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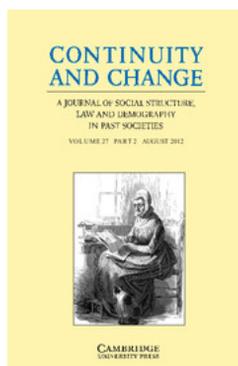
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Proto-industrialization in Europe

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I. INTRODUCTION

Proto-industrialization is the name given to the expansion of domestic industries producing goods for non-local markets which took place in many parts of Europe between the sixteenth and the nineteenth centuries. Often, although not always, such industries arose in the countryside where they were practised alongside agriculture; usually, they expanded without adopting advanced technology or centralizing workers into factories. This widespread industrial growth in early modern Europe has long been a subject of specialized study.¹ But in the 1970s it began to attract much wider interest, when a series of stimulating articles and books christened it ‘proto-industry’, and argued that it was a major cause of the transition to capitalism and factory industrialization.

These new ‘theories of proto-industrialization’, as they soon came to be called, agreed about two things: first, proto-industry was central to the economic development of early modern Europe; and second, it transformed not only the economy, but also demographic behaviour. The new theories disagreed, however, about practically everything else, including how and why proto-industry was so important. Franklin Mendels, who in 1972 invented the new term and put forward the first model, argued that proto-industry led to population growth, which in turn caused proto-industry to expand further, in a self-sustaining spiral. Mendels argued that this sustained growth in *domestic* industry led to many of the economic

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changes viewed as essential for *factory* industrialization: commercialization of agriculture, accumulation of capital, growth of entrepreneurship, capture of overseas markets, and creation of an industrial workforce.² In 1974 David Levine, too, argued that proto-industry caused population growth; more important in his view, however, was that it created a wage-dependent 'proletariat' for industrial capitalism.³ In 1976 Joel Mokyr, while rejecting most of these arguments, claimed that proto-industry in the traditional sector created a pool of cheap surplus labour for the modern sector, generating the supra-normal profits to fuel a 'dualistic' growth of the European economy, in accordance with W. A. Lewis' 'dualistic labour surplus' model of developing economies.⁴ Finally, in 1977, three German historians, Peter Kriedte, Hans Medick, and Jürgen Schlumbohm, shifted the focus away from *industrialization*, arguing that proto-industry broke down the demographic, economic, social, and cultural obstacles in traditional European society to the development of *capitalism*.⁵

By 1977, therefore, four different theories of proto-industrialization had been proposed. All claimed to solve one of the most important problems in economic history, that of the causes of economic development. This opened up an empirical vacuum. Although Kriedte, Medick, and Schlumbohm referred to the older literature on rural industries, there were still only two empirical studies which directly investigated 'proto-industrialization' as it was now conceived, and these were restricted to the north-west corner of Europe: Mendels' study of eighteenth-century Flanders, and Levine's of nineteenth-century Leicestershire. This empirical vacuum, combined with the strong claims of the theories and their important disagreements, placed proto-industrialization squarely at the centre of a lively and expanding debate which continues to this day.

Case studies of domestic industries in pre-industrial economies poured out, particularly during the 1980s. Almost all were very positively inclined toward the proto-industrialization hypotheses. Research was not restricted to Europe or to the early modern period, but extended to many non-European economies, including several in the modern developing world. Theories of proto-industrialization were applied to the historical development of Japan and the United States, and to the modern development of Korea, Taiwan, China, India, and Africa.⁶ Historical models of proto-industrialization made their way into development economics and social anthropology, and began to influence analyses of present-day developing economies.⁷

Systematic criticism of the models, by contrast, was for many years almost wholly confined to British historians. Two articles which appeared in 1983 and 1984 summed up the unease of the 'British empirical

tradition'. Donald Coleman provided a thorough inventory of the theories' failure to explain industrialization in Britain, while Rab Houston and Keith Snell pointed out their failures in Europe more widely.⁸ The critics had four main objections. First, proto-industrialization did not always lead to population growth, and population growth occurred without proto-industrialization. Second, proto-industrialization was not consistently associated with either commercialization or stagnation of agriculture; that is, its relationship with the most important sector of the pre-industrial economy was unclear. Third, proto-industrialization could not clearly be linked to any of the 'preconditions for take-off' listed in Mendels' original article: capital accumulation, entrepreneurship, a pool of labour for factories, or overseas markets. Finally, proto-industrialization did not invariably lead to factory industrialization – quite often it led to 'de-industrialization' and a return to agriculture.⁹

Another question, neglected in the criticisms of proto-industrialization but explored in some of my own work, was the effect of social institutions.¹⁰ The original theories argued that proto-industrialization cleared away the obstacles to industrial capitalism by breaking down traditional social institutions such as village communities, tenurial systems, guilds, and merchant companies. Research, however, did not confirm this. In some parts of Europe, village communities and the institutions regulating access to land and settlement rights were already weak, without proto-industrialization; in many others they remained very strong, despite proto-industrialization. Strong institutions did not always prevent proto-industries from arising, but did usually influence their subsequent development. Likewise, in some parts of Europe, guilds and merchant companies could easily be evaded by moving industry outside the towns; but in many others, cities and corporate groups exercised considerable influence over the countryside, throughout proto-industrialization. Seldom, outside England and Flanders, were the putting-out system and the proto-industrial export trade the domain of individual 'capitalist' entrepreneurs; instead, they were monopolized by guild-like companies of finishers and merchants with state privileges. In some parts of Europe, proto-industrial workers were dispersed and unorganized; in others they set up guilds, even in the countryside, to defend themselves against the merchant companies, and to exploit their own employees and suppliers. Institutions thus varied widely across different European proto-industries and, far from being broken down, profoundly influenced how these industries developed.¹¹

There are thus important questions about proto-industrialization which need to be answered. Happily, a 'second generation' of proto-industrialization studies – represented in different ways by the articles in

this special issue of *Continuity and Change* – is beginning to answer them. These studies all implicitly seek to explain the variation in proto-industrialization across different European societies. In what follows, I will seek to draw together the factors which are emerging as central to explaining this variation.

II. TECHNICAL AND PHYSICAL FACTORS

The technical requirements of different proto-industries and the physical characteristics of different regions helped to determine whether an industry arose, how it was organized, and whether it affected social structure or demographic behaviour. Wolfgang Mager explores this subject in his article for this special issue, in which he sets out a typology of proto-industry. Mager shows how the incidence and the organization of different branches of proto-industry differed owing to technical requirements: raw material and energy sources, the time-commitment and skill-level required by particular tasks, the cost of tools and raw materials, and the susceptibility of the product to fluctuations in fashion. Marco Belfanti makes the same point in his survey of proto-industries in northern and central Italy: a number of the 'localization factors' which, he argues, enabled rural industries to arise in the teeth of urban guild opposition were related to the technical requirements of the industries or the physical characteristics of the countryside concerned.

A useful way to think about this is in terms of input costs. Like any form of production, proto-industries required inputs of raw materials, labour, capital, and sometimes land. The *technical requirements of the industry* determined the demand for these inputs – the absolute quantities required, and the share represented by each input in the final cost (and thus the selling price) of the output. The *physical characteristics of the region* – its climate, soil, natural resources, topographical barriers to transportation, location near trade routes, and so on – helped to determine the supply of inputs, and thus the cost of obtaining them. A proto-industry was more likely to arise in a region where, because of physical or social features, the particular mix of inputs required by its technology could be obtained at lowest cost. And, once in existence, it was likely to organize production so as to take advantage of the characteristics of the region, in order to continue to minimize costs. Any industry which failed to exploit cost advantages would find itself undercut in all but very monopolistic export markets, since input costs were a major (although not the only) influence on output prices.

The cost of raw materials is particularly stressed by Mager, who points out how linen proto-industries arose in regions whose climate and soil

were well adapted to the cultivation of flax, and metal proto-industries arose near sources of ore and fuel. Belfanti, too, identifies water power and raw material sources as partial causes of the location of rural industries in certain regions, such as Lombardy (p. 255). Raw material sources also affected industrial organization. As Mager points out, industries such as cotton, whose raw materials were imported, tended to involve more full-time and more centralized employment than those such as linen, whose raw materials were often cultivated locally, and whose industrial workers tended therefore to be dispersed, and to work part-time in agriculture.

In this context, it is further useful to understand cost in the usual economic sense of *opportunity cost* – cost not just in money, but in terms of foregone alternatives. Since the main alternative to proto-industry was agriculture, the technical requirements of a region's agriculture, and its physical features as they affected agricultural costs and earnings, also shaped proto-industry. The opportunity cost (in terms of foregone agricultural income) of producing proto-industrial raw materials was partly determined by the physical characteristics of the countryside. For instance, as Belfanti points out, the aridity of highland Lombardy led to low grain yields, reducing the opportunity cost of cultivating mulberry trees for silkworms, and thus of the raw material for silk production (p. 270). Likewise, in the German linen regions described by Mager, soil and climate were often unfavourable for grain cultivation, lowering the opportunity cost of producing flax and hemp.

Agriculture also influenced the opportunity cost of the proto-industrial labour supply, as the rural population allocated time to agricultural and industrial work according to the relative returns of the two activities. Gay Gullickson provided an excellent illustration of this principle in her 1986 study of a proto-industrial region of Normandy, and several articles in this issue explore it further.¹² François Hendrickx shows how the infertile soil of Twente, in the Netherlands, gave rise over the centuries to land-management practices restricting access to agricultural earnings, causing parts of the rural population to turn to industry (pp. 328–332). Then in the 1830s a shift from rye to dairy farming altered the relative rewards of agricultural and industrial work, once again increasing the proto-industrial labour supply, while continuing to provide agricultural options for industrial workers. This, according to Hendrickx, meant that proto-industry failed to 'proletarianize' the social structure or to transform demographic behaviour (p. 349). Belfanti traces similar processes in Italy: poor soil (that is, a low opportunity cost of abandoning agricultural work for proto-industry) favoured the rise of knitting in the Mantuan countryside (p. 258), and of woollen-weaving and metal-working in the

mountain valleys of Brescia and Bergamo (pp. 260ff.). By contrast, the year-round cultivation demanded by mixed agriculture in Tuscany precluded complementary employment in proto-industry, at least for peasants (p. 267) – that is, it made the opportunity cost of proto-industrial labour too high.

The geographical situation of a region could also affect input costs, and thus shape its proto-industries. Wierden, one of the two Netherlands communities studied by Hendrickx, was less proto-industrial than neighbouring Borne simply because it was located on a major river, so more of its population engaged in shipping: that is, the opportunity cost of proto-industrial labour was higher, which caused proto-industry to move to neighbouring communities (p. 340). Belfanti points out how the strategic location of some centres in the countryside subject to Bologna gained them papal privileges permitting rural linen production despite urban opposition – that is, reducing its costs. Similarly, some Italian Alpine valleys owed their proto-industries to a geopolitical position which freed them from costs imposed by state, urban, and corporate institutions, and gained them cost advantages such as fiscal and customs privileges (p. 259).

Technical requirements of industries and physical characteristics of regions thus affected the costs of inputs. Costs in turn influenced whether a proto-industry would arise to begin with, and how it organized production subsequently: its links with agriculture, its division of activities between town and country, and its degree of centralization. This is shown in the Austrian context, where, as Cerman argues, the metal proto-industries of the Alpine regions must be analysed separately from the textile proto-industries, because the organization of production and trade was so different (p. 288). In Austria, even among textile industries, differing technical requirements resulted in differing divisions of activities between town and country (pp. 284–285). This in turn had important implications: as Cerman's research on Vienna shows, an urban environment could profoundly alter the demographic behaviour of a proto-industrial population.

Technical requirements also helped to decide whether goods would be made in independent craft workshops, in a putting-out system in which producers depended on merchants for raw materials but still worked at home, or in centralized manufactories or 'proto-factories'.¹³ According to the original proto-industrialization hypothesis, the workshop system (*Kaufsystem*) was succeeded by the putting-out system (*Verlagssystem*), and this in turn by centralized manufactories. Empirical research, however, has revealed that in many proto-industries all three existed simultaneously. Which of the three predominated was influenced,

according to Mager, by technical requirements. This can also be seen in terms of costs: the choice of how to organize production depended on which inputs made up the largest share of production costs, and whether centralized or dispersed supply of inputs minimized costs. Often, centralization would minimize costs for one stage of production, while a dispersed organization would minimize costs for other stages, in one and the same industry. Cerman proposes the term 'Gemengelage' – 'conglomeration' – to describe the resulting widespread coexistence of independent workshops, putting-out systems, and centralized factories (pp. 286, 289).

Technical requirements affected not only the incidence and economic organization of proto-industries, but also their social and demographic ramifications. Cerman argues that the 'conglomeration' of industrial forms led to a 'conglomeration' of demographic and family forms, at least in nineteenth-century Vienna (p. 306). This was also true in the rural context. Hendrickx, too, as we have seen, regards technical characteristics (this time of the *agricultural* system) as central to the lack of demographic response to proto-industrialization in Twente. Indeed, in their survey of demographic studies of European proto-industrial regions, Kriedte, Medick, and Schlumbohm conclude explicitly that 'the branch of industry in question, the concrete shape of the work-process, the underlying agrarian system, and the extent and nature of the combination of agrarian and industrial activities' affected reproductive behaviour (p. 224). It is not, therefore, surprising that there was wide variation in demographic and family patterns across industries and regions.

Ultimately, technical requirements also helped to decide whether domestic industries could compete with factory industries, as is shown both by Mager and by Kriedte, Medick, and Schlumbohm in the final sections of their articles. Whether a proto-industry had enough of a cost advantage to continue producing after the coming of machines and factories was decided in part by its technical characteristics (pp. 202, 236).

Yet, though technical requirements of industries and physical characteristics of regions clearly did influence input costs, helping to determine both the rise of proto-industries and their subsequent development, these were not the only variables affecting costs and prices. Proto-industries arose in regions with no special physical characteristics to favour their development. As Belfanti shows for Italy, social-structural, institutional, or political 'localization factors' could suffice. Recent research casts doubt on the earlier 'eco-typological model', which viewed the physical characteristics of pastoral and forest regions as the causes of proto-industrialization – as Kriedte, Medick, and Schlumbohm emphasize, proto-industries arose in many other ecological contexts (p. 230).

Even industries with the same technical requirements could arise in a variety of environments, and could develop very differently as a consequence. Thus, as Kriedte, Medick, and Schlumbohm point out, the technical factors which Mager argues generally caused woollen proto-industries to shift into centralized manufactories failed to have this effect in the West Riding of Yorkshire (p. 227). Moreover, many regions with infertile soils, good energy supplies, or cheap sources of raw materials failed to develop proto-industries. Technical and physical factors alone, therefore, were neither necessary nor sufficient to cause proto-industries to arise or to develop in specific ways. This is not surprising: input costs and output prices can be affected by other things than technology. In particular, costs and prices are affected by the *social institutions* governing transactions in the goods in question: land, labour, and capital inputs, and agricultural and industrial output.

III. AGRARIAN INSTITUTIONS

The wide variety of institutions which regulated agriculture – and, indeed, all economic and social activities – in pre-industrial Europe also affected proto-industry. Communities and tenurial systems laid down a dense network of rules about how land could be held, sold, and inherited, how labour could settle, reproduce and be employed, how capital could be lent and borrowed, how natural resources could be used, and how agricultural products could be bought and sold. These rules, which varied enormously across Europe, affected the costs and prices of most factor inputs and most products. Counter to what had originally been argued, communities and tenurial systems were not broken down, or even uniformly affected, by proto-industry. On the contrary: these institutions themselves shaped proto-industry, helping to decide whether a rural population would turn to industrial work, which groups would do so, which tasks they would engage in, and whether their demographic behaviour would change.¹⁴

Communities often regulated whether people could settle, work, hold land, use common resources, or marry. That is, community rules controlled the availability, and thus the cost, of labour, land, and natural resources. The original hypotheses argued that proto-industrialization broke down community institutions.¹⁵ Wider research, however, does not confirm this. Indeed, community institutions helped to shape proto-industries, by affecting their costs. Hendrickx and Belfanti illustrate how in the Netherlands and in Italy community regulation of settlement and resources encouraged proto-industrialization while altering its course. According to Hendrickx, the *marken* system – a community institution granting a group of established families exclusive hereditary rights to

common land – had two effects on proto-industry in Twente. First, by limiting access to land, it created a land-poor population available for industrial by-employments (p. 331) – that is, it lowered the opportunity cost of the proto-industrial labour supply. Then, in the 1830s, the abolition of the *marken* system encouraged some weaver-farmers to sell their land rights altogether, causing ‘the emergence of a system of domestic mass production’ (p. 332). Yet the legacy of the *marken* system was that many weavers continued to own small plots, which Hendrickx argues prevented proto-industry from transforming social structures or demographic behaviour. Both the timing and the nature of proto-industrialization in Twente, therefore, were influenced by the institutions governing access to land. Similarly, Belfanti describes how in Cento, in northern Italy, access to land was regulated by the institution of the *partecipanza*, under which all land was communally owned but allocated to families for twenty-year periods on condition that they lived in the commune. This led many families to engage in proto-industry so as to remain in the commune despite lacking enough land for subsistence (p. 265).

Feudal institutions, too, survived the advent of proto-industry, and affected its costs. The original hypotheses of the 1970s viewed proto-industrialization as a major force breaking down feudalism and replacing it by capitalism,¹⁶ but this is not borne out empirically. Belfanti describes how Italian feudal territories, such as those on the Venetian mainland, protected proto-industries which would otherwise have been crushed by cities and guilds (p. 259). That is, feudal institutions neutralized the corporate urban institutions which would have prohibitively increased industrial costs. Cerman describes how feudal landlords in the eastern Habsburg lands, particularly Bohemia, set up manufactories on their estates, compelling serfs to spin and weave as feudal labour dues (p. 289). Indeed, as is shown by Rudolph’s work on Russia, feudal proto-industries were not uncommon in central and eastern Europe.¹⁷ Clearly, proto-industrialization did not bring about the ‘transition from feudalism to capitalism’, as had been originally postulated. Rather, proto-industries themselves were shaped by prevailing agrarian and social arrangements.

Other agrarian institutions also affected industrial costs. Sharecropping tenancies, for instance, precluded proto-industrial employment for Tuscan peasants, according to Belfanti, by adjusting farm size to family membership and contractually obliging tenants to labour for the landlord. This constraint on the labour force acted as a brake on Tuscan proto-industry into the later eighteenth century (p. 267). The *Heuerling* system around Ravensberg, which also interlinked landholding with labour relationships, affected both the labour available for proto-industry and

the seasonality of production, as Kriedte, Medick, and Schlumbohm point out (pp. 225, 231–232).

The communal, feudal, and other institutions regulating access to land also influenced social structure and demographic behaviour. In their survey of research, Kriedte, Medick, and Schlumbohm acknowledge that the nature of the landholding system determined whether proto-industrialization would lead, as had originally been postulated by themselves and others, to 'proletarianization': the emergence of a wage-dependent group with no access to land or agricultural employment (pp. 227–232). In the upper Waldviertel in Austria, strong landlord and community controls over landholding and settlement permitted proto-industry, but prevented proletarianization and population explosion. In proto-industrial areas of Switzerland, France, southern Germany, and Upper Lusatia, smallholding systems remained strong, and proto-industrialization failed to transform the rural social structure or abolish agricultural by-employment. Even where proto-industrial groups were landless, institutions such as the *Heuerling* system continued to affect the organization of proto-industrial labour within the family. By influencing the opportunity costs of labour and other resources, agrarian institutions had far-reaching effects on the options of proto-industrial workers.

One of the most important effects was on their demographic options. According to the original theory, proto-industrialization led to earlier marriage, lower celibacy, and higher fertility. A major reason for earlier marriage was supposed to be that proto-industrial groups were landless and need not wait to inherit before setting up house. It is now clear, however, that workers in many proto-industries retained the possibility of inheriting land, and thus did not lose their incentive to delay marriage. A second reason proto-industrial couples were supposed to marry young was to provide themselves with child labour. But recent research surveyed by Kriedte, Medick, and Schlumbohm in their article reveals cases, such as Appenzell-Ausserrhoden in Switzerland, in which the family was not the institution by which labour was mobilized into production; instead, both parents and children traded their labour in the market, which meant that there was no special incentive to have large families (pp. 223–4). Agricultural labour markets could also affect marriage opportunities, as Kriedte, Medick, and Schlumbohm point out for the east Westphalian linen industry (p. 225). Agrarian institutions regulating transactions in land and labour thus affected not only economic but also demographic decisions by proto-industrial producers.

IV. INDUSTRIAL INSTITUTIONS

Proto-industries were also affected by the guilds and companies which had traditionally regulated manufacturing and trade in pre-industrial Europe. According to the original theory, proto-industries arose in the countryside to avoid urban guild restrictions. But this was based on an unjustified generalization of the experiences of England and Flanders. Proto-industries elsewhere in Europe were almost invariably regulated by corporate groups of 'capitalists', and often also of 'workers'.¹⁸

The economic impact of these corporate groups on the working of the local economy could be quite diverse. Cerman, who also emphasizes that guilds or guild-like organizations were set up in many proto-industries, remarks that 'the negative impact of guilds has often been exaggerated' (p. 282). In the sense that guilds did not prevent proto-industrialization altogether, this is certainly true. But whether such corporate organizations benefited any given social group or proto-industry, let alone the wider economy, can only be established by detailed study. Corporate groups sought to reduce input costs and increase output prices. To achieve this they implemented a variety of measures – entry barriers, output quotas, quality regulations, technical restrictions, wage ceilings, price floors – which were enforced with varying effectiveness. How any given corporate group affected costs and prices in any given proto-industry therefore requires detailed investigation, of a sort which has, in most cases, not yet been carried out.¹⁹ However, some general results can be identified.

In Austria, it seems clear from Cerman's article, guilds and merchant companies constrained growth in many proto-industries until the late eighteenth or early nineteenth centuries. The rural proto-industries of Upper Austria, the Waldviertel, and the south Bohemian border only began to boom after 1762, when the monopoly of the Schwechat company was abolished (p. 289). This suggests that the company's corporate privileges had endowed it with effective cost advantages. In Vienna, the proto-industrial silk-weavers in 1713 obtained guild privileges from the Emperor, which were not weakened until the late eighteenth century, when conflict broke out with state-privileged non-guild manufacturers; the struggle reached its climax only after 1800 (pp. 290–291). Since people do not expend resources to defend valueless privileges, and since the decline of the master weavers gave rise to the 'largest-ever' boom in the industry, after 1794, it seems likely that their guild was able to exercise significant influence over costs and prices at least until that date.

In other proto-industries in German-speaking central Europe, as well, companies and guilds continued to enjoy wide-ranging powers. As Mager emphasises, many aspects of proto-industrial production were carried out

in cities (p. 188). In few if any cities, at least in Germany, did merchant companies and guilds lose power before the late eighteenth century, whatever happened in the countryside. Since a corporate monopoly sought to reduce prices paid to suppliers and increase prices charged to buyers, an effective urban guild or company could affect the quantities and prices faced by its rural workers, irrespective of whether these also possessed a corporate organization.²⁰ But the control of urban corporate groups over costs and prices also provided a powerful incentive for rural proto-industrial workers to form their own guilds. Mager describes how, in the small iron goods industry of Berg and the trimmings industry of the Erzgebirg-Vogtland, rural workers 'formed corporate groups in the same way as urban craftsmen, to secure the "livelihood", regulate training, enforce quality standards, and implement their interests vis-à-vis the entrepreneurs and putters-out' (p. 188). Rural guilds formed under similar pressures in the Wuppertal proto-industry studied by Herbert Kisch, and in the Württemberg linen and worsted proto-industries studied by Hans Medick and by myself.²¹ Urban guilds in one industry could also increase costs for other industries, as is illustrated by the cases mentioned by Mager in which broadcloth- and silk-weavers prevailed on the state to restrict imports of raw cotton (p. 194).

In Italy, guilds and companies had even greater impact on proto-industry than in Germany and Austria. Belfanti describes how in the 'Italy of the Cities', most proto-industries arose in enclaves of 'institutional particularism', defined as 'areas free from the power of the cities and of urban guilds' (p. 255). Occasionally, merchant groups prevailed over guilds, and compelled a city to permit rural manufacturing, as in the Genoese silk velvet industry or the Mantuan knitwear industry, in the latter case assisted by geographical distance from the guild jurisdiction (pp. 255-258). But, according to Belfanti, this was exceptional: in most cases, urban guilds prevented the rise of rural proto-industries, which consequently only arose in areas protected by distance or countervailing feudal or papal privileges (pp. 258-264). Rural guilds were also established. In some Italian proto-industries, such as the gun-barrel industry in the Trompia Valley, rural workers set up new guilds (p. 262), while in others, such as the Prato wool industry, they simply retained their medieval guilds. The boom which followed the abolition of the Prato weavers' guild in 1770 suggests that it had exerted real economic influence (p. 266). Elsewhere in Tuscany, the Florentine guild only lost its woollen-weaving monopoly in 1739, and even then retained various privileges, contributing to the retardation of Tuscan proto-industrialization (p. 267).

Guilds were so important in central and northern Italy because the dominant political institutions there was the city-state. German and

Austrian guilds and companies also, as I have argued elsewhere, owed their power to their symbiotic relationship with the state.²² Indeed, it is rare to find a corporate group, whether of merchants or of workers, which effectively regulated markets without state enforcement. European proto-industries were thus also affected by political institutions.

V. THE ROLE OF THE STATE

Early modern Europe saw the rise both of proto-industries and of the modern state. Yet the role of the state is one of the least-researched aspects of proto-industrialization. Partly, this neglect is a reaction against interpreting state *policy* as a mirror of reality. Moreover, the original theories viewed proto-industrialization as causing the transition to 'capitalism' and 'market society', concepts which are held (often unjustifiedly) to exclude the notion of state intervention in the economy. It is now becoming clear that this neglect of the state was an over-reaction. Not only successful economic policies but also those that misfired, and, indeed, policies undertaken for non-economic purposes (to wage war, for instance, or to gain domestic political support) could have important if unintended economic repercussions. Each of the articles in this issue strikingly illustrates this: while states' direct attempts to encourage proto-industry saw mixed success, their indirect role, particularly in supporting (or breaking down) other institutions, was substantial.

The state attempted to support proto-industries in all the parts of Europe discussed in this issue: Germany, the Habsburg monarchy, the Netherlands, and central and northern Italy. Yet the vast majority of these attempts failed. As Mager points out, where dispersed production enjoyed a cost advantage, state-founded manufactories, such as those established to produce needles in Altena and Iserlohn in the late eighteenth century, could not complete, and survived only through subsidies (p. 201). Yet, in the view of Kriedte, Medick, and Schlumbohm, the attempts by many nineteenth-century German states to introduce *dispersed* proto-industries, such as straw-plaiting, to alleviate rural poverty were also largely futile (p. 234). Manufactories operated by the state or by privileged companies with state support were widespread in the Habsburg territories (pp. 287–290). However, according to Cerman, they were only part of a 'conglomeration' of proto-industrial production forms. Moreover, whether they benefited Austrian economic development is not apparent. Some clearly did not, as is shown by the textile boom in Austrian and Bohemian proto-industrial putting-out regions after the Schwechat manufactory lost its state monopoly in the late eighteenth century (p. 289). Hendrickx takes a more

sanguine view of the Nederlandsche Handel Maatschappij (NHM), a state-supported company whose establishment of weaving schools and purchases of cloth at guaranteed prices helped, in his view, to fuel the proto-industrial take-off in Twente after 1830 (pp. 333–335). However, it is not clear how much of the take-off to attribute to these direct state initiatives, and how much to contemporaneous changes in agriculture and foreign demand, especially since the NHM existed in the 1820s without causing any take-off, and reduced its activities after 1841 without causing any decline. In eighteenth-century Venice and Vicenza, direct state support for proto-industrial manufactories through tax and customs privileges was only one of an array of factors – environmental, entrepreneurial, technological, organizational, and economic – which in Belfanti's view encouraged the growth of these proto-industries (p. 267). Although, therefore, state intervention in proto-industry was by no means absent, it seldom had quite the effects desired by its initiators.

By contrast, state activity – often for non-economic purposes – had massive *indirect* repercussions on many European proto-industries. Hendrickx describes how the secession of Belgium from the Netherlands in 1830 set in motion a re-equilibration of import markets for raw cotton and export markets for cotton cloth which had huge and lasting significance for Dutch proto-industry (p. 334). Belfanti shows how strategic considerations led central and north Italian states to grant industrial privileges to remote, frontier, or mountainous parts of their territories (p. 260). Military pressures also turned the state into a major consumer of proto-industrial products, as J. K. J. Thomson showed in his 1982 study of the Languedoc woollen industry.²³ Similarly, Belfanti describes how fluctuations in military demand played a large role in the expansions and contractions of the gun-barrel proto-industry in the valleys of Brescia (p. 263).

Most important, however, was that the state could reinforce or weaken *other* social institutions. As we have seen, such institutions influenced most social, demographic, and economic decisions: settlement, marriage, work, landholding, resource allocation, access to markets, and every form of commerce and trade. Communities and landlords were only able to regulate so many activities which affected proto-industrial and agricultural costs because of the enforcement they got from the state. In territorial states, government was impossible without the co-operation of traditional local-level institutions. The central state supported local rules in tacit exchange for local co-operation in implementing taxation, conscription, and regulation. The importance of this symbiosis between state and local institutions emerges from every study of the growth of 'social control' on the local level in early modern Europe.²⁴ Its importance for proto-

industries emerges from several of the articles in this issue. Hendrickx recounts how the central and provincial state provided the initial impetus (in the 1810s) and the legal framework (in the 1830s) for the breakup of the *marken* system, which played an important role in the proto-industrial take-off in Twente (p. 331). Kriedte, Medick, and Schlumbohm draw attention to the maintenance of small land-holdings in many southwest German proto-industrial regions; this, as we know, owed a great deal to the enforced symbiosis between community and state in the German south, which lasted into the nineteenth century.²⁵ In city-states, the community was coextensive with the state: as Belfanti shows, this was the most important factor influencing proto-industrialization in northern and central Italy. In 'feudal' states, which existed in different forms in eastern Europe, parts of Italy, and the micro-states of southwest Germany, either the prince was also the major landowner, or the great landowners enjoyed governmental as well as tenurial powers over their peasants. The establishment and control of proto-industries by feudal landlords, described by Cerman and Belfanti, were only possible because in such territories the state and the tenurial system supported one another. Even the sharecropping tenancies which delayed proto-industrialization in Tuscany may have been sustained partly by state support for the landlords (pp. 266–267).

State support was also crucial for guilds and companies. Guilds were increasingly concerned during the early modern period to gain state recognition, and invested considerable resources in lobbying governments to enforce and expand their privileges. Merchant companies, as well, owed their existence to monopolies, subsidies, and other privileges granted by the state, and in return delivered taxes, loans, bribes, and political support. Enforcing internal cohesiveness and external exclusiveness was the state's major service to industrial corporate groups. But it also granted them an array of other privileges: prohibitions on competing proto-industrial branches (especially cotton), as Mager mentions (p. 194); or freedom from the restrictions of *other* corporate groups, as Cerman describes for merchant companies in Bohemia and Austria (p. 289). Occasionally, states even created 'enclaves' *free* of corporate groups, as in the micro-states of central and northern Italy to which Belfanti refers (p. 259).

The state thus played a range of roles in proto-industry. It intervened directly, though not often effectively, to encourage proto-industrial enterprises. It made war, taxed, administered colonies, and set up customs barriers, helping to shape the export markets within which proto-industries operated. Above all, the state supported the agrarian and industrial institutions which, as the 'second generation' of proto-

industrialization studies reveals, had such a wide-ranging impact on most proto-industries.

VI. THE SOCIAL CONTEXT OF DEMOGRAPHIC BEHAVIOUR

Institutions influenced not just the incidence and development of proto-industries, but their wider effects on social and, especially, demographic behaviour. The deterministic effects which proto-industry was supposed to have on marriage, fertility, and household structures have all failed to emerge from deeper empirical study. This is pointed out by Mager, and richly documented by Kriedte, Medick, and Schlumbohm, in their articles for this issue. Proto-industrialization could lead to either earlier or later marriage. It could be associated with either higher or lower fertility. Proto-industrial groups could have either larger or smaller families and households. Proto-industry could even leave any or all of these variables unchanged. It is clear that other factors than proto-industry influenced people's demographic behaviour. Fortunately, the 'second generation' of proto-industrialization studies, such as those by Cerman and Hendrickx in the present issue, is beginning to identify and explore these factors.

Cerman finds that proto-industry had less effect on demographic behaviour and household structure in Vienna than did the urban context and the general economic trend in the first half of the nineteenth century. The urban context led to high mortality, high in-migration, high sex ratios, an abnormal age structure, and a higher mean age at marriage (p. 293). This urban demographic system obscured or neutralized any specifically proto-industrial demographic pattern there may have been by this period. The decline of the silk sector after 1830 led proto-industrial groups to marry later or remain unmarried, to a greater extent than they had done previously and to a greater extent than other economic groups (pp. 294, 304). Moreover, in early-nineteenth-century Austria, people had to get permission from the state before they could marry, which delayed or prevented marriage among the poor in general, including proto-industrial workers. This combination of urban, conjunctural, and institutional pressures meant that the Viennese proto-industrial population, at least after 1830, failed to engage in the demographic behaviour predicted by the original theories of proto-industrialization.

Hendrickx, too, finds that proto-industrialization made no observable difference to demographic behaviour in the rural region he studies in the Netherlands. As proto-industrialization progressed, age at marriage remained constant and high; if anything, the proto-industrial community married later than the average (p. 343). As a consequence, fertility was relatively low – indeed, lower in proto-industrial than in other

occupations. But for Hendrickx the most striking feature of demographic behaviour in proto-industrial Twente was its continuity across occupational groups, communities, and time-periods. This, he argues, was because many proto-industrial workers continued to farm, so a risk-minimizing 'peasant' approach to demographic decisions remained 'rational' for them (p. 350). The only demographic distinction Hendrickx discovers is a higher rate of pre-nuptial conceptions in the Protestant than in the Catholic community, and this simply reflects a cultural difference widely observed throughout the Netherlands (p. 348). Demographic behaviour in proto-industrial Twente, Hendrickx concludes, must be ascribed to social and cultural continuities which proto-industrialization failed to disrupt.

Such micro-studies, and those surveyed by Kriedte, Medick, and Schlumbohm in the first section of their article, show that proto-industrialization was neither necessary nor sufficient for demographic change. It is not, therefore, surprising that Belfanti also finds that proto-industrialization did not have any systematic demographic effect in central and northern Italy (p. 273). As is clear from Kriedte, Medick, and Schlumbohm's survey, the original 'demo-economic' model of proto-industrialization is now being replaced by an array of much more differentiated theories, which are beginning to investigate the whole matrix of economic, social, institutional, and cultural constraints which affected people's demographic decisions.

VII. CONCLUSION: PROTO-INDUSTRY AND ECONOMIC DEVELOPMENT

The fascination exercised by theories of proto-industrialization stems from their claim to have found the causes of capitalism and industrialization. These theories claim to explain economic development and social change, processes of nearly universal concern. Indeed, in the final sections of their articles for this issue, both Mager and Kriedte, Medick, and Schlumbohm pay tribute to the fact that domestic industry is widespread in modern less-developed countries. This naturally gives rise to the following question: Does the last twenty years of research on early modern European proto-industries hold wider lessons for developing economies?

My answer would be a qualified 'yes'. The 'second generation' of research on proto-industrialization can help us think more clearly about economic development, but only by redirecting the debate. For one thing, proto-industries arose in many parts of early modern Europe, not just those which first industrialized or became 'capitalist': this special issue

documents active proto-industries in Germany, Austria, Italy, and the Netherlands, economies which industrialized relatively late. Similarly, domestic industries are widespread in many modern economies – especially in Africa and India – which are experiencing difficulties in developing. Such findings suggest that the mere presence of domestic manufacturing is not, in itself, sufficient for economic development. Much recent research in the developing world, in fact, suggests that it is *agricultural* development, rather than industry, which promises greater success in increasing the incomes and well-being of the population.²⁶ We have seen that this was also true of Europe: proto-industries arose in a number of societies – ‘feudal’ central and eastern Europe spring to mind – in which the economy did not begin to develop rapidly until after agrarian institutions were reformed.

We have also learned a great deal about demographic behaviour. The original theories argued that proto-industrialization caused a population to expand rapidly, breaking the Malthusian homeostatic limits to which it had adhered for centuries. Yet the ‘second generation’ of research has shown that in early modern Europe rapid population growth was neither ubiquitous in nor restricted to proto-industrial regions. In making demographic decisions, people seem to have taken into account a whole matrix of constraints, among which institutional and social factors were prominent. Similarly, in most modern developing economies fertility and population growth are, if anything, highest for the agricultural, not the domestic-industrial or industrial population. The factors affecting demographic decisions are by no means thoroughly understood, but recent research emphasizes institutional and social variables: opportunities for women outside the household, which delay or prevent marriage and increase the opportunity cost (in terms of women’s earnings) of having children; and institutions other than the family for obtaining labour inputs and for providing insurance and welfare, reducing the benefits of having children.²⁷ Finally, there is striking evidence that, at least in the modern less-developed world, population growth is negatively correlated with economic well-being, suggesting that high fertility may have ‘negative externalities’ (spill-over costs) for a developing economy.²⁸ In modern less-developed economies, therefore, just as in pre-industrial Europe, fertility is determined by a complex matrix of economic, social, and institutional constraints, and rapid population growth does not seem necessarily to favour development of the economy.

Indeed, from the point of view of modern developing countries, the most important findings of the ‘second generation’ of proto-industrialization studies may lie in the realm of social institutions. We have seen that the incidence, development, and social and demographic

ramifications of proto-industry in Europe were deeply affected by institutions. Across Europe, a wide variety of community rules, tenurial systems, corporate groups, and state structures regulated markets in land, labour, capital, and output. Even within a single continent – even among proto-industrial regions producing similar products – this gave rise to a plethora of different patterns of development. Input and output markets in present-day developing countries are also affected by a wide variety of social institutions, some with even greater powers to affect costs and prices. The research on European proto-industrialization suggests that economic and social change can only be understood by investigating these institutional constraints more thoroughly than has yet been done.

The poorest countries in the world today are facing formidable questions. How and in what direction should they develop their economies? In what light should they regard the violent demographic response to economic and social change, and how should they deal with it? The debate on European proto-industrialization no longer proffers simple answers to these questions. But it does point the direction any satisfactory answers must take. Economic and demographic developments are not autonomous, but are profoundly influenced by a complex matrix of institutional constraints. Historians of European proto-industries, by redirecting research and debate toward these institutional constraints, may indeed contribute to a better understanding of the problems facing developing economies today.

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ENDNOTES

- 1 Among economists, it received special attention from the German Historical School of Political Economy in the late nineteenth and early twentieth centuries, e.g. in W. Stieda, *Litteratur, heutige Zustände und Entstehung der deutschen Hausindustrie* (Leipzig, 1889); this is discussed in the articles by Mager and by Kriedte, Medick, and Schlumbohm in this special issue.
- 2 F. Mendels, 'Proto-industrialization: the first phase of the industrialization process', *Journal of Economic History* 32 (1972), 241–61. In fact, the first published use of the term was in C. Tilly and R. Tilly, 'Agenda for European economic history in the 1970s' (*Journal of Economic History* 31 (1971), 184–98), citing Mendels' then unpublished doctoral thesis, 'Industrialisation and population pressure in eighteenth-century Flanders' (Ph.D. dissertation, University of Wisconsin, 1970).
- 3 D. Levine, 'The demographic implications of rural industrialization. A family reconstitution study of two Leicestershire villages 1600–1851' (Ph.D. dissertation, Cambridge

- University, 1974), later published as *Family formation in an age of nascent capitalism* (New York etc., 1977); Levine developed his concept of proto-industrialization as simply a special case of proletarianization in 'Production, reproduction and the proletarian family in England 1500-1851', in D. Levine ed., *Proletarianization and family history* (Orlando etc., 1984), 87-127.
- 4 J. Mokyr, 'Growing-up and the industrial revolution in Europe', *Explorations in Economic History* 13 (1976), 371-96.
 - 5 P. Kriedte, H. Medick, and J. Schlumbohm, *Industrialisierung vor der Industrialisierung. Gewerbliche Warenproduktion auf dem Land in der Formationsperiode des Kapitalismus* (Göttingen, 1977), translated as *Industrialization before industrialization: rural industry in the genesis of capitalism* (Cambridge, 1982).
 - 6 F. Perlin, 'Proto-industrialization and pre-colonial south Asia', *Past and Present* 98 (1983), 30-95; K. Chao, 'La production textile dans la Chine traditionnelle', *Annales ESC* 39: 5 (1984) 957-76; O. Saito, 'Population and the peasant family economy in proto-industrial Japan', *Journal of Family History* 8 (1983), 30-54; D. L. Howell, 'Proto-industrial origins of Japanese capitalism', *Journal of Asian Studies* 51 (1992), 269-86; S. Nishikawa, 'Protoindustrialisation in the domain of Choshu in the eighteenth and nineteenth centuries', in P. Deyon and F. Mendels eds., *VIII Congrès Internationale d'Histoire Economique, Budapest 16-22 août 1982, Section A2: La protoindustrialisation: Théorie et réalité, Rapports*, 2 vols. (ms, Université des Arts, Lettres et Sciences Humaines, Lille, 1982), contribution no. 32; T. L. Ditz, 'Proto-industrialization and the household economy in the American north: inheritance patterns in five Connecticut towns, 1750-1820', in *ibid.*, contribution no. 12; S. P.-S. Ho, 'Small-scale rural industries in contemporary economic development: the case of South Korea and Taiwan', in *ibid.*, contribution no. 18; M. Johnson, 'Proto-industrialization in West Africa', in *ibid.*, contribution no. 23.
 - 7 For examples of its influence on anthropologists, see E. N. Goody, 'Daboya weavers: relations of production, dependence and reciprocity', in E. N. Goody ed., *From craft to industry: the ethnography of proto-industrial cloth production* (Cambridge, 1982), 50-84; R. J. Pokrant, 'The tailors of Kano City', in *ibid.*, 85-132; and D. A. Swallow, 'Production and control in the Indian garment export industry', in *ibid.*, 133-65.
 - 8 D. C. Coleman, 'Proto-industrialization: a concept too many?', *Economic History Review* 2nd ser. 36 (1983), 435-48; R. Houston and K. D. M. Snell, 'Proto-industrialization? Cottage industry, social change, and industrial revolution', *Historical Journal* 27 (1984), 473-92.
 - 9 De-industrialization as a possible outcome of proto-industrialization was already recognized in Kriedte, Medick, and Schlumbohm, *Industrialization*, 145-54.
 - 10 S. C. Ogilvie, 'Corporatism and regulation in rural industry: woollen weaving in Württemberg, 1580-1740' (unpublished Ph.D. dissertation, Cambridge University, 1985); forthcoming as *State corporatism and proto-industry: The Württemberg worsted industry, 1580-1797* (Cambridge University Press); see also Ogilvie, 'Coming of age in a corporate society: capitalism, Pietism and family authority in rural Württemberg, 1590-1740', *Continuity and Change* 1: 3 (1986), 279-331; Ogilvie, 'Women and proto-industrialisation in a corporate society: Württemberg textile manufacture, 1590-1700', in W. R. Lee and Pat Hudson eds., *Women's work, family income and the structure of the family in historical perspective* (Manchester, 1990), 76-103.
 - 11 Ogilvie, *State corporatism and proto-industry*, chs. 2-3; Ogilvie, 'Coming of age'; Ogilvie, 'Women and proto-industrialisation'.
 - 12 G. L. Gullickson, *Spinners and weavers of Auffay. Rural industry and the sexual division of labor in a French village, 1750-1850* (Cambridge, 1986).

- 13 This term pre-dated 'proto-industry', and was coined by H. Freudenberger and F. Redlich ('The industrial development of Europe: reality, symbols, images', *Kyklos* 17 (1964), 372–403).
- 14 Ogilvie, 'Women and proto-industrialisation'.
- 15 For example, Kriedte, Medick, and Schlumbohm (*Industrialization*, p. 78) write that 'If this new system was to take effect, the framework of political and governmental institutions, anchored to *Grundherrschaft* or *Gutsherrschaft* and the village community, had to disintegrate...'
- 16 *Ibid.*, 6–8, 9, 18.
- 17 R. L. Rudolph, 'Family structure and proto-industrialization in Russia', *Journal of Economic History* 40 (1980).
- 18 Ogilvie, *State corporatism and proto-industry*.
- 19 I make the attempt to do so for the Württemberg worsted proto-industry in *State corporation and proto-industry*.
- 20 Certainly this was the case, for instance, in the Nagold Valley worsted industry in Württemberg: see Ogilvie, 'Coming of age'; and W. Troeltsch, *Die Calwer Zeughandlungskompagnie und ihre Arbeiter* (Jena, 1897).
- 21 H. Kisch, 'From monopoly to laissez-faire: the early growth of the Wupper Valley textile trades', *Journal of European Economic History* 1 (1972), 298–407; H. Medick, "'Freihandel für die Zunft". Ein Kapitel aus der Geschichte der Preiskämpfe im württembergischen Leinengewerbe des 18. Jahrhunderts', in *Mentalitäten und Lebensverhältnisse: Beispiele aus der Sozialgeschichte der Neuzeit. Rudolf Vierhaus zum 60. Geburtstag* (Göttingen, 1982), 277–94; H. Medick, 'Privilegiertes Handelskapital und "kleine Industrie". Produktion und Produktionsverhältnisse im Leinengewerbe des altwürttembergischen Oberamts Urach im 18. Jahrhundert', *Archiv für Sozialgeschichte* 23 (1983), pp. 267–310; Ogilvie, *State corporatism and proto-industry*.
- 22 S. C. Ogilvie, 'Germany and the seventeenth-century crisis', *Historical Journal* 35 (1992), 417–41, here pp. 422–3, 433–4, 437–41.
- 23 J. K. J. Thomson, *Clermont-de-Lodève 1633–1789: fluctuations in the prosperity of a Languedocian cloth-making town* (Cambridge, 1982).
- 24 See, for example, the literature surveyed in Ogilvie, 'Seventeenth-century crisis', 434–5.
- 25 M. Walker, *German home towns: community, state and general estate, 1648–1871* (Ithaca, 1971); W. Grube, 'Dorfgemeinde und Amtsversammlung in altwürttemberg', *Zeitschrift für württembergische Landesgeschichte* 13 (1954), 194–219; H. Jänichen, *Beiträge zur Wirtschaftsgeschichte des schwäbischen Dorfes* (Stuttgart, 1970); F. B. Tipton, *Regional variations in the economic development of Germany during the nineteenth century* (Middletown, 1976), esp. ch. 3; S. C. Ogilvie, 'An alternative model of the German state: the Duchy of Württemberg', in E. Hellmuth and J. Brewer eds., *The state in the eighteenth century: Britain and Germany in comparative perspective* (Oxford, 1993).
- 26 World Bank, *World development report: agriculture and development* (Oxford, 1982).
- 27 See, for instance, the institutional and social factors discussed in R. A. Bulatao and R. D. Lee eds., *Determinants of fertility in developing countries* (New York and London, 1983); and G. McNicoll & M. Cain eds., *Rural development and population: institutions and policy* (Oxford, 1990).
- 28 On this, see World Bank, *Population change and economic development* (Oxford, 1984), 23–33, esp. Figures 2.4 and 2.5.