Rural Industry and Uneven Development: The Significance of Gender in the Irish Linen Industry.

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Abstract
From the middle of the eighteenth century, the Irish linen industry grew on the basis of unequal relations of exchange between spinning and weaving households. This regional division of labour in turn depended on unequal relations of production between women and men within rural industrial households. The 'proto-industrialization' thesis has tended to obscure this process by focussing on the household as a bounded entity, and by failing to recognize the significance of inequalities within the household production unit. Once gender relations are made central to the thesis, it can be expanded to explain regional differences in rural industrialization and deindustrialization.

Introduction
In his account of the Irish linen industry, John Horner (1920: 50-51) quotes, on facing pages, two commentaries on the management of time in domestic production, without any apparent sense that they are contradictory. The first is from Benjamin Franklin’s ‘Principles of Trade’:

There can be no doubt but all kinds of employment that can be followed without prejudice from interruption; work that can be taken up and laid down often in a day without damage, such as spinning, knitting, weaving, etc., are highly advantageous to a community, because in them may be collected all the produce of these fragments of time, that occur in family business, between the constant and necessary parts of it that usually occupy females, as the time between rising and preparing for breakfast, between breakfast and preparing for dinner, etc. The amount of all these fragments is, in the course of a year, very considerable to a single family; to a state, proportionally highly profitable; therefore it is wise, in this case also, to follow that divine direction, 'gather up the fragments, that nothing may be lost'.

The second quotation is from Adam Smith’s The Wealth of Nations:

The advantage which is gained by saving the time commonly lost in passing from one sort of work to another, is much greater than we should at first view be apt to imagine. It is impossible to pass very quickly from one kind of work to another that is carried on in a
different place, and with quite different tools. A country weaver, who cultivates a small farm, must lose a good deal of time in passing from his loom to the field, and from the field to the loom. A man commonly saunters a little in turning his hand from one sort of employment to another, and this renders him almost always slothful and lazy, and incapable of any vigorous application even on the most pressing occasions.

The quotations represent two quite different, indeed mutually incompatible ways of thinking about the relationship between time and profitability. The first is characteristic of the organization of production under a ‘proto-industrial’ system, where the merchant capitalist relies on the producers' willingness to engage in self-exploitation - that is to expand the fragments of time they are prepared to spend on commodity production - in order to reap a differential profit. The second implicitly refers to production organized in manufactures or factories, where the capitalist depends on subdivision of the labour process and on direct supervision of the producers' time at work, in order to extract a surplus from their labour. The quotations did not appear contradictory to Horner – nor indeed would they have appeared so to a contemporary observer of the Irish linen industry - because the first so clearly refers to women’s work, and the second to men’s work. This understanding of the different qualities of male and female labour seemed self-evident, despite the fact that women’s sphere of activity was not confined to the home - women were often required to travel from field to spinning-wheel, as men were required to travel from field to loom.

The thesis of this paper is that the Irish linen industry expanded on the basis of an unequal exchange between areas which specialized in women’s work - spinning - and areas which specialized in men’s work - weaving. This unequal exchange developed on the basis of unequal relations of production between women and men within rural industrial households, unequal relations which were reinforced by an ideology of men’s and women’s work similar to that reflected in Horner’s discussion. I argue that it was precisely the availability of cheap yarn, spun by women and children in remote subsistence households, which facilitated class differentiation and capital accumulation in Ulster’s core weaving district. I proceed through a discussion, first, of the theory of proto-industrialization and its shortcomings in relation to the Irish case. I argue that once gender relations are made central to the theory, it can be expanded to explain regional differences in industrialization during the growth of the domestic system, and in the transition to
factory production. Gender is thus the missing theoretical thread which ties together our understanding of the transformation of pre-capitalist structures and the uneven development of capitalism. In the remainder of the paper I substantiate this argument with reference to the Irish case.

The Irish Linen Industry and Proto-Industrialization

From the end of the seventeenth century, domestic production of linen cloth and yarn expanded rapidly in Ireland, primarily in response to the introduction of favourable trade regulations and to growing British demand. Linen for the export market was first produced by Protestant settlers in east Ulster, whose fenced landholdings had replaced the Irish unenclosed system (described below) during the seventeenth century [Crawford, 1976: 194]. All parts of the production process were performed in such households, from cultivation of the flax to sale of the woven cloth. The cloth was bought up at local markets by drapers, who had it bleached, and then sold the finished product to merchants in Dublin or Belfast, or carried it themselves to fairs in Chester.

As the industry expanded it was accompanied by rapid population growth and land subdivision, so that the producers became increasingly dependent on the money economy. There were two immediate causes of this. First, the subdivision of plots meant that weaving households could no longer grow enough flax to provide raw material for their work, nor enough agricultural produce to supply their subsistence needs. Second, technological advances, especially the introduction of chlorine after 1785 [Green, 1949: 69], made bleaching, and hence weaving, a year long rather than a seasonal process. As men devoted more of their time to weaving, the women and children in their own households could not spin enough yarn to supply their looms. At least four spinners were required to supply a full-time weaver with yarn. This bottleneck, combined with a strict sexual division of labour, led weaving households of the north-east to become increasingly dependent on yarn imported from other districts - primarily from west Ulster and north-west Connaught [Collins, 1982].

The linen industry thus spread to parts of the country where much of the land continued to be held under the system sometimes referred to as 'rundale'. Large farms were rented jointly by small communities, who then allocated arable land in use shares and held access to grazing land in
common. The arable land was divided in such a way as to ensure that each family had the use of some good soil, so that individual holdings consisted of a number of widely dispersed, unfenced plots. Land was transmitted, not by inheritance, but by periodic reallocation to the whole community [McCourt, 1981]. The system was thus particularly conducive to subdivision, and it is probable that the availability of income from spinning contributed in large measure to the population explosion in such marginal districts from the middle of the eighteenth century [Almquist, 1977, 1979].

Many households in the weaving districts could not afford to purchase yarn in the marketplace and thus became dependent on wealthier ‘manufacturers’ who put out yarn to be woven at a fixed rate. Manufacturers could be entrepreneurial drapers, or farmers who put out yarn to their cottiers, employing them thus as journeymen rather than as agricultural labourers. The latter relationship was more typical of coarse-weaving districts, outside the industry’s heartland in the Lagan and Upper Bann river basins. These early manufacturers were not large-scale employers: most of them probably ‘keepet twathree gaun’ as the weaver poet James Orr [1935] described it. Bleachers, however, had become increasingly capitalized in Ulster by the end of the eighteenth century. They now bought the cloth directly from manufacturers and weavers at the brown linen markets, and exported it themselves.

By the turn of the nineteenth century, then, three regionally distinct patterns of production might be distinguished within the Irish rural linen industry. There was first a core 'inner' weaving district - the 'linen triangle' - between the towns of Belfast, Dungannon and Newry, where households were land-poor and dependent on the market for raw materials and many of the necessities of life. Many of them were employed by petty manufacturers who sold the cloth to bleachers in the brown linen markets. Surrounding the linen triangle was an 'outer' weaving district, extending through most of the eastern, central and southern parts of Ulster. Here, where weaving was often carried on in conjunction with commercial agriculture, the gardens of cottier-journeymen clustered around their employers' farms. Finally, the 'yarn districts' of west Ulster and north Connaught represented the periphery of rural industrial Ireland, where spinning paid the rent on poor subsistence holdings. I have painted these regions with broad strokes - within them many significant local variations could be found.4
The Irish linen industry continued to expand on the basis of rural domestic production into the early decades of the nineteenth century, when its foundations were destroyed by the development of the factory system. While finishing the cloth had been a relatively capital-intensive process from early in the eighteenth century, water-driven spinning mills did not appear in north-east Ireland until the 1820s. These early factories, located in rural villages and often attached to bleachworks, did not immediately threaten domestic production. With the establishment of steam-driven mills in and around Belfast in the 1830s, however, the rural industrial system finally lost its viability. The transition to factory production had different consequences for producers in different regions. Many households in the core north-eastern district continued to weave mill-spun yarn in their homes, while local mills employed some women and girls. Elsewhere, farmers who could afford to do so abandoned the linen industry while others were forced to seek new sources of income or to migrate, either temporarily in search of seasonal agricultural work, or permanently to urban centres of production in Ireland and Britain. The loss of income from spinning created great hardship in the yarn districts, which were thus left particularly vulnerable to the Famine of 1845-7.

Marilyn Cohen [1990: 427] has rightly observed that the case of the Irish linen industry illustrates well both the strengths and weaknesses of the proto-industrialization thesis as it has been developed by Hans Medick [1981; 1976]. She argues that the weakness of his model derives from its 'neo-Chayanovian aspect,' which prevents him 'from attributing any active role to the peasant/artisan producers in the transition to capitalism' [1990: 415]. I propose that the shortcomings of Medick's thesis centre on his failure to recognize the significance of unequal relations within and between rural industrial households – relations which, in the Irish case, were structured by gender. The strength of the proto-industrial model lies precisely in the active role it ascribes to subsistence-oriented households in bringing about, through their own internal tendencies, the growth and crisis of the rural industrial system. This is in sharp contrast to earlier understandings of the pre-factory household as a static entity which was passively transformed by capitalist development.5

In the book Industrialization before Industrialization [1981], Medick, together with Peter Kriedte and Jurgen Schlumbohm, elaborated most fully the thesis that proto-industry should be
understood as a socio-economic system, based on the interrelationship between merchant capital and the family economy of rural producers. The availability of income from commodity production encouraged earlier marriage and land subdivision, they argued, because the survival of rural households no longer depended on property in land. These trends in turn led to population growth and increasing dependence on industrial earnings, ensuring a permanent oversupply of labour. Moreover, as long as the producers possessed a piece of land 'they could work under conditions where their remuneration did not suffice to cover the cost of reproducing their labour power as well as the renewal costs of their means of production' [1981: 23]. Under these circumstances there was little incentive to merchant capitalists to raise productivity through capital investment, and producers often found themselves in a downward spiral of impoverishment, indebtedness and self-exploitation - a process which David Levine [1983] has aptly termed 'industrial involution.'

The proto-industrial system also contained within it the seeds of its own destruction, because rural producers were concerned with household subsistence, rather than with the accumulation of profit, working less when prices were high. This meant that in order to maximize profits during boom periods merchants were obliged to extend production into new areas of the countryside. Spatial expansion, however, inordinately increased the costs to merchant capitalists. The advantages of manufactures did not outweigh their disadvantages as long as they remained at the same level of technology as household production. Thus: 'There was only one way out of the crisis of the proto-industrial mode of production: mechanization coupled with centralization' [1981: 137]. The mass of land-poor workers provided a ready labour supply for the early factories.

Irish rural industrialization followed the trajectory outlined by the proto-industrialization thesis in many respects. The development of the linen industry was associated with population growth and land subdivision. Contemporary observers often complained about the prevalence of early marriages and of subsistence-oriented patterns of work and leisure similar to those described by Medick. However, the Irish case also highlights the problems associated with the thesis. By itself, the thesis does not explain why rural industry led to factory production and proletarianization in the vicinity of Belfast, but to de-industrialization and immiseration elsewhere. More particularly, it does not explain why linen production led to industrial involution in some areas, but
to class differentiation and petty capital accumulation in others. Their subsistence oriented
strategies should have had a levelling effect amongst rural industrial households, under the
premises of proto-industrialization. As Cohen [1988: 168] has pointed out, the proto-industrial
model ‘eliminates by definition any contribution by those weaver/drapers who emerged from the
peasantry through the accumulation of small amounts of capital to become petty-capitalists and
petty-landlords.’ Insofar as the dynamics of proto-industrialization as a system were supposed to
be driven by the ‘laws’ of the family economy, then the existence of petty-capitalist households can
only be explained by the rather poor argument that they ‘did not adhere to the norms of their fellow
producers’ [Schlumbohm 1981: 116].

Case studies elsewhere in Europe have shown that rural industry did not lead to the predicted
fall in marriage age, population increase and impoverishment in all areas. Scholars have been
obliged to look to extraneous sources of possible comparative advantage in order to explain this
regional variation.7 Local variation in the development of the Irish linen industry has been
explained by such diverse features as the ‘Ulster Custom’ which encouraged tenants to reinvest
profits in their holdings [Gill, 1925], the rundale system of landholding [Almquist, 1977] and the
quality of cloth woven and proximity to markets [Crawford, 1988]. While not denying the validity
of these explanations, I will emphasize the significance of interregional relations, by focussing on
the division of labour between spinning and weaving districts.

I believe that the shortcomings of the proto-industrialization thesis can be accounted for by what
Olivia Harris [1981] has called ‘naturalistic assumptions’ about the household as a unit of
production and consumption. The first problematic assumption is that households are characterized
by functional interdependence amongst their members. By stressing family co-operation, Medick
and his colleagues failed to recognize the significance of unequal power relations between men and
women within households. In her study of the Caux region in northern France, Gay Gullickson
[1986] found no evidence to support Medick’s early hypothesis that rural industry led to greater
egalitarianism and role flexibility amongst men and women. In contrast to the Irish case, however,
she found that in the Caux the sexual division of labour was a stabilizing factor in household
reproduction, where the availability of agricultural employment for men inhibited the demographic
trends usually associated with proto-industrialization. In Ireland the sexual division of labour was a
potentially de-stabilizing factor within individual manufacturing households, as a family’s prosperity could be affected by the sexual composition of its labour force, as well as by the rhythm of the family life-cycle [Collins, 1982].

The second problematic assumption made by the proto-industrialization theorists was that households were bounded entities. By developing their analysis on the basis of an abstract ‘normal’ type, they failed to take into account the significance of relations between household production units, both locally and across rural industrial regions. While Mendels [1972], in his original formulation, emphasized the importance of regional specialization in determining the relationship between rural industry and commercial agriculture, insufficient attention has been given in the proto-industrialization literature to spatial divisions of labour in the sphere of industrial production itself. Esther Goody [1982] has argued that the development of a functional division of labour between household production units played a key role in the industrialization process by shifting capital from investment in trade to direct involvement in production, as merchants became manufacturers in the sense of using their capital to control the distribution of raw materials, tools and labour.

In the Irish case the development of a functional division of labour between spinning and weaving households was crucial to the growth of the linen industry. The extent to which manufacturers intervened directly to integrate the various components of the production process was limited, however, and confined to its final stages. While there may have been a tendency for drapers and farmers to exercise more direct control over the production of cloth in the north-east, they continued to rely on the market for their supply of yarn spun by women in "independent" households in the north-west. Thus in Ireland the articulation of different stages of production between households fostered regional dependency and uneven patterns of class formation. Manufacturers continued to take advantage of women's ability in the north-west to work for less than the cost of reproducing their households, while at the same time exercising greater control over the labour process in weaving households of the north-east.

Unequal relations of exchange between households in different regions of Ireland were made possible by unequal relations of production by gender and age within households. Medick [1976]
and Levine [1977] both argued that it was the labour of women and children which made possible the "super-exploitation" of proto-industrial households - that is, the purchase of commodities produced in such households at less than the cost of household reproduction. Women and children provided the crucial marginal work effort which enabled the household to survive, but this work remained underpaid and often did not involve any direct money transfer to those who performed it. Because they continued to see the household primarily as a bounded, harmoniously functioning entity, however, the theorists of proto-industrialization did not fully recognize the significance of contradictory relations within household production units to the proto-industrial system.

In Ireland gender based exploitation transcended the boundaries of individual households, as manufacturers and weavers benefitted from the work of spinners in the yarn districts, in addition to that of women and children in their own households. Whereas the proto-industrialization theorists focussed on the contradictions between merchant capitalism and the family economy of rural producers, I argue that, at least in the Irish case, contradictions of gender structured both the growth and uneven regional development of rural industry. As I will show, this was made possible by a strict sexual division of labour, reinforced by ideologies of men's and women's work.

Women’s work, men’s work, and the rural industrial system
In 1705 Louis Crommelin, a French Huguenot who had been invited to assist in developing the Irish linen industry, published a small tract entitled An Essay towards the improving of the Hempen and Flaxen Manufactures in the Kingdom of Ireland. He argued that Irish linen could not compete internationally because the cultivation and preparation of the raw material, flax, was left to women.

I leave any indifferent Person to judge,’ he wrote, whether it is not much more eligible for the Women of the Kingdom (who may be made the best Spinners in the World) to apply themselves to that business, and give over their application to the raising and dressing Hemp or Flax in the manner they do: They are and for ever will be ignorant how to chuse their Seed: They will never know when or how to pull their Flax or Hemp: They know not how or when to water or grass their Flax: Each of which are essential and inseparable to the Goodness or Beauty of the Goods (1705: 23).

He linked this idea of the ‘correct’ sexual division of labour within the linen industry both to technical competence in the various stages of the labour process, and to what he considered to be
appropriate relations of exchange between the various stages. In other countries, he wrote, flax was raised and prepared by ‘Men of Good Stocks,’ who sold it to spinners in the marketplace.

Crommelin’s remarks centred on a feature of the Irish industry which distinguished it from linen production elsewhere in the British Isles. Whereas in Scotland flax was imported by manufacturers who then employed spinners on an outputting basis [Durie, 1979], in Ireland flax was grown on small plots, rarely in quantities greater than the spinning capacity of individual households [Smyth, 1988]. Arthur Young’s estimates for the expense of an acre of land under flax, show that, late in the eighteenth century, women were still responsible for much of the labour involved in cultivating, harvesting and preparing the crop. Their work included clearing the ploughed land of stones, weeding and pulling the crop, and rippling it to save the seed. Men shared the latter task and were responsible for steeping the flax in pools of water. Once the flax was ‘retted’, women spread it to dry, before separating and preparing the flax fibres for spinning (scutching and hackling) [Crawford, 1991].

In contrast to countries where merchants and manufacturers exerted some control over the early stages of the production process, the Irish system of growing and preparing flax ensured that spinning remained under the control of independent, subsistence oriented households. Crommelin’s assertion that this inhibited successful competition with European manufacturers may have been true with respect to the very fine linen which the Huguenots specialized in. The Irish linen industry, however, expanded primarily through the production of relatively coarse cloth, especially once a fledgling cotton industry had attracted many of the skilled weavers in the Lagan Valley. Data on the value of sales in Ulster’s linen markets show that over 45% of the growth after 1783 occurred in the ‘outer’ weaving district [Crawford, 1972: 10]. In this context the quality of the yarn was less important than the cheapness with which it could be procured.

Crommelin did not get his wish with regard to the separation of flax preparation and spinning, then, but Irish producers do seem to have maintained a strict sexual division of labour between spinning and weaving. So much so that in 1754, Robert Stephenson, anxious to increase the quantity of cloth manufactured in Ireland, argued that ‘women might be more advantageously employ’d in weaving up some of the yarn we have to spare’ [1754: 14]. Women would not have
lacked the skill to do so - there is some suggestive evidence that the definition of weaving as ‘men’s work’ was confined to commercial weaving. In a late seventeenth-century description of the parish of Islandmagee, County Antrim, Richard Dobbs observed that the men spent their time in ‘ploughing’ and the women theirs ‘in spinning and making linen cloth, and some ordinary woolen for their family use.’ [Donaldson, 1927: 43] Over a century later, James Neligan reported from Kilmactige parish in County Sligo, on the other side of the country:

With what wool they have of their own, and some more bought, the woman spins, and makes frize, for the use of the men, and drugget for herself and her daughters. She also makes every year as much linen as will serve the purposes of the family, with the assistance of two girls who can spin.
[1816: 388]

Antoine O’Reachtabhra, the Galway poet, provides additional evidence that ‘bandle’ weaving for home consumption was done by women. In his poem ‘Eanach Dhuin’ he wrote: ‘And the women likewise, in all things expert, / for weaving homespun and the linen thin.’ [O’Tuama and Kinsella, 1981: 249]

It is not clear why weaving for the market was confined to men. Efforts to impose apprenticeship regulations in the early eighteenth century may have succeeded in excluding women, although they failed to restrict weaving to those men who had served their time [Gill, 1925: 19]. The wider looms on which commercial cloth was woven may have required greater physical strength, and were difficult for pregnant women to operate, according to Wakefield [1812: 698], since the weaver had to stand and stoop over the cloth. That the fly shuttle, which alleviated this problem, was not adopted in Ireland until around 1815, many years after its invention in 1733, suggests that women’s exclusion from weaving had a social as well as technological foundation [Crawford, 1991: 261].

Whatever its origins, the sexual division of labour meant that within weaving households the most valuable stage of the production process was controlled by men. Spinning was significantly
more labour intensive than weaving. Four spinners were required to supply a full-time weaver with yarn, according to Wakefield’s [1812: 685] informants, but even this is almost certainly an underestimate. Young [1892: 198] found that a man could weave three yards of average quality cloth a day. A woman could spin a hank of yarn a day. Since it took two hanks of yarn to produce a yard of cloth, this means it took six days worth of spinning to produce yarn for a day’s worth of weaving. Furthermore, several female witnesses told the Poor Law Commissioners in 1836 that women with other family responsibilities were not able to spin so much as a hank a day. Spinning was poorly remunerated in comparison with weaving. According to Young’s estimates, a spinner could earn approximately three or four pence a day in the late eighteenth century, whereas a weaver could earn from ten pence a day to a shilling and six pence for fine work. Finally, a loom represented a much greater investment than a spinning wheel. The Linen Board distributed wheels and looms as premiums for sowing flax in 1796. It paid between ten and twelve shillings for each wheel, and about fifty shillings for each loom.9

The labour intensive nature of spinning meant that women’s work was essential to the prosperity of those rural industrial households in which all stages of the production process were completed. The Ordnance Survey Memoir for Aghaderg Parish in County Down noted that in earlier times the whole community had celebrated (and promoted) women’s skill by holding spinning competitions, and that ‘the winner of the day was queen of the night.’10 Thompson [1802: 174] suggested that sexual composition was the determining factor in a household’s decision whether or not to participate in the linen industry:

Whenever a cottager, who has a family principally of girls, is able to sow flax, he endeavours to do it, which, if it turns out well, is a great source of profit, as every individual of his family may be employed in the different branches of its manufacture.

As Brenda Collins [1982] has shown, however, the imbalances created by the sexual division of labour in rural industrial households eventually led to the spatial extension of spinning as weaving intensified. While weaving households could attempt to correct for a deficiency of female labour by employing spinning servants, or by adding female relatives and lodgers to the core nuclear family, ultimately the demand for yarn in the weaving districts exceeded the labour capacity of
local women and children. With the emergence of regional specialization in the production of yarn and cloth, the unequal gender relations which structured production within weaving households were reproduced between spinning and weaving households. Relative to the yarn districts of the north-west, production in the north-eastern weaving districts was well remunerated and capitalized. More importantly, weavers and manufacturers could now draw on the expandable labour of women and children in households far distant from their own.

The significance of this is strikingly illustrated in the 1825 Parliamentary report of the ‘Select Committee to consider the Laws which regulate the Linen Trade of Ireland.’11 The Commissioners were concerned that the regulations which governed the Irish linen industry served to inhibit ‘capitalism,’ especially in the manufacture of yarn. (They were somewhat encouraged by signs that petty manufacturers existed in weaving.) Drawing on the economic reasoning illustrated by the quotation from Smith at the beginning of this paper, the Commissioners tried, unsuccessfully, to persuade their Irish witnesses of the advantages of a putting-out system in spinning. Time and again the witnesses pointed to the cheapness of yarn produced under the Irish system, and to the significance of women’s labour in the success of the linen industry as a whole. When asked about the feasibility of importing yarn George Grier remarked 'I can scarcely conceive how any foreign yarn can be supplied much cheaper than the Irish yarn; the price of labour cannot be much cheaper on the continent than it is in the west of Ireland.' Spinning accounted for half the value of the linen, Grier reckoned; James Twigg supposed that women doubled the value of flax by their work. At the same time observers noted that women often sold their yarn for little more than the price of raw flax [Wakefield, 1812: 684]. The discussion reached telling levels of absurdity when one of the Commissioners argued with Peter Besnard, the Linen Board’s Inspector General for Munster and Connacht, over the meaning of the phrase 'division of labour.' Besnard used it to refer to a household's ability to draw on the expandable labour of all its members; 'they have the article cheaper than it can be got in any other way,' he insisted, 'They set little value on their own labour.' The Commissioner retorted that 'the principle of division of labour (would) be more accurately applied if one set of persons confined themselves to grow the flax, if another set of persons confined themselves to dress the flax, and if a third set of persons confined themselves to spinning the yarn.'
The Commissioners failed to recognize - or perhaps did not wish to recognize - that at least half of the manufacture of Irish linen remained decentralized precisely because therein lay its competitive advantage. The industry had been characterized by lack of capital from the outset, when Irish merchants were obliged to rely on credit from their counterparts in London to cover the costs of exporting the cloth. Some of those landholders in the vicinity of Belfast, who specialized in bleaching and finishing the cloth, accumulated enough capital in the course of the eighteenth century to overcome this problem. Even they were not willing to venture their capital in employing weavers, as Crawford [1988] has shown. They thus created an opening for entrepreneurial households who bought up yarn in the marketplace and then employed weavers to manufacture cloth by the piece. By 1825, 386 such manufacturers were sufficiently well established in Counties Antrim, Armagh and Down to hold their own seals for certifying the quality of the cloth. While they were considered to be of 'as respectable a station' and of 'as much worldly substance' as many of the bleachers, they operated on a very small scale, employing from five to twenty weavers on average [Crawford, 1988: 45]

These petty entrepreneurs could not have succeeded; it is my contention, had it not been for the availability of cheap yarn imported from subsistence households in marginal districts. Furthermore, while this gender/regional configuration of the division of labour facilitated class differentiation within the rural industrial community in some areas, it also inhibited significant investment in the industry by those who might have been able to afford it - namely, the bleacher-merchants of the Lagan valley. Joseph Nicholson, a bleacher who was also one of Ireland’s earliest mill-spinners, told Edward Wakefield [1812: 684] that 'The leading cause against the extension of machinery, is the low price of labour. Yarn spun by women is sold here much cheaper than the same article manufactured by machinery in England.' Thus while the Parliamentary Commissioners of 1825 were correct in their suspicion that the absence of 'capitalism' in the industry as a whole had a good deal to do with the organization of production in spinning, they were wrong in their belief that this was principally due to over-regulation on the part of the Linen Board. One Commissioner found it impossible to credit that 'there are two prices for the labour; that there is one price for the work of the labourer hired, and a distinct price for the work done [by those who spin for themselves].' Yet this was precisely the case. The Irish linen industry had developed on the basis of an articulation between regions in which household production took place
in the 'fragments' of time which women gathered from the interstices of their daily work, and regions in which the rhythm of household production was increasingly market-oriented and constrained by employers' demands.

**Little family trifles: the ideology of women’s work**

Local socio-economic circumstances may largely explain these differences in the organization of production in spinning and weaving households. Specialization in spinning occurred mainly where the land was marginal, and agriculture oriented primarily towards subsistence. The Linen Board and individual landlords fostered rural industrialization in such districts by distributing spinning wheels and reels. The introduction of spinning enabled landlords to increase rents without fundamentally altering the subsistence basis of agricultural and landholding practices. Arthur Young [1892: 256] described the great majority of rural industrial households in the yarn districts when he wrote that, 'In their domestic economy, they reckon that the men feed the family with their labour in the field, and the women pay the rent by spinning.'

Differences in the organization of commodity production in spinning and weaving households may also have been fostered by a gender ideology, however. Upper-class commentators certainly thought about men’s and women’s work in different ways. Arthur Young estimated the value of women’s labour time in terms of the totality of their household work when he wrote that 'A woman will earn by spinning...in general 2 1/2d. or 3d., besides doing little family trifles.' Edward Wakefield [1812: 684] remarked that:

Spinning by the hand, in a country like Ireland, where the sedentary occupation of the female must so often be interrupted, not only by domestic, but agricultural labours, is attended with one very striking advantage, namely, that it can be suspended and resumed without any inconvenience, and thus small intervals of time are filled up that would otherwise be lost.

Yet both these men lamented the fact that the combination of weaving with agriculture led to interruptions in men’s labour, arguing that in consequence they did neither task well.
It is far more difficult, of course, to determine how the producers themselves thought about men’s and women’s work. Some evidence can be gleaned from two folk poems - ‘The Penitent' by the Antrim weaver-poet, James Orr, 12 [1935: 173-180] and the anonymous song 'An Tuirnin Lin' (The Flax Spinning-Wheel) [Ni Ogain, 1921: 24] – which describe the failure of a weaving and a spinning household, respectively. ‘The Penitent' tells of a weaving household which is almost destroyed by the drunkenness and profligacy of its male head, Christy Blair. (It is saved by his conversion to Methodism). Orr describes the household division of labour succinctly:

He weav'd himsel', an' keepet twathree gaun
    Wha prais'd him ay for hale weel-handled yarn;
His thrifty wife an' wise wee lasses span,
    While warps and queels employ'd anither bairn;

Christy’s moral lapses - drunkenness, gambling and fighting - occur in the public space of the market, so that he 'aft brought hame nought but an empty purse, / O' a' the hale wabs price he took to sell.' Mary, his wife, tries to keep the household together, spending her 'pence' to ease his craving for alcohol, and pawning her wedding clothes to buy his way out of the army in which he had rashly enlisted. Her moral lapses take place within the private sphere of the home, where she abdicates responsibility for minding the house and feeding the family:

Mary ne'er min't the house-mair like a byre,
    But clash'd wi' nyber wives. Unkent to him
For tea, an’ snuff, the troubled dames desire,
    She’d smuggled meal an’ seeds; tho' hunger grim
Devour'd the duddy weans, now in a wretched trim.

In Orr's depiction of a weaving household, therefore, the man’s role does seem to be more outward-oriented, mediating between the family economy and the market, whereas the woman’s role is more inward-oriented, reproducing the family on a daily basis.
'An Tuirnin Lin' humorously depicts the plight of a man who thought he had married a choice woman when she brought six pounds of flax as a dowry. He soon concludes that she must spend two days lying down for every one day up and about, because it takes her three months to spin just one pound. She makes a stalwart effort to fool her husband, however:

When she notices me coming towards the house,
She sets a good turf fire,
Organizes the children around the house,
And puts the flax spinning-wheel in motion.

    Och! my wife and my family and my flax spinning-wheel,
    My couple of pounds forever unspun;
    Tobacco at her hand and a pipe at her side,
    And no care in the world where the rent comes from.13

This final verse of the song is telling, because in it we learn that the narrator doesn’t know his wife spends most of her time lying down; he just thinks this must be the case because the flax remains unspun. The man’s work is perceived to be outside the house, whereas a good spinner is revealed in the whole of her work within the home- a well-lit fire, well-managed children, and a humming spinning wheel - even though it is her work which brings in the cash necessary to pay the rent.

The songs provide some tentative evidence, therefore, that both in households where men’s work was the primary source of cash income, and in households where women’s work was the main link to the money economy, rural industrial producers associated women’s work with 'housework' – that is, with the daily reproduction of home and family. We can speculate as to whether or not this gender ideology led linen producers to adopt different household strategies in spinning and weaving districts. Certainly, the comments of upper-class observers strongly suggest that by the early eighteen hundreds, weaving households had begun to abandon 'proto-industrial' patterns of work and leisure in favour of more disciplined habits. Young [1892: 128] had found in 1776 that around Lurgan, County Armagh, 'All the drapers wish that oatmeal was never under 1d. a pound,' because 'when provisions are very cheap the poor spend much of their time in whiskey-houses.' In 1804, however, Sir Charles Coote observed very different production strategies:
Perhaps in the poorer counties they are a more hard working people, employed earlier and later than in Armagh, but they are not regularly so; they are only industrious when pinched by poverty, when their wages have been squandered, and when they are overwhelmed with debt. In this county, a steady industry affords a sufficiency for the moderate comforts of life, and will admit of a redundancy for other purposes, without exhausting nature by extraordinary labour at such a sedentary business as the loom [1804: 264].

Similar observations on producers’ 'improved' work and leisure practices can be found in Mason’s parochial survey of County Armagh, and in Dubourdieu's statistical surveys of Counties Antrim and Down. This transformation of working habits went hand in hand with a decline in the significance of women’s labour input to weaving households. Wakefield [1812: 688] reported that around Armagh town the women did very little spinning, since most of the yarn was imported from other counties. Women’s income from spinning had acquired the status of pin money, according to Coote [1804: 253]: ‘Their earnings are generally spent on finery, as the men’s labour procures them provisions.’ In the yarn districts, by contrast, women tried to meet rising rents and declining prices for their yarn by ever-expanding labour. An Ordnance Survey report from County Fermanagh noted in the 1830’s that 'The Female part of the community invariably spin and earn but a very scanty profit for their almost incessant application to the wheel.’

Conclusion
In the late 1830’s cotton mill-spinners in the vicinity of Belfast began to switch their machinery to flax-spinning. The introduction of such significant amounts of capital to linen production undermined the rural industrial system. Mechanization had one striking consequence amongst those households in the north-east who continued to gain a livelihood by weaving mill-spun yarn: it led to a breakdown in the sexual division of labour. Otway noted in 1840 that:

Females are now generally employed in hand-loom weaving...(The) introduction of mill-spun yarn has permitted, by the greater ease with which it is wove, the application of female labour...not only female but almost infant labour.
I would suggest that women turned to weaving in response to a fundamental alteration in the social relations of production, rather than simply to a change in the quality of yarn. The sexual division of labour which had served to maintain hierarchical relations of production between women and men within rural industrial households, and uneven relations of exchange between spinning and weaving households, had become irrelevant once the production process was controlled by factory owners.

I have argued in this paper that gender relations were at the heart of the growth and uneven regional development of the Irish linen industry. Inequalities in the relations of production between women and men within rural industrial households contributed to unequal relations of exchange between spinning and weaving households. These inequalities were underwritten by a sexual division of labour which ensured that women were confined to a relatively labour-intensive and poorly remunerated stage of the manufacturing process. From the middle of the eighteenth century, the growth in output of linen cloth was predicated on the availability of cheap yarn spun by women in subsistence households in remote, marginal districts. This gender/regional division of labour facilitated the emergence of petty entrepreneurs in the weaving districts, and at the same time fostered those ‘proto-industrial’ household strategies which left the yarn districts so vulnerable to deindustrialization in the 1830s.

The theory of proto-industrialization has obscured the significance of gender in rural industry, I have argued, because its authors have tended to see the household as a functioning, bounded entity. Once gender relations are made central to the thesis, it can be expanded in the Irish case to explain uneven regional patterns of development. Thus we can retain the strength of the idea of proto-industrialization - namely, that the dynamics of household production were at the heart of the growth and crisis of rural industry as a system - in an explanation which takes account of differentiation and interdependence between household production units.

Finally, my analysis suggests the need for a re-conceptualization of the different understandings of time and profitability represented by the quotations at the beginning of this paper. It has generally been assumed that 'time-disciplined' labour replaced 'task-orientation' as capitalism superseded pre-industrial relations of production. The case of the Irish linen industry points to the limitations of this linear model, by showing that industrial growth occurred through the
interdependence of the two systems, and that gender relations were at the heart of this process. As social scientists point to the growing importance of household and ‘informal’ production strategies in the late twentieth century [Portes et al. 1989], the significance of gender in the transition to industrial capitalism deserves special attention.

NOTES

1. The original statements can be found in Franklin [1884: 390] and Smith [1909: 14]. Horner probably took the Franklin quotation from Wakefield [1812: 686]. He seems to have slightly abridged the quotation from Smith. See Thompson [1967] for a classic statement on time and the labour process in the transition to industrial capitalism.

2. By the ‘theory’ of proto-industrialization I mean specifically the elaboration of Mendel’s [1972] concept by Kriedte, Medick and Schlumbohm [1981], where they argue that rural industrial production should be understood as a socio-economic system. In their introduction they note that Kriedte and Medick saw proto-industrialization as a mode of production in its own right, but that Schlumbohm preferred to think of it as a transitional system. Despite this difference, the papers by the three primary authors in this collection together represent a coherent theoretical statement on the significance of rural industry in European capitalist development.

3. General accounts of the development of the Irish linen industry are found in Crawford [1972], Cullen [1972] and Gill [1925]. For applications of the proto-industrialization concept to Ireland see Cohen [1990], Clarkson [1989], Collins [1982] and Almquist [1979].

4. County Fermanagh, where commercial, enclosed agriculture was carried on in conjunction with specialization in spinning, is the most striking example of a local counter-tendency to the overall regional trends. There have been various outlines of regional specialization in the Irish linen industry. Gill [1925] originally distinguished three weaving districts according to differences in the organization of production. Crawford [1988], however, has argued convincingly that bleachers did not become significant employers before the introduction of mill-spinning, as Gill had claimed. Crawford proposes that regions should instead be identified on the basis of type of cloth woven. He is specifically concerned with the linen industry in Ulster, so he does not include the yarn producing region of the north-west. Both his [1972: 5] and Clarkson’s [1989: 256] maps of the regional distribution of linen manufacturing thus understate the significance of spinning in the
north-western periphery. Collins [1982] on the other hand, does consider the relationship between the north-western region and the coarse-weaving counties of north-central Ireland. My outline of regional differences is a distillation of these accounts.

5. William Roseberry [1989] has argued that both Marxist and modernization theorists have tended to think in terms of an opposition between 'natural economy' and market economy, with peasant society as an undifferentiated and ahistorical starting point. Marxist-feminist perspectives (see eg. Hamilton [1978] and Zaretsky [1976] have also been prone to adopt this dualism. While Hareven [1974] and Anderson [1976] have emphasized the continued importance of family strategies under the factory system, the perspective of proto-industrialization puts exceptional emphasis on the part played by household strategies in bringing about the transition to industrial capitalism.

6. On patterns of work and leisure in rural industrial Ireland see Young’s [1892: 127, 128, 132] remarks on weavers' tendency to stop working when provisions were cheap, or when opportunities for amusement presented themselves. Contemporary observations of 'improvident' early marriage and land subdivision are numerous. See for example Coote [1804: 136] and Greig [1976: 155].


8. 'S na mna da reir sin a dheanfadh 'ch aon ni, / Shniomhfadh breidin is anairt chaol.' Translation in the text by Thomas Kinsella.

9. B.P.P, Poor Inquiry, Ireland, Appendix D XXXI, 1836; 'An account of the number of wheels...,' P.R.O.N.I., D562/5577, 1796.

10. N.L.I. Mic. 2740.

11. B.P.P., Report from the Select Committee on the Linen Trade of Ireland, V, 1825.

12. James Orr was a weaver and small farmer who lived from 1770 to 1816 in the parish of Broadisland, on the south-east coast of County Antrim. For a discussion of the uses of his poetry for social history, see Akenson and Crawford [1977]. For a general account of Ulster’s 'rhyming weavers,' see Hewitt [1974].

13. 'Nuair airigheann si me fein ag teacht chun an tighe
    Teine mhaithe mhona cuireann si sios,
Stiuruigheann na leinbh ar fuaid an tighe,
Agus scaoileann ar siubhal an tuirnin lin.
    Och! mo bhean as mo chlann as mo thuirnin lin,
    Mo chupla punt go deo gan sniomh;
    Tobac ar a bais as piopa lena ais,
    'S is cuma san domhan ca ngabhann an cios.'

My translation in the text.

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