

THE CLASSICAL ECONOMISTS AND THE FACTORY ACTS — A RE-EXAMINATION

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I

British historians of the Industrial Revolution are unanimously of the opinion that early factory reform was achieved in the face of strong hostility from the economic experts of the day. It does not matter whom we consult: Toynbee, Trevelyan, the Hammonds, Cunningham, Clapham; the classical economists are always depicted as unalterably opposed to the Factory Acts.<sup>1</sup> But if we turn to the historians of economic thought a very different interpretation emerges. Marshall, for instance, asserts that the classical economists "supported the factory acts, in spite of the strenuous opposition of some politicians and employers who claimed to speak in their name"; he cites McCulloch and Tooke as examples in point.<sup>2</sup> In his *History of Economic Analysis*, Schumpeter flatly declares that "Most 'classic' economists supported factory legislation, McCulloch especially."<sup>3</sup> K. O. Walker, in an article which examines the question in some detail, concludes that "the direct influence of the political economists on labor legislation was negligible" and that "any influence that was exerted tended to favor, rather than oppose, the passage of the Factory Acts."<sup>4</sup> Lionel Robbins' study of *The Theory of Economic Policy in English Classical Political Economy* deals briefly with this issue; he suggests that the classical authors generally favored regulation of child labor while disapproving of legislation for adults.<sup>5</sup>

1. For a recent example see R. G. Cowherd, *The Humanitarians and the Ten Hour Movement in England* (Boston, Mass., Kress Library of Business and Economics, 1956), pp. 5–6, 9–10.

2. *Principles*, pp. 47, 763n. See also Marshall's *Industry and Trade*, pp. 763–65.

3. (New York, 1954), p. 402.

4. K. O. Walker, "The Classical Economists and the Factory Acts," *Journal of Economic History*, I (Nov. 1941), 170. See also L. R. Sorenson, "Some Classical Economists, Laissez Faire, and the Factory Acts," *ibid.*, XII (Summer, 1952), which reaches similar conclusions. Sorenson documents the assertion made above about the opinions of economic historians.

5. (London, 1952), pp. 101–3.

How can we account for such widely divergent interpretations of what is, after all, a matter of record? One answer is that the evidence which has so far been considered is highly selective.<sup>6</sup> Moreover, little attention has been paid to the successive phases of the factory reform controversy: generalizations have been advanced on the basis of writings published at different times and under distinctly different circumstances.

The fact of the matter is that the attitude of the classical writers was conditioned at each stage of the debate, by the degree of regulation that had already been achieved. Many a factory bill, whose introduction had been bitterly opposed, met with approval once it became law. Although the classical economists supported the *principle* of granting protection to children, they were aware that the unavoidable consequence was a shorter working day for adult operatives; rather than to countenance that they preferred to dispense with the benefits of regulated child labor. Thus, we are faced on the one hand with differences of opinion among the classical economists as to the desirability of further restrictions on the employment of children, and on the other hand with a general tendency towards rear-guard action designed to prevent the effective regulation of adult labor.

For this reason the question whether the classical economists did or did not favor the Factory Acts cannot be answered. This much, however, is a matter of pure academic interest. The real significance of the discussion lies in the opportunity which it affords to study the quality of classical policy-pronouncements. Were their opinions based upon economic considerations, such as the effects of shorter hours on employment and real wages, or solely upon fundamental value judgments embodied in the tenets of *laissez faire*? In the concluding section of this paper I shall attempt to evaluate the merits of the classical economists' position in the light of their own analytical apparatus and the relevant factual knowledge available to them.<sup>7</sup>

## II

The history of factory legislation in England begins with Peel's Bill of 1819. An earlier Act of 1802, regulating the labor of parish apprentices, was an extension of the Poor Laws, not a factory act; no new power of the state was at issue. Peel's Bill, however, did raise the question of state interference in private industry; it reduced the

6. This is particularly true of Walker's analysis which deals only with the literature up to 1833.

7. The presentation of the argument has gained in clarity through the criticisms of Mr. M. Leiserson.

working day of children under sixteen to twelve hours and prohibited altogether the employment of children under nine years of age. The act applied only to the cotton factories and inadequate inspection provisions made it largely inoperative. Nevertheless, there was opposition to the bill, particularly from the House of Lords, in the form of an appeal to "that great principle of Political Economy, that labour ought to be left free." The proponents of Peel's Bill, on the other hand, defended the measure on the grounds that children were not "free agents."<sup>8</sup> Economists took little interest in the debate; Malthus alone gave public support to the measure.<sup>9</sup>

Additional restrictions on child labor in the cotton factories in 1825 and 1831 improved but little upon the Act of 1819. But with the publication of Oastler's letters on "Yorkshire Slavery" and the appearance of Sadler's Committee Report (1833) the movement for factory reform began to assume a more radical tone. Lord Ashley's motion of a Ten Hours Bill, applicable to all persons under the age of sixteen, led to the appointment of a Royal Commission to collect further evidence. The Commissioners — Thomas Tooke, Edwin Chadwick, and Southwood Smith — proposed several amendments to Ashley's Bill to prevent interference with the free employment of adults.<sup>1</sup> The final version, known as Althorp's Act, limited the working day of persons between thirteen and eighteen to twelve hours a day and of those between nine and thirteen to nine hours a day.<sup>2</sup>

After the passage of Althorp's Act it was necessary to employ children in part-time relays since the work of the adult spinners and weavers depended, for technical reasons, upon the labor of their young assistants. The factory inspectors devised a variety of schemes for co-ordinating the work day of different categories of labor but none of the plans proved completely successful. The relay system soon became one of the major devices for evading legislative control. The leaders of the Ten Hours party were quick to point out that it

8. W. Smart, *Economic Annals of the Nineteenth Century* (London, 1910), I, 688, 702-3; Walker, *op. cit.*, p. 175.

9. T. R. Malthus, *Essay on Population* (5th ed.; London, 1817), p. 282. Only some dozen tracts appeared on Peel's Bill in contrast to the flood of pamphlets that accompanied the legislation of the '30's and '40's. See J. B. Williams, *A Guide to the Printed Materials for English Social and Economic History, 1750-1850* (New York, 1926), II, 192-94.

1. See M. W. Thomas, *The Early Factory Legislation* (London, 1948), pp. 55-56.

2. In addition, night work was abolished for those under eighteen, and the scope of regulation was extended to all textile factories, with the exception of lace and silk mills. Furthermore, employment for children was made conditional upon attendance at school for two hours a day and machinery of inspection was provided to supervise the enforcement of the Act.

was impossible to separate the adult from the child for purposes of legislative control; in short, they did not attempt to disguise their ulterior aim of limiting the hours of adult labor by means of placing restrictions upon the hours of children. Classical political economy, however, sanctioned a limit on the employment of children below "the age of consent" so long as this could be achieved without encroaching upon the working hours of adults. Consequently, economists arraigned themselves against the Ten Hours movement as its ultimate purpose became increasingly evident.<sup>3</sup>

The years between the Acts of 1833 and 1844 mark the first phase of the debate; at this point there was still great variety in the attitudes of individual economists. It was only in the 1840's that something like a uniform position began to emerge. Nevertheless, all the leading arguments in the controversy make their appearance at this stage of the discussion.

The first to commit himself, even before the passage of Althorp's Act, was John Stuart Mill. Writing in a popular weekly in 1832, he expressed a desire to see "a law established *interdicting* altogether the employment of children under fourteen, and *females of any age*, in manufactories".<sup>4</sup> He anticipated objections to such a law drawn from the "non-interference philosophy" and admitted that he, too, was a partisan of this principle "up to a certain point." He drew attention, however, to a significant exception:

"The case in which it would be to the advantage of everybody, if everybody were to act in a certain manner, but in which it is not in the interest of any individual to adopt the rule for the guidance of his own conduct, unless he has some assurance that others will do so too. There are a thousand such cases; and when they arise, who is to afford the security that is wanted, except the legislature?"

The case of child and female labor is a typical example, he went on to say; here private and public benefit must diverge unless a universal

3. As one of the advocates of shorter hours put it bitterly:

"They could not refuse to protect children, but they are 'political economists'; and though, as men, they could no longer screw up their minds and hearts so far as to sacrifice any more limbs and lives of infants, the science would not suffer them to invade the 'freedom of industry' by involving the adults in that protection which they were obliged to give the child. It is this absurd attempt to separate the adult from the child in its labour, that has rendered every Act that has ever been passed to give protection to children almost void." C. Wing, *Evils of the Factory System Exposed* (London, 1836), p. 17 quoted by Thomas, *op. cit.*, p. 89.

4. "Employment of Children in Manufactories," *The Examiner*, Jan. 29, 1832, p. 67. The article appeared anonymously; for evidence of Mill's authorship, see *Bibliography of the Published Writings of J. S. Mill*, ed. N. MacMinn, et al. (Evanston, Illinois, 1945).

compact can be secured. This argument could have been applied with the same force to the labor of adult males but Mill failed to carry it through.<sup>5</sup>

Robert Torrens supported Ashley's Ten Hours Bill when it came up for debate in Parliament, but with an important qualification. Since the Corn Laws had raised the cost of food and thus depressed real wages, the working class was entitled to shorter hours without a reduction in money wages. Still, the tariff on agricultural produce should be lowered so as to "create a margin on which your short time might safely stand."<sup>6</sup> In a work published shortly before the passage of Althorp's Act, he declared:

The evidence presented by the Royal Commission of 1832 makes it imperative on Parliament to interpose, to shorten the hours of labour, and to save the infant labourer from the cruel oppression of excessive toil. But while humanity cries aloud for such intervention, and while it must be promptly and freely granted, the truth should at the same time be declared, that a Bill for regulating the hours of labour, though framed by a consummate wisdom, cannot reach the root of the disease.<sup>7</sup>

The "root of the disease," of course, is the Corn Laws.

George Poulett Scrope took a similar view in his *Principles of Political Economy*: the Factory Bill is "a measure which in a healthy state of society would be a needless interference, though in the existing circumstances of the country, it seems to us highly desirable."<sup>8</sup> *The Westminster Review* (under the proprietorship of Colonel Perronet Thompson, an ardent Benthamite and free trader), varied the argument: it condemned Althorp's Act as a "restrictive blunder" and depicted the Ten Hours Movement as "the stalking-horse to cover and protect — the Corn Laws and West Indian Slavery."<sup>9</sup> Within a decade this became the standard reply of the Anti-Corn Law League to the factory reform movement.<sup>1</sup> The Corn Laws were made the scapegoat of distress in the factory districts, and cheap bread was hailed as the nostrum to remedy all ills.

While the Factory Act of 1833 was still under discussion, Lord Ashley solicited McCulloch's views on the question. McCulloch had

5. In his *Principles* (1848), however, Mill pursued the argument to its logical conclusion. See *infra*.

6. *Hansard's Parliamentary Debates*, 3d series, XV, 414-15. See also Sorenson, *op. cit.*, pp. 253-54.

7. *Letters on Commercial Policy* (London, 1833), p. 73.

8. (London, 1833), p. 51; also pp. 241, 358.

9. *Westminster Review*, April, 1833, pp. 380-81. See also G. L. Nesbitt, *Benthamite Reviewing* (New York, 1934), pp. 147-48.

1. See A. E. Bland, *et. al.*, *English Economic History: Select Documents* (London, 1919), pp. 611-12; J. Morley, *The Life of Richard Cobden* (London, 1910), pp. 166-70.

spoken approvingly of factory legislation in 1827, adding the warning, however, that "no farther interference ought, in any account, to be either attempted or tolerated."<sup>2</sup> Now he wrote to Ashley: "I would not interfere between adults and masters; but it is absurd to contend that children have the power to judge for themselves on such matters."<sup>3</sup> McCulloch's modern reputation as a friend of factory reform is largely based upon this private communication, penned under the stimulus of the shocking disclosures of Sadler's Committee Report. It is to be noted, however, that the argument goes no further than the admission that children are not "free agents," a notion that was rapidly becoming a commonplace.

Indeed, in the pages of the *Edinburgh Review* McCulloch continued to deprecate the case for legislative control. In 1835 he devoted a major article to Ure's *Philosophy of Manufactures*, a crass apology for the factory system.<sup>4</sup> "That abuses have existed in some factories is certain," McCulloch admitted, "but these have been rare instances; and, speaking generally, factory work-people, including non-adults, are as healthy and contented as any class of the community obliged to earn their bread in the sweat of their brow." He saw no reason to object to the exclusion of children under thirteen years of age from factory employment provided that they were properly looked after at home. But in view of parental attitudes among the lower classes, it was likely, he argued, that children turned out of factories would become delinquent paupers. The factory system, he observed, did imbue children with disciplined habits and allowed them to extend material assistance to their parents. Nevertheless, "the Legislature did right in prohibiting altogether the employment of children in mills under nine years of age." Lest these words give comfort to factory reformers, McCulloch hastened to add that the limitation of hours was "a matter of great nicety and difficulty"; on the whole, he concluded, the less the textile trade is "tampered with" the better.<sup>5</sup> Senior's *Letters on the Factory Act* (1837) is too well known to require discussion. Its importance lies in the fact that it carried the debate out of the realm of such general considerations as the proper "age of consent," the character of parental supervision, or

2. *Edinburgh Review*, June, 1827, p. 35.

3. Quoted by Robbins, *op. cit.*, pp. 101-2. See also G. Ramsay, *An Essay on the Distribution of Wealth* (Edinburgh, 1836), pp. 102-3, for the same argument.

4. On the basis of personal experience, Ure testified that child labor in factories "seemed to resemble a sport": children, working twelve hours a day, spent nine hours in idle contemplation and "sometimes dedicated these intervals to the perusal of books."

5. *Edinburgh Review*, July, 1835, pp. 464-67.

the priority of free trade over factory legislation. Senior accepted Althorp's Act as it stood but argued that, given the cost structure of the typical textile mill, further reductions in hours would wipe out the margin of profit.<sup>6</sup> Senior's thesis proved to be a serviceable argument against the extension of regulation and in the next round of discussions which took place in 1844 several members of Parliament succumbed to its logic.<sup>7</sup> Senior's fellow economists, however, did not take it very seriously: *Letters on the Factory Acts* is hardly mentioned, much less analyzed, in the economic literature of the day. The records of the Political Economy Club clearly suggest that Senior's argument was not accepted by his colleagues: They objected to his unrealistic estimate of capital investment upon which his conclusions were grounded.<sup>8</sup> But one of Senior's basic assumptions, that output would fall proportionately with the reduction of hours, was not challenged and became an essential feature of the classical analysis of factory legislation.

### III

A new Factory Act was passed in 1844 which lowered the working hours of children to six and one-half hours and that of "young persons" (boys below eighteen and girls below twenty-one) to twelve hours. This Act proved to be a steppingstone to the Ten Hours Bill of 1847 which finally secured a fifty-eight hours' week for "young persons" and for women of all ages. The passage of both measures was accompanied by an intense discussion that marked the high point of three decades of debate. Economic arguments became more concrete and were now clearly divorced from the precept of noninterference. However, there were no dramatic conversions to the Ten Hours camp.<sup>9</sup> At the Political Economy Club in 1844, Edwin Chadwick put up this question for debate: "Is legislative interference

6. Contrary to popular belief, fostered by Marx's attack, Senior did not advance a general theory that profits are produced in the "last hour." Even on his own assumptions, Senior's calculations actually show no more than that a shortening of the working day by one hour would cause profits to fall from 10 to 8 per cent, given a constant output per man-hour. See K. Wicksell, *Lectures on Political Economy* (New York, 1934), I, 194-95.

7. See A. E. Bland, *et. al.*, *op. cit.*, pp. 605-6.

8. See Walker, *op. cit.*, pp. 171-72.

9. There is some evidence that Dr. Thomas Chalmers, a leading Scottish divine and author of several economic treatises, was finally won over by the Ten Hours campaign in 1847. If so, Chalmers was a singular exception. See C. Driver, *Tory Radical. The Life of Richard Oastler* (New York, 1946), pp. 476-79.

between the Master and the Adult labourer, to regulate the hours of work, expedient?" The diary of one of the participants reveals that Charles Buller, the radical philosopher, was the only member to vote in favor of such interference.<sup>1</sup> Chadwick, Senior, Torrens, and Tooke answered the question in the negative. McCulloch admitted much of Buller's reasoning but thought the matter could not be settled in general terms. The views of John Stuart Mill at this point are not clear; but in an article on "The Claims of Labour" for the *Edinburgh Review* (1845) he referred to the Ten Hours Bill as falling into the category of "quack schemes of reform."

The prevailing economic argument against the Ten Hours Bill is set forth in Torrens' *Letter to Lord Ashley* (1844), a curiously neglected work.<sup>2</sup> Torrens begins his discussion with a strong condemnation of the principle of "leaving things to their course." The concept of "free agents," however, is not mentioned at all. His analysis is largely concerned with "the delusion" of the operatives that "upon the passing of a Ten Hour Bill, they would receive the wages of twelve hours for the work of ten." Torrens lays it down as an incontrovertible fact that "the rate of profit in this country is already approaching the minimum at which no margin remains for an advance of wages"; "capital to an enormous amount already emigrates from our shores."

Torrens' conclusion is that the Ten Hours Bill would check production and diminish wages: "Enact your Ten Hours Bill and one of two events must inevitably ensue: — the manufactures of England will be transferred to foreign lands, or else the operatives must submit to a reduction of wages to the extent of 25 per cent."<sup>3</sup>

There is no mention in Torrens' pamphlet of the possible productivity effects of a shorter working day. Yet this had long been a favorite argument of the factory reformers. Robert Owen had testified in 1818 before Peel's Committee that a reduction from fourteen to twelve hours a day in his factory at New Lanark had actually

1. *Proceedings of the Political Economy Club, 1821-1920* (London, 1921), VI, 287-88.

2. Sorenson (*op. cit.*) contends that Torrens was definitely sympathetic to factory legislation. The evidence for this comes from Torrens' Parliamentary speeches in the 1830's while *Letter to Lord Ashley*, the most important of Torrens' writings on the Factory Acts, is not considered.

3. *A Letter to Lord Ashley* (London, 1844), pp. 64-65, 71-73. Torrens' argument was reproduced in the popular journals: see the article on "Protection of Labour," *The Economist*, April 6, 1844. Typically, however, *The Economist* based its case on laissez faire (see S. Gordon, "The London *Economist* and the High Tide of Laissez Faire," *Journal of Political Economy*, LXIII (Dec. 1955), 478, 483).



resulted in an increase of output.<sup>4</sup> Speaking in the House of Commons in 1844, Lord Ashley recalled Owen's testimony by way of an attack on Senior's "last hour" theory. Reviewing the successive Factory Acts since 1819, he pointed out: "you had no diminution of produce, no fall in wages, no rise in prices, no closing of markets, no irresistible rivalry from foreign competition, although you reduced your hours of working from 16, 14, 13, to 12 hours a day."<sup>5</sup> The implication is that productivity per man-hour had risen with each reduction in the length of the working day.

Ashley's argument is loose, of course: dynamic factors unrelated to shorter hours might account for the facts. The same argument, however, more carefully stated, appears in a popular treatise of the forties, William Thornton's *Over-Population and Its Remedy*. Thornton reviewed the whole question in the light of the imminent repeal of protection. If "the daily labour of British operatives were shortened," he thought it "very possible that their wages would fall." But once the Corn Laws were abolished, lower food prices might leave real wages constant, or even raise them, despite the fall in money wages owing to a Ten Hours Bill. Moreover,

It is not quite certain that a diminution of produce would result from shortening the duration of labour. Persons who are not obliged to work so long may work harder than before, and may get through the same quantity of work in a short time as formerly occupied them for a longer period. . . . If so, the limitation of labour to ten hours daily would not in any circumstances reduce wages, and at all events the reduction might be either prevented or neutralised by the establishment of free trade in food.<sup>6</sup>

Unhappily, Thornton's analysis made no impression on his contemporaries. McCulloch, for example, continued to discuss the regulation of hours along traditional lines. "We should be inclined to think," he wrote in 1846, "that the existing regulations respecting factory labour in this country are about as reasonable and judicious as they can be made." Then he went on to praise Torrens' *Letter to Ashley* as "the best tract in opposition to the ten-hours project."<sup>7</sup> In the fourth edition of his *Principles* (1849) he added a few pages on the Factory Acts, lauding the Act of 1844 as consistent with "claims of humanity" and "the interest of manufacturers" but

4. See B. L. Hutchins and A. Harrison, *A History of Factory Legislation* (London, 1911), pp. 19-23.

5. *The Ten Hours Factory Bill. The Speech of Lord Ashley, M.P. in the House of Commons on Friday, May 10, 1844* (London, 1844), pp. 15-16.

6. (London, 1846), p. 399.

7. *The Literature of Political Economy* (London, 1846); London Reprints No. 5 (1938), pp. 294-96.

roundly condemning the Bill of 1847 because it tended to restrict the hours of adults. At this point he turned to a new argument. The conditions of the working class, he declared, rest ultimately upon the size of the wages fund relative to population; the real issue, therefore, is not whether eight, ten, or twelve hours constitutes the "proper" length of a working day.

If . . . the longer be introduced by the customs of the country, in preference to a shorter period, it is a proof that there is, if not an excess, at all events an extremely copious supply of labour; and that the labourers are, in consequence, obliged to submit to the drudgery of lengthened service . . . it is difficult to perceive how the hours of work . . . should be lessened by a legislative enactment without at the same time, and by the same act, reducing wages.<sup>8</sup>

John Stuart Mill touched briefly on the economic objections against the Factory Acts in his *Principles* (1848). Whether a reduction of hours without a cut in wages would inevitably displace labor was, he said, "in every particular instance a question of fact, not of principle." For the most part his analysis of factory legislation dealt with the propriety of government intervention along the lines laid down in his earlier article of 1832.<sup>9</sup> If a nine hour day were proved to be in the interest of the working class, Mill reasoned, state action would be required "not to overrule the judgment of individuals respecting their own interest, but to give effect to that judgment." He concluded: "I am not expressing any opinion in favour of such an enactment . . . but it serves to exemplify the manner in which classes of persons may need the assistance of law, to give effect to their deliberate collective opinion of their own interest." He condemned the Acts of 1844 and 1847, however, on the grounds that they excluded working-women from factories, although women were "free agents" as much as men.<sup>1</sup>

8. *Principles of Political Economy* (London, 4th ed., 1849), pp. 427-30. See also McCulloch's *Treatise on the Circumstances Which Determine the Rate of Wages* (London, 1851), pp. 93-97, and *Treatises and Essays* (Edinburgh, 1859), pp. 453-54.

9. Mill's argument here is nothing but an early example of Pigou's famous distinction between private and social costs, as W. J. Baumol pointed out: *Welfare Economics and The Theory of the State* (Cambridge, Mass., 1952), pp. 15-16, 150-52.

1. J. S. Mill, *Principles of Political-Economy*, Ashley edition, pp. 964-65, 959. Senior took the same view on female labor: *Industrial Efficiency and Social Economy*, ed. S. L. Levy (London, 1929), II, 307-8.

## IV

The Ten Hours Bill of 1847 had failed to abolish the system of employing children in part-time shifts; consequently, it was possible to keep adult male operatives at the bench for fifteen hours a day without violating the letter of the Act of 1847. Renewed agitation at last secured the "normal working day" for women and children in 1853: hours of legal employment and meal times were specified in greater detail so that it became difficult to employ relays. The scope of the Ten Hours Bill was extended in the 1860's, although industries other than textile were not covered until the Consolidating Act of 1878. The minimum age of child labor was now raised to ten, the employment of women was further restricted, and sanitary inspection and safety-regulations were improved. None of this legislation, except the details of sanitation, was applicable to adult males but their weekly hours, of course, were almost everywhere scaled down to sixty or less.

Meanwhile, fragmentary statistical data on the effect of the Act of 1847 had been gathered by the factory inspectors. The initial consequences were partly obscured by a severe trade depression. Wages in textiles fell, but much less than the 16 per cent reduction in hours or the 10 per cent reduction in piece rates. After the revival of prosperity in the 1850's, Horner and Tooke declared that the Ten Hours Bill had not depressed either earnings or output owing to an increase in the intensity of labor.<sup>2</sup>

There is no indication that economists shared the belief that shorter hours had paid for themselves through a rise in output per man. New editions of Mill's *Principles* in the fifties and sixties reveal no alterations with respect to the topic under discussion. Cairnes' writings contain no explicit discussion of the Factory Acts. Fawcett, however, delivered a lecture on the question in 1872 in the midst of a new campaign for a nine hours' day. At the outset he expounded the familiar theme of the free agent:

It certainly appears to me that it is quite as desirable to pass a law limiting the number of hours which a child is permitted to work, as it would be undesirable to impose similar restrictions upon men and women. If grown-up persons overwork they do it of their own free will.

Moreover, he had no patience with Mill's "hypothetical argument" in favor of state intervention. This is "the old story," Fawcett com-

2. See G. H. Wood, "Factory Legislation, considered with reference to the Wages, etc., of the Operatives Protected thereby," *Journal of the Royal Statistical Society*, LXV (June 1902), p. 297.

plained, which requires us to believe in the collective wisdom and infallible judgment of the legislature. He proceeded to examine the notion that a diminution of hours could increase the efficiency of labor and thus leave output unaffected. He admitted that there was some factual evidence which might be adduced in behalf of this argument. Still, he insisted that generally entrepreneurs could be trusted to maximize profits and, thereby, to achieve an optimum length of the work day from the viewpoint of maximizing output per man-hour.<sup>3</sup>

The success of the Nine Hours Movement, Fawcett warned, would open the way to a campaign in favor of eight hours, and so forth. Already, England "can scarcely hold her own in some trades in which she once had an almost undisputed supremacy." When the Nine Hours Law came up for debate in Parliament Fawcett spoke against it on the grounds that "this House has no right to interfere with the labour of adults" or to place the employment of women on a different footing from the employment of men.<sup>4</sup>

Although Jevons is not a classical economist, his treatment of the Factory Acts contains some instructive differences as well as similarities to the classical analysis. Jevons denied, first of all, that the question can be decided once and for all on "some supposed principle of liberty." The same principle, if it existed, would apply to adult women whose hours were already regulated. Moreover, a mass of "paternal legislation," such as the Truck Acts, the Coal Mines Act, and a series of bills relating to merchant shipping and the fencing of machinery, had long ago been sanctioned for the protection of adult men. On the face of it, he saw no reason to prohibit state action in the matter "if it could be clearly shown that the existing customs are injurious to health and there is no other probable remedy."<sup>5</sup>

At the same time, Jevons' analysis is quite innocent of the type of consideration introduced by Thornton.<sup>6</sup> Jevons believed it to be "an economic fallacy" to suppose that shorter hours could give rise to any counterbalancing advantage other than the workmen's enjoyment of more leisure.<sup>7</sup> Then, ignoring Mill's contention that private interests were fundamentally interdependent, he concluded:

3. H. Fawcett, *Essays and Lectures on Social and Political Subjects* (London, 1872), pp. 36, 113-15, 120.

4. H. Fawcett, *Speeches on Current Political Questions* (London, 1873), pp. 122 ff.

5. W. S. Jevons, *The State in Relation to Labour* (London, 1882), p. 65.

6. Thornton's argument was finally "rediscovered" by Marshall (*Principles*, pp. 695-96).

7. See Jevons, *The Theory of Political Economy* (2d ed.; London, 1879), pp. 63-64, and *Methods of Social Reform and Other Papers* (London, 1883), p. 109.

When we observe too, that trades unions are already constantly wrangling with employers for a reduction of hours, while individual workmen are generally ready to work overtime for a moderate inducement, we shall be led to think that there is no ground whatever for legal limitation of adult male labour in the present day.

## V

The classical analysis of the Factory Acts consisted of two quite separate strands of thought. On the one hand, factory legislation was criticized in terms of the doctrine of "freedom of contract" between enlightened economic agents. On the other hand, it was held that something like a Ten Hours Bill would spell the ruin of British industry if unaccompanied by a drastic fall in money wages. We will examine each argument in turn.

In so far as the problem was treated as a matter of enlightened individualism, the attitude of the classical economists was unambiguous: where self-interest was plainly unenlightened, as in the case of children, they recommended intervention by the state, differing only about the proper age of consent and the scope of parents' right of supervision. Nevertheless, in practice this meant that they acquiesced in just so much legislation as had already been achieved; at each stage of the debate they warned against further measures. Invariably, notions about the age at which a worker becomes a "free agent" changed in the wake of legislation, at each turn approving a *fait accompli*.

McCulloch's treatment of the question is typical in this respect. One would hardly describe him as a supporter of the Factory Acts. Senior is another telling example. In his *Letters on the Factory Acts* he agreed that no child of eleven should be employed as much as twelve hours a day; this implied acceptance of Althorp's Act which defined thirteen as the age at which "the period of childhood, properly so called, ceases." In 1841 he thought that the "age of consent" ought to be raised from thirteen to fourteen; in 1847 he urged that it be set at sixteen, that is, two years below the age of consent stipulated in the Ten Hours Bill. Similarly, he now assented to a six and one-half hour day for children, as called for in the Act of 1844. But he never changed his mind about the undesirability of regulating adult labor.<sup>8</sup>

8. Sorenson, *op. cit.*, pp. 260-61. Walker's observation (*op. cit.*) that "reputable and orthodox economists like Colonel Robert Torrens, Joseph Hume, Thomas Tooke, Edwin Chadwick, and Leonard Horner, were all favorable to factory legislation as long as it was limited to children" completely begs the question. Not only were some of these "economists" never regarded, by themselves or others, as spokesmen of economic science, but all public figures after 1820 or thereabouts approved of factory legislation limited to children below some age or other.

Apart from being wise too often after the event, the classical economists never faced the question whether it was, in fact, possible to protect women and children without interfering with the employment of adult males. Strictly speaking, economists are not concerned with administrative feasibility. Still, the total neglect of the difficulties created by the relay system rendered most of the classical prescriptions for legislation void of practical significance. In addition, the notion of "free agents" was in itself extremely vague. The whole case against the Factory Acts based on this concept falls to the ground once we consider Mill's argument that the ability of adult operatives to recognize their own self-interests does not prevent them collectively from working longer hours than each alone might have found desirable. Although Mill presented this argument in one of the most widely read treatises of the period, he never for one moment succeeded in deflecting the debate from the well-worn theory of free agents. This is all the more surprising since this doctrine is repeatedly attacked in the reports of the factory inspectors.<sup>9</sup>

In the case of Mill and Fawcett the problem of factory reform was complicated by the issue of feminism. They feared that the Ten Hours Bill would encourage the substitution of unprotected adult males for protected female workers.<sup>1</sup> Since the emancipation of women was held to be dependent upon unlimited access to factory employment, they thought it necessary to condemn the Factory Acts in so far as these involved restrictions upon the hours of women workers.

All things considered, the Ten Hours camp was not far wrong in regarding "political economy" with its slogan of "free agents" as a major obstacle to factory reform. This is even more true when we consider the arguments based directly upon economic theory. It cannot be doubted that the Ten Hours movement would have met with much less hostility if economists had insisted from the outset, as did John Stuart Mill in 1848, that the wage and employment effects of shorter hours were "in every particular instance a question of fact, not of principle." To be sure, economic theory added very little in the way of theoretical analysis to popular thinking about the Factory Acts. The level of formal analysis barely rose above the

9. See the citations by K. Marx, *Capital* (New York, 1939), p. 288.

1. Their fears seem to have been unfounded. Available data covering the period 1835-70 reveal a steady tendency to replace protected children with similarly protected adults and young persons; women above thirteen comprised from 50-56 per cent of the labor force throughout the period. See Wood, *op. cit.*, pp. 310-11.

commonplace: no effort was made to distinguish the short-run and long-run effects of a change in hours, without which distinction any analysis was bound to be naïve. In this sense, it is true to say that "had there been no classical economic theory, the arguments would have been essentially the same."<sup>2</sup> Nevertheless, the assumption of a constant productivity of labor irrespective of the length of the working day had been challenged by at least one economist, William Thornton. On the face of it, there is nothing in classical theory which would have prevented a consideration of this factor; once introduced there is little left of Torrens' *Letter to Ashley*, "the best tract in opposition to the ten-hours project."

McCulloch's use of the wages fund doctrine to show that it is fruitless to restrict hours by legislative enactment is simply wrong. He failed to realize that at bottom, and apart from humanitarian motives, the leaders of the Ten Hours movement were trying to restrict the supply of labor in order to maintain the rates of wages in periods of severe unemployment. It is no accident that all the Factory Acts in the first half of the nineteenth century were passed after vigorous working class agitation "at, or close to, a low point in cyclical fluctuations."<sup>3</sup> At such times employers were more inclined to accept restrictive legislation, but that is not the point. Only under depressed conditions can workers hope to gain instantly by an elimination of child and female labor; in a boom the immediate effect would be a reduction in real income per family. Needless to say, the wages fund doctrine is quite adequate to show why a reduction in the labor supply does tend to reduce wages. At the same time, it must be said that the doctrine is really inappropriate to a discussion of the Factory Acts: it assumes that the size of the labor force is a constant proportion of the total population, thus ignoring variations in the child and female participation rate.

In a class by itself is Fawcett's contention that pecuniary motives alone bring about the adoption of a work day that optimizes output per man-hour. This argument is open to the objection that it assumes perfect foresight. Contrariwise, Thornton's thesis amounts to a denial of perfect knowledge on the part of the entrepreneur. We should say today that entrepreneurs may have little incentive to reduce hours since the immediate effect, if wages are kept constant, is to increase costs and decrease output; whereas, a simultaneous reduction in wages under these circumstances is bound to affect

2. Walker, *op. cit.*, p. 177.

3. W. W. Rostow, *British Economy of the Nineteenth Century*, p. 118.

efficiency adversely. Thus, employers may fail to maximize output per man-hour owing to an excessive emphasis on profit maximization in the short run.<sup>4</sup> Be that as it may, Fawcett's line of reasoning clearly shows where the classical economists' treatment of hours legislation is deficient: they had no theory of the firm.<sup>5</sup>

There is a simple moral in all this: for some purposes a theory of economic growth is not enough.

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4. See J. R. Hicks, *The Theory of Wages*, pp. 104-10. Even on the assumption of perfect foresight, this is a clear case of private costs diverging from social costs. There is no reason why the classical economists could not have considered this possibility; the distinction between private and social costs is implicit in Adam Smith's discussion of public works.

5. Since Jevons likewise had no theory of the firm he was unable to improve upon classical analysis in this respect.