26. In period II, private bankers, who were the forerunners and founders of the joint-stock banks, predominate.

27. Albert Hirschman, *The Strategy of Economic Development*, and W. W. Rostow, *The Process of Economic Growth* (New York, 1962). Herbert Kisch re-

spected those works but never made explicit use of the development theory they presented. Nevertheless, his writings contain repeated scattered references to the "external economies" that textile industries growth could generate for the regions in which they were located, so the train of thought in the text does not seem to be too far from his intention.

28. On this, see Henning, *Industrialisierung in Deutschland*, p. 73. Also see Richard Tilly, "Capital Formation in Germany in the Nineteenth Century," in Peter Mathias and M. M. Postan, eds., *The Cambridge Economic History of Europe*, 7.1 (Cambridge, 1978); also Kaufhold, *Das Gewerbe in Preussen um 1800*.

29. See Hermann von Laer, *Industrialisierung und Qualität der Arbeit* (New York, 1977), esp. pp. 166–73, and H. J. Teuteberg, *Westfälische Textilunternehmer in der Industrialisierung. Sozialer Status und betriebliches Verhalten im 19. Jahrhundert* (Dortmund, 1980).

30. The protoindustrial form of textiles reached its peak around 1850, but the continued growth of the industry in the nineteenth century brought no radical locational shifts. See Henning, "Industrialisierung und dörfliche Einkommensmöglichkeiten" (note 7); G. Adelman, "Zur regionalen Differenzierung der Baumwoll- und Seidenverarbeitung und der Textilien Spezialfertigungen Deutschlands 1846–1907," in Hans Pohl, ed., *Gewerbe- und Industrielandschaften vom Spätmittelalter bis ins 20. Jahrhundert* (Wiesbaden, 1986). See also Günter Kirchhain, *Das Wachstum der Baumwollindustrie im 19. Jahrhundert* (Münster, 1973), and Wolfram Fischer, "Bergbau, Industrie und Handwerk, 1850–1914," in H. Aubin and W. Zorn, eds., *Handbuch der deutschen Wirtschafts- und Sozialgeschichte* (Stuttgart, 1976), II, pp. 553–55.

31. See Peter Beyer, *Leipzig und die Anfänge des deutschen Eisenbahnbaus* (Weimar, 1978), esp. pp. 62, 168–69, and Table 1; Rainer Fremdling, *Eisenbahnen und deutsches Wirtschaftswachstum, 1840–1875* (Dortmund, 1975), pp. 132–63. Walter Steitz, *Die Entstehung der Köln-Mindener Eisenbahn* (Cologne, 1974), emphasizes the important feeder role of foreign trade closely connected with textiles. See also Bodo von Borries, *Deutschlands Aussenhandel 1836–1856* (Stuttgart, 1970), esp. pp. 200–205 and 216–18.

32. The following is an incomplete list of important relevant contributions: H. H. Muller, *Märkische Landwirtschaft vor den Agrarreformen von 1807. Entwicklungstendenzen in der zweiten Hälfte des 18. Jahrhunderts* (Potsdam, 1967); F. W. Henning, "Kapitalbindungsmöglichkeiten der bäuerlichen Bevölkerung am Anfang des 19. Jahrhunderts," in W. Fischer, ed., *Beiträge zum Wirtschaftswachstum* (Berlin, 1971); H. Harnisch, "Die Bedeutung der kapitalistischen Agrarreform für die Herausbildung des inneren Marktes und die industrielle Revolution in den östlichen Provinzen in der ersten Hälfte des 19. Jahrhunderts," *Jahrbuch für Wirtschaftsgeschichte* (1977), pp. 63–82. See also Schultz, *Landhandwerk* (cited in note 15), esp. pp. 55–56, and H. Harnisch, *Kapitalistische Agrarreform und Industrielle Revolution* (Weimar, 1984), esp. pp. 43–58, 258–59, 263–68, and 329–42.

33. See, for example, Alan Everitt, "The Food Market of the English Towns," *Third International Economic History Conference, Munich* (Paris, 1968); Eric Jones, ed., *Agriculture and Economic Growth in England, 1650–1815* (London, 1967), Introduction; and Braun, *Industrialisierung und Volksleben*, esp. pp. 92–100.

34. In this connection, see also Jeffrey Diefendorf's interesting study *Businessmen and Politics in the Rhineland, 1789–1834* (Princeton, N.J., 1980), esp. p. 344.

35. The phrase actually refers to the German socialist labor movement, but the point can stand. See Richard Reichard, *Crippled from Birth: German Social Democracy 1844–1870* (Ames, Iowa, 1969).

36. See Werner Sombart, *Die deutsche Volkswirtschaft im 19. Jahrhundert*, 4th ed. (Berlin, 1919), as discussed in Kisch's concluding statement earlier.

37. It would not be wholly out of line with Kisch's approach to explore the possibilities of the Lewis-Marx model of "economic development with unlimited supplies of labor" as a means for interpreting German industrialization in the nineteenth century as a consequence of previous protoindustrialization. The work of Joel Mokyr, *Industrialization in the Low Countries, 1795–1850* (New Haven, Conn., 1976), esp. chap. 4, might serve as a guide. And the German historical situation—particularly the considerable evidence of surplus labor—speaks for such a model's relevance. Still, it must be admitted that such an approach would not fit Kisch's progressive Rhenisch districts as well as it would those regions he neglected.

38. John R. Hicks, *Capital and Growth* (Oxford, 1965), p. 11.

39. Cited several times in the text. He shared, and often referred to, the methodological position outlined by E. H. Carr in *What is History?* (London, 1961), pp. 96–97.

40. See Robert W. Fogel, "Circumstantial Evidence in 'Scientific' and 'Traditional' History," in Williams Dray, ed., *Philosophy of History and Contemporary Historiography* (Ottawa, 1982), pp. 61–112.

41. *Ibid.*, p. 42.

42. Peter Kriedte, "Demographic and Economic Rhythms. The Rise of the Silk Industry in Krefeld in the Eighteenth Century," *Journal of European Economic History*, 15 (1986), 289. This qualification is consistent with Kisch's position. See also P. Kriedte, "Lebensverhältnisse, Klassenstrukturen und Proto-Industrie in Krefeld während der französischen Zeit," *Mentalitäten und Lebensverhältnisse. Beispiele aus der Sozialgeschichte der Neuzeit. Rudolf Vierhaus zum 60. Geburtstag* (Göttingen, 1982), pp. 295–314; P. Kriedte, "Proto-Industrialisierung und grosses Kapital. Das Seidengewerbe in Krefeld und seinem Umland bis zum Ende des Ancien Régime," *Archiv für Sozialgeschichte*, 23 (1983), 219–66.

43. The problem of methodology raised here is virtually identical with that discussed by K. Basu, E. Jones, and E. Schlicht in their recent article, "The Growth and Decay of Custom: The Role of the New Institutional Economics in Economic History," *Explorations in Economic History*, 24 (January 1987), 1–21.

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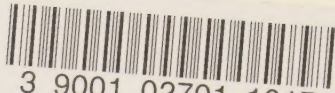
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