Proto-Industrialization? Cottage Industry, Social Change, and Industrial Revolution
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# HISTORIOGRAPHICAL REVIEW

## PROTO-INDUSTRIALIZATION? COTTAGE INDUSTRY, SOCIAL CHANGE, AND INDUSTRIAL REVOLUTION

### I

Small-scale, traditional local handicrafts had always existed in rural areas, but in the period from the fifteenth to the nineteenth century a new economic development occurred in many regions to which considerable attention is now being paid. There was an expansion of rural industry without major changes in the techniques or scale of production. This developmental phase has recently been termed 'proto-industrial' – a form of 'Industrialization before industrialization' which it is claimed holds the key to the question of why the industrial revolution took place.[1] Drawing on the work of Braun and others, the theory of proto-industrialization was originated by Mendels in his work on Flanders[2] and has been further developed particularly by Medick, Kriedte and Schlumbohm of the Max-Planck Institut für Geschichte in Göttingen as a way of explaining the transition both from feudalism to capitalism, and from a traditional society of peasant agriculture to the modern industrial world. As a description of the nature of expanding rural industry during this period, and as an explanation of industrialization, the theory put forward in *Industrialization before industrialization* is very wide-ranging over time and space, and has invited much discussion. We intend here to consider and appraise this concept and the arguments made for its importance.

Proto-industry occurred in the countryside among peasant farmers and semi-proletarianized workers in need of an income supplement. It was however controlled by urban capital, which integrated it into a new set of regional, supra-regional and international markets.[3] The goods produced were mainly textiles with their mass market potential, but industrial activities included gloving, straw-plaiting, glass-making, leather and metal working. Previously, petty producers had commonly owned the means of production, and sold their products locally or to a middleman, but proto-industry made them much more dependent on capital and upon entrepreneurial commission. Proponents of proto-industrial theory stress that in

[1] P. Kriedte, H. Medick and J. Schlumbohm, *Industrialization before industrialization* (Cambridge, 1981). Translated by B. Schempp, first published as *Industrialisierung vor der Industrialisierung* (Göttingen, 1977). (Henceforth KMS).

[2] F. F. Mendels, 'Proto-industrialization: the first phase of the industrialization process', *Jnl of Economic History*, XXXII (1972). The work of Mendels and of Kriedte, Medick and Schlumbohm cannot be seen as part of the same intellectual tradition. The former is influenced by modernization theory, and the latter espouse various forms of Marxism. The criticisms of this article are directed at aspects of proto-industrial theory held by all its exponents.

[3] KMS, pp. 2–3.

England in particular there was a 'reorganization of rural relations of production according to the laws of the market' from the sixteenth century onwards.[4] Furthermore, and drawing on the classical economic theory that markets overseas incorporated productive resources more effectively than did local markets, it is argued that 'foreign trade was not only the "handmaiden" of proto-industrialization, but, indeed, its "engine of growth"'.[5] Such a wider market acted as a powerful agent of social and demographic change, having far-reaching effects on an economically traditional form of production, still based on conservative inclinations among rural producers who wished to maintain intact their family economies.

Proto-industry is held to be specifically but not completely capitalist, an adaptation of capital to existing conditions of labour availability. Untrammelled by urban guild and company restrictions, rural workers were particularly attractive to entrepreneurs since they often had a subsistence base in agriculture and could thus forgo part of their wages, which were extracted as surplus by the capitalist.[6] Throughought Europe, the theory argues, merchant capital exploited an impoverished 'peasantry' who were responding to subsistence needs in the way predicted by Chayanov for Russia: when labour input of land had increased to the point where marginal returns to additional inputs were negligible the family would turn to non-agricultural work.[7] The peasant family was a self-exploitative entity searching for day-to-day subsistence without any calculation of the cost of its labour.[8] The 'total labour force' of the family was applied in an attempt to maximize use values rather than exchange values, to augment gross product rather than net profit.[9]

The theory of proto-industrialization has it that maximum total labour income was achieved by the joint working capacity of husband and wife plus a large number of economically productive children.[10] Proto-industrial workers are believed to have had an earlier age at first marriage than their traditional agricultural counterparts, a higher proportion ever married and consequently higher fertility and population growth rates.[11] The reason for this is thought to be that 'generative reproduction among the landless and land-poor industrial producers was no longer tied to the "social reproduction" of a relatively inflexible rural property structure'.[12] 'The family engaged in domestic industry reproduced itself in such numbers in order to subsist through its labour, and not primarily to consume "surpluses", still less to accumulate them.'[13] Proletarianization of labour freed more people 'from traditional controls which had previously been effective measures of maintaining an optimum population size'.[14] 'Children necessarily counted as labour power... they were also "living capital" that served to support the parents during their old age.'[15] Because of this it was necessary to have children early and frequently, and to retain them

[4] KMS, p. 21.
[5] KMS, p. 34.
[6] KMS, p. 23.
[7] KMS, pp. 16, 26.
[8] P. Jeannin, 'La proto-industrialization: développement ou impasse?', *Annales E.S.C.* (1980), p. 56: 'Pour assurer la subsistence immédiate, on y travaille sans considération de rentabilité, littéralement à n'importe quel prix.'
[9] KMS, pp. 41, 79.
[10] KMS, p. 79.
[11] R. Braun, 'Early industrialization and demographic change in the canton of Zürich', in C. Tilly (ed.), *Historical studies of changing fertility* (Princeton, 1978), pp. 317, 331; D. Levine, 'The demographic implications of rural industrialization: a family reconstitution study of Shepshed, Leicestershire, 1600–1851', *Social History*, II (1976), 178; KMS, pp. 85 7.
[12] KMS, p. 40.
[13] KMS, p. 81.
[14] Levine, 'Demographic Implications', p. 178.
[15] KMS, p. 80.

as far as possible into the productive years of adolescence and adulthood. Thus in proto-industrial areas rates of population growth are presumed to have been faster than in strictly agricultural regions, population density greater and household size larger.[16] Proto-industry broke a previous demographic homeostasis: 'population and domestic industry grew jointly, reinforcing each other's extension'.[17] These demographic changes were accelerated as 'merchant capital, by drawing an essentially pre-capitalist social formation – namely peasant society – into its sphere, promoted the process of accumulation and became the pacemaker of the general acceptance of the market principle'.[18] The social consequences of this were considerable, and apparently included far-reaching changes in familial relations and the disappearance of 'traditional' sexual divisions of labour.[19]

While unable fully to discuss all the features of proto-industrial theory, we shall consider some of the problems in this explanation of social and economic change in the early modern world. Kriedte has written that:

> The introduction of a new term to characterize a specific stage in socio-economic development is justified only if it can be operationalized. It must be possible to assign to it empirically verifiable indicators.[20]

His own criterion of proto-industry stressed that the level of industrial income should exceed that from agriculture, and that production must be mainly for non-local markets.[21] Both Mendels and Kriedte have stressed that the existence of (often substantial) proportions of non-agricultural workers involved in rural domestic industry (found in parts of Europe from the twelfth century if not earlier) is not by itself a sufficient indicator.[22] And the latest of a range of definitions from Mendels has emphasized that the market should be located outside the region of production; that production should be by precariously self-subsistent peasants, although the process was organized from, and the product sometimes finished in, towns; and that there should be a 'symbiosis of rural industry with the regional development of commercial agriculture'.[23] These definitions provide a reasonably concrete starting point. However, it must be said straight away that it is difficult to estimate either earnings or production, as criticisms of J. U. Nef's theory of an 'industrial revolution' in the sixteenth century have shown.[24] It is harder still to determine the proportion of 'production for supra-regional and international markets'.[25] At what stage for example did the market transcend purely local horizons and thus promote proto-industrial development? Population patterns, at least, can usually be quantified; but without necessary evidence on many 'hard' economic aspects, advocates of the theory have often been constrained to a range of measures indicative simply of 'the destabilization of the traditional social structure'.[26]

[16] KMS, p. 82.

[17] S. Pollard, *Peaceful conquest: the industrialization of Europe, 1760 1970* (Oxford, 1981), p. 69.

[18] KMS, p. 37.

[19] KMS, p. 61.

[20] KMS, p. 25.

[21] KMS, p. 25.

[22] A. Klima, 'The role of rural domestic industry in Bohemia in the eighteenth century', *Economic History Review*, XXVII (1974), 48; H. Kisch, 'The growth deterrents of a medieval heritage: the Aachen-area woollen trades before 1790', *Jnl Econ. Hist.* XXIV (1964), 518; Pollard, *Peaceful conquest*, p. 70.

[23] F. F. Mendels, 'Proto-industrialization: theory and reality. General report', in *Eighth International Economic History Congress, Budapest, 1982. 'A' Themes* (Budapest, 1982), p. 79.

[24] D. C. Coleman, *Industry in Tudor and Stuart England* (1975).

[25] KMS, p. 25.

[26] KMS, p. 25.

We must recognize initially that the heuristic value of the theory seems to be limited to northwestern Europe in so far as it stresses economic, demographic and social structural changes consequent on industrial commodity production for wider markets. According to Medick *et al.* 'proto-industrialization could establish itself only where the ties of the feudal system had either loosened or were in the process of full disintegration'.[27] In parts of central Russia the shift after about 1760 from labour services to payment in cash or kind was associated with a sharp rise in participation in cottage industry.[28] However, this was not always the case, and Kriedte points to the example of the feudal lords (*Gutsherren*) on the Silesian border, where linen production was drawn into the system of feudal obligations.[29] Bohemian industrial commodity production was fitted into the structure of feudal exploitation and was used to preserve feudal relations.[30] Side by side with feudal landlords we can nevertheless detect successful serf-capitalists or kulak-type peasant middlemen.[31] Further, the serf system favoured cottage industry over concentrated manufactures, with the result that factories did not replace domestic labour until the twentieth century.[32] In parts of eighteenth- and nineteenth-century Russia rural domestic production competed successfully with large, concentrated manufactories.[33] Finally there was little regional specialization of agriculture and industry since industrial commodity production was located in the same household as agriculture.[34]

Nor do the demographic predictions of proto-industrial theory work outside northwestern Europe, since before the nineteenth century in eastern and southern Europe age at first marriage for women was usually already low – typically 17–20 compared to 23–27 in northwestern Europe – proportions never married were low, migration by individuals was restricted and households were large.[35] Intensification of industrial commodity production in eighteenth-and ninteenth-century Japan and Russia was not associated with a fall in the age of marriage or greater population density.[36] Mean household size was actually smaller in industrial regions of Russia compared to agricultural ones.[37] Land was made available by the community in Russia, so that there was no constraint created by the need to wait for inheritance, from which young couples could be freed by industrial employment opportunities.[38] In Russia as in Japan family and community control over individuals remained strong, and the division of labour between (predominantly female) industrial production and (largely male) agricultural production remained a prominent

[27] KMS, p. 6.

[28] R. L. Rudolph, 'Family structure and proto-industrialization in Russia', *Jnl Econ. Hist.* XL. (1980), 111.

[29] KMS, p. 20.

[30] Klima, 'Rural domestic industry', pp. 49, 53.

[31] KMS, p. 29; Klima, 'Rural domestic industry', p. 52.

[32] Rudolph, 'Family structure and proto-industrialization', pp. 116–17.

[33] Klima, 'Rural domestic industry', p. 55.

[34] Rudolph, 'Family structure and proto-industrialization', p. 115.

[35] R. M. Smith, 'Fertility, economy and household formation in England over three centuries', *Population and Development Review*, VII (1981), 618; R. M. Smith, 'The people of Tuscany and their families in the fifteenth century: Medieval or Mediterranean?', *Jnl of Family History*, VI (1981); C. Mosk, 'Nuptiality in Meiji Japan', *Jnl of Social History*, XIII (1980); Rudolph, 'Family structure and proto-industrialization', pp. 112, 114.

[36] Mosk, 'Nuptiality in Meiji Japan'; Rudolph, 'Family structure and proto-industrialization', pp. 112–15.

[37] Ibid. p. 114.

[38] Ibid. pp. 112–13.

feature of income generation.[39] While proto-industrial theory does not provide an accurate prediction of social and economic development in eastern Europe, this area nevertheless often supplies the cultural context from which certain important but mistaken assumptions about familial relations in western Europe are drawn.[40]

## II

Let us then concentrate on the relevance of proto-industrial theory to northwestern Europe. The first crucial aspect of the theory concerns the agrarian preconditions of proto-industry, which is seen emerging in the high middle ages as a result of the developing division of labour, social polarization, intensified market transactions, the development of towns and population increase.[41] The work of Joan Thirsk in particular stressed the pastoral context of cottage industry, arguing that pasture and upland areas were unable to provide as full employment as mixed or cereal-producing regions, and were thus particularly receptive to cottage industrial by-employments.[42] Protagonists of proto-industrial theory have adopted this argument, along with the associated stress on the need for by-employments where partible inheritance customs had led to subdivision of peasant holdings and allowed population to grow to a level of unstable subsistence.[43] For Mendels 'the most significant aspect of proto-industrialization concerns the participation of *peasant* populations in handicraft production for the market'.[44] Kriedte too argues that 'the subsistence farm must be considered as the agrarian basis of proto-industrialization', and finds 'the rural industries of Europe concentrated in barren mountain regions'.[45] The theory is predicated on the assumption of subdivided peasant holdings in pastoral and infertile upland regions: a premise which is important both for subsequent demographic and social structural predictions and for attempts to connect proto-industrial growth with the development of commercial agriculture.

Now the problem that arises here is that much rural domestic industry, including that of a proto-industrial nature, could be located in very different environments, many of them not pastoral and upland. In England alone one thinks of the East

[39] O. Saito, 'Population and the peasant family in proto-industrial Japan', paper delivered to Eighth International Economic History Congress, Budapest, 1982, p. 16. For further discussion of the complex relationship between economic change and demographic patterns in Japan see S. B. Hanley and K. Yamamura, *Economic and demographic change in pre-industrial Japan, 1600–1868* (Princeton, 1977). Control by landlord and community over 'inheritance' of land and thus over marriage was maintained in eastern Europe and Japan. This strategy was not available in England since most property was transferred by *inter vivos* market transactions. See Smith, 'Fertility, economy and household formation', pp. 616–17. Thus Medick's view that (efficient) control on social and sexual reproduction could be maintained by joint peasant and seigneurial supervision is not borne out. See Jeannin, 'La proto-industrialization', p. 57.

[40] See Smith, 'People of Tuscany', pp. 120 3 on southern Europe, which shares some important cultural facets with eastern Europe.

[41] KMS, pp. 6–7.

[42] J. Thirsk, 'Industries in the countryside', in F. J. Fisher (ed.), *Essays in the economic and social history of Tudor and Stuart England* (Cambridge, 1961).

[43] In passing it is worth noting that there is no necessary association of proto-industry with partible inheritance; demand for by-employments could be equally strong in areas of impartible inheritance where younger sons would be left landless.

[44] Mendels, 'Proto-industrialization: theory and reality', p. 79.

[45] KMS, pp. 14, 26.

Anglian woollen industry, the pillow-lace and straw plait industries of Buckinghamshire, Bedfordshire, Hertfordshire and Huntingdonshire, the linen industry on the Norfolk–Suffolk border, calico-printing in parts of Surrey, the Essex silk industry, or hand and framework knitting in many still unenclosed arable-based Leicestershire villages. Even the Suffolk woollen industry was not located in wood-pasture areas, and only half of the Suffolk villages active in the industry lay in a pastoral region. The rest were in a sheep–corn district. All such industries were proto-industrial in that they produced for non-local markets. In Scotland the pressure of population on scarce economic resources produced a greater involvement in linen-yarn production in the Highlands during the eighteenth century, but there was also a substantial amount of spinning and manufacture in rural areas and small towns such as Kilmarnock, set in the rich arable land of the Western Lowlands.[46] Such contrary examples are common too on the continent, and raise obvious doubts about the exact agrarian preconditions of proto-industrialization. Kriedte, Medick and Schlumbohm seem to recognize the many exceptions, but these do much to vitiate the theory at an early stage.

Their discussion of this (as of many other) issues is indeed replete with qualificatory phrases,[47] and there are frequently more exceptions than they admit. At the same time, many of the different agrarian preconditions and contexts they list are theoretically quite incompatible. They include conditions of seasonal (winter) unemployment associated with arable and commercial farming; generalized structural unemployment; the predominance of subsistence and strictly peasant farms; 'barren mountain regions'; commercial stock-raising districts; situations where there had been a subdivision of holdings; places where money rents were rising; poor-soiled and less productive pastoral districts; population growth; areas near towns with labour shortages, sometimes with guild and company controls to be escaped; areas with cheap raw materials, or with low taxes and/or prices; districts faced with different forms of agricultural depression; rising rural real wages or wages above subsistence requirements; 'a labour system that was still essentially feudal...in which "property rights" were not fully assured';[48] rural areas proximate to ports; districts with marketing and transport facilities; a 'more open and flexible social order' than obtained where 'the collective controls of the village were still unbroken', and so on.[49] The theory aims to delineate and typify in a certain form the nature of expanding rural industry, but in this regard almost every conceivable European agrarian context is encompassed. As Kriedte eventually admits: 'Despite what was said earlier, those forms [agrarian preconditions] could vary greatly'.[50] The authors acknowledge regional diversity, but from the start force it into a very limiting theoretical framework.

Nevertheless, the consistent emphasis in proto-industrial theory is the need for industrial commodity production among peasant smallholders whose relatively unproductive upland holdings have become fragmented, and where demographic pressure on limited resources was acute. Proto-industry is said to be the 'child of poverty'; and because of their foothold on the land and non-capitalist mentality

[46] R. A. Dodgshon, *Land and society in early Scotland* (Oxford, 1981), pp. 313–15; R. A. Houston, 'Marriage formation and domestic industry: occupational endogamy in Kilmarnock, Ayrshire, 1697–1764', *Jnl of Family History*, 8, 3 (Fall, 1983), 215–29, A. J. Durie, 'Linen spinning in the north of Scotland, 1746–1773', *Northern Scotland*, II (1974–5), 18.

[47] For example see KMS, pp. 16, 21–2.

[48] KMS, p. 142.

[49] KMS, pp. 21–33.

[50] KMS, p. 26.

these now semi-proletarian 'peasants' tended to remain poor while surplus wealth was extracted by urban-based entrepreneurs. Despite demand for their products, earnings apparently remained desparately low, especially in the final stages when proto-industry was glutted by its own demographic repercussions, and threatened by the factory system to which its course of development apparently led it.

However, we should stress that proto-industry often emerged during periods of *rising* real wages, and indeed frequently enhanced the wages of industrial commodity producers particularly before the late eighteenth century. For example, it allowed a higher standard of living in parts of Belgium,[51] or among the hand and framework knitters in Leicestershire;[52] or in the metal and weapons trade around Liège;[53] or for the English handloom weavers until late in the eighteenth century.[54] In pillow lace and straw plait too, earnings (especially for women) could be considerably enhanced,[55] and this was also true for some glove-making areas. The presence of rural domestic industry could also maintain familial income during periods when agricultural real wages were commonly falling, as for example in the hosiery districts of the southern Midlands of England after about 1770.[56] Real wages in cereal-producing areas of southern England often fell sharply in areas lacking cottage industry.[57] All this suggests that proto-industrial areas were not necessarily fearful poverty traps; and that the emphasis given to proto-industry as a major explanation of continued pauperism is overdrawn and simplistic in ignoring many other factors.[58] The arguments of Medick *et al.* that proto-industry developed from and perpetuated a specific context of agrarian poverty through the relationship of population to the needs of capitalist production singularly fail to take cognizance of the actual experience of proto-industrial regions.

## III

Let us turn to the demographic components of the theory. Industrial commodity production for non-local markets is said to have wrought profound changes on the existing population patterns of agrarian Europe. For Pierre Deyon, 'aucun doute n'est permis' about these demographic consequences.[59] Medick asserts that 'the

[51] C. Vandenbroeke, *Handlingen van de Geschieden Oudheidkundige Kring* (Oudenaarde, 1976).

[52] D. R. Mills, 'Proto-industrialization and social structure: the case of the hosiery industry in Leicestershire, England', paper to the Eighth International Economic History Congress, Budapest, 1982; S. D. Chapman, 'The genesis of the British hosiery industry, 1600 1750', *Textile History*, III (1972), 35 7; S. D. Chapman, 'Enterprise and innovation in the British hosiery industry, 1750 1850', *Textile History*, V (1974), 29.

[53] M. P. Guttman and R. Leboutte, 'Early industrialization and population change: rethinking proto-industrialization and the family', paper delivered to the annual meeting of the Population Association of America, Denver, Colorado, 1980.

[54] D. Bythell, *The handloom weavers* (Cambridge, 1969), pp. 11, 116, 130–2; S. Bamford, *Early days* (1841).

[55] P. L. R. Horn, 'Pillow lacemaking in Victorian England: the experience of Oxfordshire', *Textile History*, III (1972), 100; G. F. R. Spenceley, 'Origins of the English pillow lace industry', *Agricultural History Review*, XXI (1973).

[56] K. D. M. Snell, *Social change and agrarian England, 1660–1900* (forthcoming, Cambridge, 1984), ch. 1.

[57] Ibid. ch. 1; K. D. M. Snell, 'Agricultural seasonal unemployment, the standard of living, and women's work in the south and east, 1690 1860', *Econ. Hist. Rev.*, XXXIII (1981).

[58] Snell, *Social change and agrarian England.*

[59] P. Deyon, 'L'enjeu des discussions autour du concept de "proto-industrialization"', *Revue du Nord*, LI (1979), 12.

intermittent dynamic of population growth inherent in agrarian societies must be contrasted with that which was inherent in the "demographic hothouse of proto-industrialization".[60] Braun meanwhile points to the 'certain proof that in England, at least in the regions of cottage industry, a considerable population growth preceded the Industrial Revolution. The same phenomenon can be recognized in the eighteenth century for all regions of continental Europe where cottage industry or proto-industry generally played dominant roles as sources of livelihood.'[61] Indeed it did. In the canton of Zürich in 1634 population density was 46 per square kilometre in farming regions and 53 in upland industrial commodity production areas; by 1792 the density in proto-industrial parts had risen faster than agricultural: to 108 compared to 73.[62] The comparatively less fertile mountain areas of Bohemia had population densities 30 per cent higher than the national average, due to rural domestic industry.[63] By the late eighteenth century proto-industrial areas of Ireland had comparatively dense populations,[64] while mono-industrial (textile) regions of Germany such as Minden and Ravensburg had faster rates of population increase than the more diverse industrial area of Mark.[65] A similar pattern can be found in parts of England, Scotland, Holland and Flanders.[66] Yet these densities were not unique to proto-industrial areas. The three eastern provinces of Prussia with the highest crude birth rates in the late eighteenth century had almost no industry, but there had been a 'réaménagement de l'économie domaniale'.[67] Parts of wholly agricultural central Finland saw a doubling of population between 1720 and 1770.[68] The count of Tecklenburg, a large-scale cloth producer, had population densities on his estates very similar to neighbouring areas which were wholly agrarian.[69] In England the agrarian south moved from having among the lowest birth rates of any English region in the early eighteenth century to having the second highest in the early nineteenth century. The region was certainly not one of expanding cottage industry.[70] In other words proto-industry does account for population increase and density in some areas, but cannot be used as a general explanation of the eighteenth-century population rise. Population growth and high densities may occur for reasons which have little to do with industrial commodity production.

Of course it is possible that the mechanisms behind demographic change may have been different in areas of rural domestic industry. Medick argues vigorously that population was effectively regulated in agricultural communities where marriage

[60] KMS, p. 76.

[61] Braun, 'Early industrialization and demographic change', p. 293; Deyon, 'Proto-industrialization', p. 12.

[62] Braun, 'Early industrialization and demographic change', p. 329.

[63] Klima, 'Rural domestic industry', p. 50.

[64] B. Collins, 'Proto-industrialization and pre-famine emigration', *Social History*, VII (1982), 134–5.

[65] Jeannin, 'La proto-industrialization', p. 61.

[66] R. M. Smith, 'Population and its geography in England, 1500–1730', in R. A. Dodgshon and R. A. Butlin, *An historical geography of England and Wales* (1978), p. 231; Houston, 'Marriage formation and domestic industry'; J. de Vries, *The Dutch rural economy in the golden age, 1500–1700* (1974); Mendels, 'Proto-industrialization: the first phase of the industrialization process'.

[67] Jeannin, 'La proto-industrialization', p. 58; Pollard, *Peaceful conquest*, p. 76.

[68] Jeannin, 'La-proto-industrialization', p. 58.

[69] Ibid. p. 58.

[70] P. Deane, and W. A. Coale, *British economic growth, 1688–1959* (Cambridge, 1962, 1976 edns), p. 127.

was dependent on the inheritance of land; and that industrial employment destroyed the connexion between inheritance of land and marriage, and so removed disincentives to early marriage. Proto-industrial workers therefore married earlier than their agricultural counterparts, and since more of the woman's childbearing years were utilized population would rise.[71] Significant differences can certainly be detected in the demographically crucial age at first marriage for women between some cottage industrial and agricultural populations. At Comines in north-east France for the years 1739–89 the mean age at first marriage for brides involved in textile production was 25·3 years, while for peasant brides it was 28.[72] Four agricultural villages in French Flanders during the period 1690–1799 had female marriage ages ranging from 27·6 to fully 30, but in two proto-industrial villages in this region ages were 22·4 and 23·7.[73]

However, the picture is not as simple as it may appear. In a group of villages in the Thimerais, situated between Chartres and Dreux, the rate of *increase* in age at first marriage for women marrying *laboureurs* (big farmers) over the eighteenth century was much less than for *journaliers* – mainly weavers and labourers.[74] During the 1720s *laboureur* women were marrying on average at 23·1 years, but by 1760–89 this had risen to 25·2. For *journaliers* the comparable increase was 21·9 to 26·3. At the same time, though not dealing with specifically proto-industrial communities, the work of John Knodel on eighteenth- and nineteenth-century German villages casts serious doubt on the connexion between proletarianization and population increase through the mechanisms of nuptiality and fertility. He finds that farmers' wives were almost invariably younger when they first married than were the wives either of artisans or of cottagers and unskilled labourers.[75] These differences in the demographically crucial female age at marriage are consistent over time and across all villages studied. Lastly, by comparing two villages in the Basse Meuse region of Belgium which mixed agriculture with mining and metal working, with one in the Pays de Herve where agricultural changes during the eighteenth century increased involvement in spinning and weaving woollen cloth, Guttman and Leboutte found that the predictions were either seriously attenuated or not fulfilled.[76] There was no significant fall in the female age at first marriage in the proto-industrializing village of Thimister until the fertility transition in the late nineteenth century. Age at marriage in the coalmining community of Vottem was

[71] KMS, pp. 82 9. Medick and others are perhaps too ready to reject the idea that in-migration of people in the nubile age groups produced gross increases in vital rates, of the kind identified by Braun and Levine in industrial communities with weak controls on immigration. Braun, 'Early industrialization and demographic change', p. 300; Levine, 'Demographic implications of rural industrialization', pp. 183 4.

[72] P. Deyon, 'La diffusion rurale des industries textiles à Flandres française à la fin de l'ancien régime et au début du XIXème siècles', *Revue du Nord*, LI (1979), 94.

[73] See also D. Terrier and P. Toutain, 'Pressions démographique et marché du travail à Comines au XVIIIème siècle', *Revue du Nord*, LI (1979), 23; M. W. Flinn (ed.), *Scottish population history* (Cambridge, 1977), pp. 276–8.

[74] B. Derouet, 'Une démographie sociale differentielle', *Annales E.S.C.*, XXXV (1980), 4, 8, 41. Derouet is careful to distinguish *journaliers* from the small number of traditional rural craftsmen in his communities 'les véritables artisans' who included carpenters, wheelwrights, saddlers and smiths.

[75] J. Knodel, 'Demographic transitions in German villages', Population Studies Center, University of Michigan Research Report no. 82-22 (April 1982), pp. 13 18.

[76] Guttman and Leboutte, 'Early industrialization and population change'.

only marginally below that of more traditional artisans. The demographic changes discussed by Mendels, Levine and others are not exclusively, nor perhaps generally, associated with proto-industrialization.

The need for a wider comparative context is illustrated in the demographic work of Levine.[77] Mendels rather boldly asserts that 'the demographic aspects of the hypotheses were fully tested out by David Levine on some English parishes'.[78] Yet Levine's work is marred by the narrowness of his key comparison of demographic patterns in the proto-industrial village of Shepshed in Leicestershire with those of the nearby agricultural parish of Bottesford. He argued that the opportunity of non-agricultural employment resulted in the estrangement of growing numbers in Shepshed from traditional Malthusian preventive checks, removing the disincentive to early marriage.[79] Since increased fertility, largely caused by a fall in marriage age, was the main engine of population growth in England between 1700 and 1850, his demonstration that in Shepshed female age at first marriage fell by more than five years between the seventeenth century and the second quarter of the nineteenth compared to only one or two years at Bottesford seems to point to the causes of population growth before and during the industrial revolution.[80] However, if we compare the experience of Shepshed women and those from Gedling, another *possibly* proto-industrial community which had some framework knitting, with the mean age at first marriage for eleven English parishes where family reconstitution studies have been completed, we find that it was much less distinctive than Levine believed (see Table 1). These eleven parishes cover a wide range of economic types, but significantly they had comparatively little involvement in proto-industry.

Table 1. *Mean age at first marriage for females in England*[81]

| Date | 11 English parishes | Shepshed | Gedling |
|---|---|---|---|
| 1600 49 | (1641) 25·4 | (56) 28·5 | (68) 26·9 |
| 1650 99 | (1563) 26·2 | (56) 26·5 | (121) 26·1 |
| 1700 49 | (2429) 25·3 | (129) 27·3 | (166) 25·5 |
| 1750 99 | (4211) 23·9 | (292) 24·8 | (179) 24·1 |

In other words, the changes which Levine identified as a product of proto-industry were happening elsewhere in wholly different economic circumstances, and thus presumably for other as yet unidentified reasons. Age at marriage in Shepshed was exceptionally late in the first half of the seventeenth century, but it is difficult to attribute the fall to proto-industrialization since this did not develop until the late

[77] D. Levine, *Family formation in an age of nascent capitalism* (1977).

[78] Mendels, 'Proto-industrialization: theory and reality', p. 75. Medick also draws heavily on Levine's work as the best support for his theory, referring to the latter's study of the 'regions of cottage industry' as if more were being covered than simply the one proto-industrial parish of Shepshed. KMS, p. 87.

[79] Levine, 'Demographic implications', p. 178.

[80] Levine, *Family formation*, pp. 61, 97.

[81] Source: family reconstitution files of the Cambridge Group for the History of Population and Social Structure. Only the period 1600 1799 has been used, to prevent any truncation effects on marriage cohorts. The table uses all cases where woman's age at first marriage is known. Figures in parentheses are the numbers of marriages used in the calculation of the mean.

seventeenth and early eighteenth centuries. The rate of fall in age at marriage is actually less between the late seventeenth and late eighteenth century at Shepshed and Gedling than in the eleven 'traditional' communities.

At the same time the period of the greatest proletarianization during the early nineteenth century in England as a whole did not see a quickening of nuptiality, but rather a fall in fertility. This fertility decline after 1815 was not the result of a fundamentally different response to economic trends among the increasing numbers of proto-industrial workers in the population. Rather it was to be expected from the experience of earlier generations when real wages fell.[82] The relationship between nuptiality and fertility and variations in real wages is important, and in England it has been argued that they were closely connected. In the long term when real wages rose so too did nuptiality, albeit with a lag of thirty or forty years, the level falling again with a similar lag when real wages were stagnant or dropping.[83] However, for Medick *et al.* the relation of fertility to the standard of living is seen very differently. For them it was *low* wages which encouraged early marriage, since industrial producers were fighting for subsistence and needed to increase production by using more family members. Marriage remained early and wages low in this vicious circle. Similarly, Mendels argued that when grain prices fell and linen prices rose in Flanders population also rose, and that it did not decline when real wages fell.[84] The problem here in part is to explore and distinguish between short- and long-term relationships.[85] Proto-industrial theory does not do this. Its advocates see the demographic effects of falling real wages or adverse internal terms of trade as an unprecedented break from previous relationships between population and resources. This seems dubious in England, where it is possible that the immiseration which occurred after about 1770 'is what might be expected in view of previous *pre-industrial* national experience, and did not represent a new or unlooked for turn of events'.[86]

There are also problems with Levine's discussion of illegitimacy, taken over by proto-industrial theory. Following the arguments of Scott and Tilly,[87] he argued that where women had more opportunities for employment (as supposedly in proto-industrial households), and where a greater proportion of the population was no longer dependent on inheritance for its life chances, there would be more repetitive

[82] E. A. Wrigley and R. S. Schofield, *The population history of England, 1541 1871* (1981), p. 443.

[83] Ibid. pp. 402 43.

[84] Pollard, *Peaceful conquest*, p. 68.

[85] Wrigley and Schofield, *Population history*, pp. 421 2.

[86] Ibid. p. 440. Proto-industrial theory's explanation of population increase relies almost exclusively on the mechanism of nuptiality and fertility. For England in the eighteenth and early nineteenth century this emphasis is correct, but the relative impact of mortality and fertility on population trends was not constant over time; nor is the pre-eminence of fertility true of all European countries. In explaining the increase in population over the eighteenth and early nineteenth century in Sweden, mortality improvements played the greater role, while in France population stagnation is explained by the equal importance of falling mortality and fertility. Ibid. pp. 236 48. Incidentally, it is by no means proven that the Malthusian preventive check worked effectively in balancing population and resources in 'traditional' rural society outside England. In fact the subsistence crises which ravaged areas of France during the seventeenth and eighteenth centuries would suggest otherwise. P. Goubert, *Beauvais et le Beauvaisis de 1600 à 1730* (Paris, 1960).

[87] L. Tilly, J. W. Scott and M. Cohen, 'Women's work and European fertility patterns', *Journal of Interdisciplinary History*, VI (1976).

bearing of bastard children.[88] Again the contrast between Shepshed and Bottesford or Terling in Essex supports this contention, but comparison with other reconstitution parishes does not confirm that repetitive bastard-bearing was particularly associated with proto-industry.[89] The latter may have accelerated changes but it did not initiate them. Problems in proto-industrial theory arising from too narrow a demographic context also occur in Medick's discussion of seasonality. In traditional rural society there was a peak in baptisms during the winter months and a trough during the summer. Rural domestic industry is said to have reduced these variations, since 'the reproductive behaviour of proto-industrial populations had detached itself from the rhythms of the agricultural year'.[90] Medick points to a similar pattern in 'larger cities' from the seventeenth century,[91] but in the early seventeenth century, London (one of the largest cities in Europe) shared seasonality of baptism patterns with a large sample of mainly rural parishes in England.[92] Once set in a wider context, an occupationally specific explanation alone of these seasonal patterns is hard to maintain: the same secular trends towards an evening-out of peaks and troughs in baptisms over the year is visible from the sixteenth to the nineteenth century.[93] The process quickens after 1750 in England but is apparent in most parishes well before that date. Changes attributed to proto-industrial development were happening more widely, and in very different contexts.[94]

## IV

Associated with demographic changes, a number of broadly social structural ones are held to have occurred. In order to maximize gross family output, children were retained longer in the 'ganze Haus' among industrial families than in peasant and other households.[95] Kin might also be used to swell the family labour force, since the marginal cost of including them in the household was small.[96] The result was that 'the average household size of the rural cottage workers was significantly higher

[88] Levine, *Family formation*, pp. 127 45; M. Anderson, *Approaches to the history of the western family, 1500–1914* (1980), pp. 55 6.

[89] R. M. Smith, 'Family reconstitution and the study of bastardy: evidence for certain English parishes', in P. Laslett, K. Oosterveen and R. M. Smith, *Bastardy and its comparative history* (1980), pp. 87 8.

[90] KMS, pp. 91, 268. [91] Ibid. p. 92.

[92] Wrigley and Schofield, *Population history*, p. 292.

[93] Ibid. pp. 288 9.

[94] This is also true of migration. Both Braun and Levine notice a decline in out-migration from established proto-industrial areas, due, they believe, to the lack of any incentive to move when employment opportunities were easily available. Braun, 'Early industrialization and population change', p. 302; Levine, *Family formation*, pp. 36 44. In agricultural communities a more usual pattern was of out-migration when any imbalance of population and resources needed to be eased. V. Skipp, *Crisis and development* (Cambridge, 1978), pp. 39 40. For Medick, 'proto-industrialization completely or partially abolished those migration patterns'. KMS, p. 84. However, it has been argued by others that a contraction of migration fields occurred more widely in England between the mid-seventeenth and mid-eighteenth centuries, and cannot be seen as purely or even principally the result of proto-industrialization. P. Clark, 'Migration in England during the late seventeenth and early eighteenth centuries', *Past & Present*, 83 (1979); D. Souden, 'Movers and stayers in family reconstitution populations, 1660 1780', *Local Population Studies*, 32 (1984).

[95] KMS, p. 84.

[96] Collins, 'Proto-industrialization and pre-famine emigration', p. 134.

than that of farm workers'.[97] There are two difficulties with this picture. First the household size of proto-industrial producers was not always 'significantly higher'. Damask weavers at Lisburn in Ireland for example (1820–1), actually had a smaller household size than other weaving households, and smaller than those whose heads were not involved in textiles.[98] For southern Flanders in 1796 Vandenbroeke has shown that wage-earning textile workers had a mean household size of only 4·1 persons, compared to 5·4 for farmers and 4·8 for traditional craftsmen and tradesmen. The composition of the proto-industrial households differed only in the lower number of servants they contained: the mean number of resident kin and children was almost exactly the same as for independent artisans.[99] Similarly weavers in the industrial quarter of Bruges in 1814 had a household size and composition which was very much in line with other low-status groups.[100] Involvement in proto-industry did not invariably produce a distinctive household size and composition.[101]

Secondly, the model of the proto-industrial household 'takes little account of internal life-cycle changes within the family system of textile production'.[102] Even in periods of rising population it must frequently have been impossible for industrial commodity producers to employ only, or even mainly, their own children or kin.[103] Some sort of recourse to the (active) market in wage labour in northwestern Europe would have been necessary. The exclusive family production unit cannot have been universal.[104] Furthermore, this model of a family economy raises a paradox in

[97] KMS, p. 54.

[98] L. Clarkson and B. Collins, 'Proto-industrialization in an Irish town, 1820 21', paper delivered to Eighth International Economic History Congress, Budapest, 1982.

[99] Vandenbroeke, *Handelingen*, p. 278.

[100] R. Wall, 'The composition of households in a population of six men to ten women: south-east Bruges in 1814', in R. Wall (ed.), *Family forms in historic Europe* (Cambridge, 1982), pp. 448, 452, 456.

[101] Similarly, the mean number of children of married males (with an average age of thirty-four) examined under the English Settlement Laws who had proto-industrial employments (framework knitter, weaver, woolcomber and woolsorter) was the same as for those male examinants (with the same average age) who worked in a more traditional range of artisan employments which used wives and children as productive labour. Such 'familial' occupations (of which proto-industrial employments were a small subset) were clearly differentiated from the smaller families with occupations where the man worked away from home, or where his work commonly disallowed the participation of family members (Snell, *Social change and agrarian England*, ch. 7). In this as in other aspects, proto-industrial theory needs to pay more comparative attention to the large numbers of traditional artisans, who shaded gradually into the category of 'proto-industrial' workers. A good analysis of the spectrum of producers from independent artisans to full wage-earners, and the wide range of relationships to entrepreneurs and markets is given in P. Hudson, 'Proto-industrialization: the case of the West Riding wool textile industry in the eighteenth and early nineteenth centuries', *History Workshop*, XII (1981), and there are interesting sidelights in Dodgshon, *Land and society in early Scotland*, pp. 314 15; and in M. Gray, *The highland economy, 1750–1850* (Edinburgh, 1957), pp. 139–41. For Ireland see L. M. Cullen, *An economic history of Ireland since 1660* (1972, 1976 edns), pp. 61 6.

[102] Collins, 'Proto-industrialization and pre-famine emigration', p. 132.

[103] M. Anderson, 'Sociological history and the working class family: Smelser revisited', *Social History*, III (1976), 325.

[104] Ibid. p. 325; Collins, 'Proto-industrialization and pre-famine emigration', pp. 130–1. Peter Laslett draws our attention to an important distinction here: between a family where joint contributions of all members were essential to the budget, and one where there was 'a work group organized for collaboration in a particular productive activity undertaken in the household', despite the common pooling of resources in both. P. Laslett, 'Family and

proto-industrial theory. Given that industrial commodity producers became economically productive at a young age, and could marry young because freed from the constraints of inheritance, what means were available to retain children at home to co-operate in family production, when their own interests lay in establishing separate households using their own labour?[105] Children are said to have had little freedom of choice about whether to stay at home, contribute to the family budget or look after aged parents.[106] In this respect proto-industrial workers remained firmly 'traditional' in their motivations and expectations. Wealth flowed from the younger to the older generations. In the canton of Zürich among families who retained an interest in the land 'children turned their earnings as a matter of course over to the economic unit of the family'.[107] In landless families too, children apparently continued to pay part of their earnings for board and lodging.[108]

Now the requisite economic and moral controls over the younger generation exercised by 'patriarchal domination'[109] and buttressed by a poorly developed wage–labour market might be available in mediterranean and eastern Europe, but were certainly not in England nor indeed much of northwestern Europe.[110] Proto-industrial theory is incorrect to claim otherwise. In England care for the aged was overwhelmingly community rather than kin based.[111] 'Many poor spent their old age as dependants of the parish whether they had adult children or not.'[112] Both before and after the onset of proto-industry, adolescents and young adults could accumulate capital on their own account (through service for instance), and marry much as they pleased, subject to a set of flexible cultural norms.[113] They were aided in this by wealth flows which were predominantly from the older to younger generations.[114] By contrast, in the Chayanovian peasant world 'the maintenance of property had priority over individual happiness'.[115] Braun allows that this might not be true of the landless population, but like Medick runs into problems when assessing the nature of relationships within households. He eventually espouses an argument, later adopted by Edward Shorter,[116] which sees freedom from property constraints leading to a 'much more intimate aura' in marriage. Family property interests had been replaced by 'a reciprocal commitment of two people who helped to realize individual happiness through it'.[117] In contrast to the peasant community 'marriages were contracted without any thought to material considerations', so enhancing 'the larger Western tendency towards individualism' and bringing about

household as work group and kin group: areas of traditional Europe compared', in Wall, *Family forms*, p. 544. Laslett further emphasizes how 'we may have accepted too readily the notion of a co-resident domestic group in traditional times as being both kin group and work group and have ourselves applied that notion... to associations of other kinds'. Ibid. p. 552.

[105] Anderson, *Approaches to the western family*, p. 82.

[106] KMS, p. 55.

[107] Braun, 'Early industrialization and demographic change', p 320.

[108] Ibid. p. 321; KMS, p. 55.

[110] Smith, 'Fertility, economy and household formation in England', pp. 617 18; Smith, 'People of Tuscany', p. 122; Snell, *Social change and agrarian England*, ch. 7.

[111] Smith, 'Fertility, economy and household formation in England', pp. 606 8.

[112] Ibid. p. 608.

[113] K. Wrightson, *English society, 1580–1680* (1982), pp. 66 118.

[114] Smith, 'Fertility, economy and household formation in England', p. 606.

[115] Braun, 'Early industrialization and demographic change', pp. 310, 320.

[116] E. Shorter, *The making of the modern family* (1976).

[117] Braun, 'Early industrialization and population change', p. 313.

'a transformation of the erotic consciousness'.[118] The arguments are familiar ones, repeated by Medick. But the sort of traditional familial mentality said to have broken down because of proto-industry was largely absent from interpersonal relations in English society from at least the sixteenth century.[119] The same may well be true of much of northwestern Europe. In the English context arguments for a growth of affective individualism, a 'rise of romantic love' and a transformation of 'erotic consciousness' due to the 'liberating' effects of proto-industry are highly dubious.[120]

Finally social changes in the role of women are said to have occurred – an earlier (supposedly rigid) division of labour between the sexes becoming blurred because of the new joint inputs of husband and wife to the family budget. Levine for example claims that 'because wages were so low in the framework knitting industry it was very difficult for a family to survive on the husband's earnings alone', and the theme is stressed by Medick.[121] An 'inner structural change' occurred, manifested 'in the transformation of the division of labour between the sexes, of the configuration of roles within the family, and of [the] social character of the whole family'.[122] This could go so far under proto-industry 'as to erase the traditional division of labour between the sexes and age groups'.[123] Proto-industry could even lead to 'the reversal of traditional roles... the necessities of production compelled women to neglect household "duties"'.[124] These changes in the sexual division of labour are held to have been closely bound up with those in affective and sexual behaviour.[125] However, from the work of Alice Clark, Pinchbeck, Richards, Snell and others it is clear that women in England before the nineteenth century took part in a wide range of employments, which became progressively limited to men by and during the nineteenth century.[126] In agriculture and the artisan trades more generally the period after about 1750 saw a reduction of participation rates for women, a change away from earlier and more sexually shared work-allocations, which were themselves due both to traditional family production and to labour shortages consequent on demographic stagnation and a high leisure preference.

The lack of a sexual division of labour in proto-industrial occupations followed a similar pattern to earlier artisan family economies: women in England had been apprenticed to many other trades besides framework knitting or weaving.[127] There was nothing novel in their employment in eighteenth-century proto-industrial occupations.[128] Similarly women worked widely in the old-style textile and other

[118] R. Braun, 'The impact of cottage industry on an agricultural population', in D. Landes (ed.), *The rise of capitalism* (New York, 1966), pp. 59–60. Translated from his *Industrialisierung und Volksleben: Die Veranderungen der Lebensformen in einem landlichen Industriegebiet vor 1800* (Erlenbach Zürich and Stuttgart, 1960).

[119] A. Macfarlane, *The origins of English individualism* (Oxford, 1978); Wrightson, *English society*.

[120] Macfarlane, *English individualism*; Snell, *Social change and agrarian England*, chs. 6, 7.

[121] Levine, 'Demographic implications', p. 178.

[122] KMS, p. 60. [123] KMS, p. 61.

[124] KMS, p. 62. [125] KMS, pp. 59–63.

[126] A. Clark, *Working life of women in the seventeenth century* (1919); I. Pinchbeck, *Women workers and the industrial revolution, 1750–1850* (1930); E. Richards, 'Women in the British economy since c. 1700 an interpretation', *History*, LIX (1974); Snell, 'Agricultural seasonal unemployment'; idem, *Social change and agrarian England*.

[127] Ibid. ch. 6.

[128] There are examples where proto-industrialization actually accentuated the sexual division of labour. Before the eighteenth century in the highlands of Scotland women and children were employed in agriculture to a considerable degree, but with the advent of the

industries of Leiden in the Netherlands during the seventeenth century, but their participation actually decreased subsequently.[129] Such work by all family members can be found widely in England, and in this respect the generalized emphasis placed on proto-industry as a transformer of 'traditional' sexual divisions of labour appears quite misplaced.[130]

## V

Proto-industrial theory purports not only to describe the usual pattern of developing rural domestic industry, but also to explain why industrialization occurred. There are three main posited connexions: proto-industry provided the opportunity for the accumulation of capital which could be used for investment in the factory system; by increasing population it provided a labour force for industrialization; and overseas markets were secured for their (supposedly all-important) role in absorbing factory produce.

The problem raised by Kriedte of 'assigning empirically verifiable indicators' to proto-industry is especially marked here. Debate on industrialization in Europe is still hindered by paucity of empirical data on such aspects as real wages and the class, regional and sexual location of the home market; the relative proportions of domestic industrial product absorbed by the home or overseas market; or the sources of labour and capital for factories. Britain is frequently held up as a 'classic case' of the industrializing aspect of proto-industrial theory, and it is fortunate that its experience is among the best documented. First, it is difficult to assess the thesis that 'A group of merchant-manufacturers, middlemen, and sometimes small artisans emerged who became the agents of industrialization, backed by capital which they had accumulated during proto-industrialization'.[131] There is limited evidence that the transition from handloom to power weaving was facilitated by investment in the latter from some handloom manufacturers, especially in the 1820s – although the theory would have this happening earlier and on a larger scale. Some handloom weavers were also employed by master spinners.[132] However, the long and socially unfortunate persistence of both forms of production alongside each other is not suggestive of entrepreneurial agreement on the benefits of changes in technology or the reorganization of production. As late as 1830 there were about 60,000 power looms in England and Scotland, but still 240,000 handlooms.[133] Nor was there much overlap by region of handloom and factory power-loom weaving – which is contrary to proto-industrial theory.[134] We should note that this industry is

putting-out system for the production of linen yarn men became increasingly involved in agriculture alone, while women and children were almost wholly working at spinning. See Dodgshon, *Land and society in early Scotland*, p. 313. See also for Ireland, Collins, 'Proto-industrialization and pre-famine emigration', p. 131. The emphasis on the division of labour in all its dimensions as a significant social solvent is of course central to much outmoded industrialization theory. Anderson, 'Sociological history', p. 319.

[129] We should like to thank Dr Heiko Tjalsma of the University of Leiden for this information.

[130] See note 126 above and R. A. Houston and R. M. Smith, 'A new approach to family history? Some comments on Miranda Chaytor's "Household and kinship in Ryton"', *History Workshop*, XIV (1982).

[131] KMS, p. 141.

[132] D. Bythell, 'The hand-loom weavers in the English cotton industry during the Industrial Revolution – some problems', *Econ. Hist. Rev.*, XVII (1964), 341.

[133] Ibid. p. 342.

[134] Ibid. p. 346.

held up as the firmest evidence of the links between proto-industrial capital accumulation and the factory system. Some such connexions did exist, but they should not be overdrawn from the present scanty evidence. For some other industries there is a suggestion of interrelationships, but a general or even predominant association cannot be substantiated. Sources of capital accumulation were probably extremely diverse.[135]

If the connexion between proto-industrial capital accumulation and industrialization is much less clear than Medick and others assume, the view that factory labour was mainly comprised of those who had migrated from proto-industrial forms of production is altogether dubious. In many cases of course – handloom weavers, lace makers or stockingers come to mind – proto-industrial workers were entirely antagonistic to the factory both for reasons of culture and economic interest. The point is repeatedly borne out in Samuel Bamford's autobiographies.[136] Power-loom weaving derived its labour almost exclusively from sources outside handloom-weaving families, and from different areas. And the common regional separation of the factory from proto-industrial regions (partly a matter of anti-Luddite expediency), coupled with the prevalence of very localized migration fields further militates against this emphasis on the connexion of proto-industry to the factory via labour supply.[137]

Further it is stressed that proto-industry created, supplied and prepared overseas markets which were to be crucial in the success of the factory system. Kriedte allows the importance of a 'strong domestic market' in England's economic success, but accepts too readily arguments which underplay the role of this eighteenth-century home market in favour of what now seems to be too early and excessive an emphasis on foreign trade.[138] He writes of the way 'Overseas, markets for the products of European proto-industries seemed to be without limit. It was in this way that the current of demand came into being which helped give rise to the new system of production.'[139] Now it is undeniable that foreign trade became increasingly important for British industrialization after about 1800; but for earlier periods this argument is much less convincing. Exports were an unstable basis for industrialization in the eighteenth century, prone to fluctuations especially in time of war.[140] The significance of the growth of the export trade was limited by the purchasing power of British colonial customers, which in turn was constrained by what they could earn from exports to Britain. Periods of accelerated growth of foreign trade (1725–50 and 1780–1800) were associated with adverse shifts in the terms of trade.

[135] A neat illustration of the problems of identifying 'proto-industrial regions' and of assessing the social impact of proto-industrial production is provided by Arthur Young's description of Kendal in Cumbria in the second half of the eighteenth century. Several thousand people were employed in stocking-knitting, which used wool from Leicestershire, Warwickshire and Durham; the finished products were sent to London for marketing. A. Young, *A six months tour through the north of England*, III (1770), 170–3. Side by side with this was to be found 'linsey woolsey' weaving on a large scale which used wool produced in that region, spun and sold by local farmers on their own account; the cloth was mainly sold in local markets. In addition there was a tanning industry, and one using waste silk from London.

[136] S. Bamford, *Early days* (1841); idem, *Passages in the life of a radical* (1843).

[137] The early emphasis in *Industrialization before industrialization* on very localized migration among proto-industrial workers is dropped in the discussion of labour supply to factories. KMS, pp. 46 7.

[138] KMS, p. 33. [139] KMS, p. 142.

[140] Despite Kriedte and Schlumbohm's denial of this, KMS, pp. 33 4, 125; cf. Deane and Coale, *British economic growth*, pp. 41 50.

Before the late eighteenth century a low proportion of home industrial product was commonly exported. The rate of growth of exports was actually declining during the crucial period after 1745, when the growth of net imports was much more marked than was the case for exports. For such reasons, it has become clear in recent years that the reasons for British economic growth after 1745 must be sought primarily at home. Discussion has shifted to an assessment of the regional, class and even sexual specificity of the home market, especially in the agricultural sector: a historiographical trend ignored by proto-industrial theory with its overwhelming stress on the role of exports.[141]

Finally, it was the case that many regions of proto-industry (perhaps most) 'de-industrialized', and that industrialization occurred in many areas which had little or no experience of proto-industry. Both points raise serious problems for the theory's main pretension: to explain how industrialization occurred. Medick, Kriedte and Schlumbohm's attempts to reconcile de-industrialization with their theory lack conviction. De-industrialization is held to be an 'extreme case', but judging from the experience of a wide range of cottage industries in East Anglia, Kent, Sussex and other areas of southern England, or parts of Lancashire and Cheshire, Wales, Ireland, Scotland, Flanders, Hesse, east Westphalia, Silesia, Württemberg, Normandy, parts of France (to say nothing of areas outside north-western Europe), de-industrialization might seem to have been the *usual* pattern for proto-industrial regions. In all these cases (as where the factory emerged from a non-proto-industrial milieu) the theory has little credibility.

The explanations offered for these 'extreme cases' do little to avoid this verdict. Apparently the conditions created by proto-industry

> were not however sufficient to actually introduce the process of industrialization. For the domestic system of production to be pushed into industrialization, a certain general framework was necessary [besides the defining features of proto-industry]... If that framework was lacking or insufficiently developed... the system would collapse altogether, without succeeding at industrialization.[142]

But in such a form this is less a rigorous theory than an exercise in tangential historical possibility. One could construct alternative 'theories' by emphasizing any one of a wide range of other factors, and similarly excuse failure by pleading the absence of a 'certain general framework'. When discussing the causes of industrialization it would seem more helpful to consider the relations between all the factors in the specific regional frameworks from which it emerged. Moreover, it seems illogical to build a 'theory' by isolating as the *sine qua non* of industrialization one factor which sometimes occurred among many others, and explaining its failure to occur by the absence of the others. And when industrialization occurred in the absence of proto-industry no doubt the other factors were paramount, so perhaps they should always receive primary attention.

Two other considerations are raised to try to reconcile de-industrialization with the theory of industrialization. First, where proto-industry 'resulted in an over-supply

[141] The stress on overseas markets is of course tied up with theories about the crucial role of colonial trade in overcoming 'the limitations of the internal market', and stimulating 'the utilization of heretofore idle resources', KMS, p. 34. It is also linked to the thesis of progressive immiseration following upon the progress of industrial capitalism, a view which further detracts from consideration of a broadly based home market.

[142] KMS, pp. 145 6.

of labour power, it arrested the introduction of capital-intensive techniques; and because it favoured the extension of production, it threatened to freeze the forces of production at the existing level'.[143] The problem here is obvious. After all, overabundance of labour is assumed to be one of the essential preconditions for the agrarian genesis of proto-industry, and such an over-supply of labour is said to have been perpetuated by the new demographic dynamic created by proto-industrialization itself. 'Proto-industrialization can be described as "economic development with unlimited supplies of labour"'.[144] It seems contradictory to explain away the failure of proto-industrialization in terms already used to define its origins and development. The unnoticed corollary is that if unlimited labour supplies were necessary for the inception of rural domestic industry but were also fatal to it, transition to factory production was theoretically impossible. This is hardly a viable explanation of industrialization but could be of the more usual development: de-industrialization.[145] Secondly, competition from Britain is blamed for de-industrialization. 'British competition had become a serious threat to the industries on the continent... England had gained the upper hand over them in the struggle for the "appropriation of 'foreign' purchasing power"'.[146] No doubt this did affect many European areas and industries. But what of all the examples of de-industrialization in Britain, ignored by Medick *et al.*? Given the theory's strict emphasis on overseas markets, this explanation becomes less than adequate – was Britain competing against itself for colonial markets? Of course, the competition which undercut southern English rural industries was largely internal and mainly affected them on the home market. But the extent of the latter is heavily underplayed by the theory, as we saw. Because of this if fails adequately to reconcile itself with British de-industrialization.

## VI

There are too many inconsistencies in proto-industrial theory and too many exceptions in practice to deal with fully in a short article. These problems seriously limit its heuristic value. The telescoped and simplistic picture of 'traditional' society in early modern Europe offered by Medick and others, for example, has been shown to be very dubious in the case of England.[147] Another serious omission is the prevalence of industrial commodity production within towns, not just controlled by

[143] KMS, p. 146.

[144] KMS, p. 28.

[145] On the relationship between proto-industrialization and the factory, Kriedte's discussion is replete with Hegelian terminology, the full slant of which is largely, if inevitably, lost in translation. The verb *aufheben* in particular, used to describe the transformation of one system to another, is translated as 'to replace', although it properly means to 'pick up', and implies a process. The sense is that somehow proto-industry was picked up by and transformed into the factory system. Such Hegelian language appears to be acceptable currency in much German social and economic historiography. Nevertheless, it is plain that it does not *explain* anything about the supposed transition from proto-industry to the factory, but rather begs the question by presupposing a theoretical schema of historical development. See KMS, pp. 138 9 for an example of how the translation has lost both Hegelian and functionalist elements of the original expression.

[146] KMS, p. 147.

[147] Macfarlane, *English individualism*; Snell, *Social Change and Agrarian England.*

them in rural areas.[148] Many manufacturing towns of the sixteenth and seventeenth centuries did experience a loss of industrial functions to the countryside – Leiden, Lille, Venice, Cracow for instance.[149] Yet silk production was conducted at Bologna under much the same conditions as in rural areas in the seventeenth and eighteenth centuries,[150] while European towns as a whole were regaining their economic vigour in the eighteenth century. The textile towns of the Paris basin had a much faster rate of population growth than the surrounding countryside in the eighteenth century,[151] and the same was true of many contemporary English manufacturing towns before 1780.[152] Similarly proto-industrial theory exaggerates the restrictive nature of the guilds in late seventeenth- and eighteenth-century England. There were a smaller number of gildated towns than is implied, and it is also becoming clear that the institutions of guild, company and apprenticeship survived much longer than is often thought – well into the period of more marked British economic growth.[153] They certainly proved more flexible and less inhibitive of urban labour supply than proto-industrial theory allows. The growth of towns was probably a more potent force promoting agricultural improvement, regional market integration and the development of the factory system than was proto-industrialization.

The problems abound, and they are serious ones which severely limit the claims of proto-industrial theory. It is important to construct theoretical frameworks, but in so doing we must take account of a much wider range of factors in accounting for economic growth and capital formation. There is little reason why cottage industry should receive prime attention. Many of the points made about the 'agricultural origins of industry' are hardly new. There has been a lively stimulation of research, but we are still little closer to a general or theoretical understanding of the transition from an agrarian to an industrial world. For this reason, proto-industrial theory will have to be abandoned, and replaced by a less schematic and limiting approach which takes more account of the diversity of European social and economic development in the passage to industrialization.

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[148] KMS, pp. 21 2. 'Even the weaving and textile-industries and the cottage-iron industry, those branches of industry usually regarded as specifically "proto-industrial", were predominantly concentrated in the towns' in certain parts of western Prussia in the early nineteenth century. H. Matzerath, 'The influence of industrialization on urban growth in Prussia (1815 1914)', in H. Schmal (ed.), *Patterns of European urbanization since 1500* (1981), p. 151.

[149] Deyon, 'L'enjeu des discussions autour du concept de proto-industrialization', p. 11. At Leiden in the Netherlands the development of the factory system in the nineteenth century was not induced by proto-industrialization but by changes within the town itself. We are grateful to Dr Heiko Tjalsma for this information.

[150] C. Poni, 'A proto-industrial city: Bologna, XVI–XVIII century', paper to Eighth International Economic History Congress, Budapest, 1982.

[151] Jeannin, 'La proto-industrialization', p. 64.

[152] Contrary to what is claimed by Medick. KMS, p. 84.

[153] M. J. Walker, 'The guild control of trades in England, c. 1660–1820', paper to Economic History Society Conference, Loughborough, 1981; Snell, *Social change and agrarian England*, ch. 5.