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Culture and Wealth Creation: Mechanics' Institutes and the Emergence of Political Economy in Early Nineteenth-Century Britain

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Abstract

In late eighteenth and early nineteenth-century Britain, a decisive shift occurred in assumptions about the nature and viability of commercial society and how it needed to be organised in order to ensure social order and national prosperity. This transformation was part of a wider intellectual and cultural shift that attempted to make sense of changes in political and economic institutions or to shape these changes. The intellectual endeavour to explain or control new processes of wealth creation and urbanisation produced key concepts for thinking about the social, economic, spatial, and political organisation of industrial societies, and gave rise to both social statistics and political economy. These emerging bodies of knowledge challenged the older householding framework for thinking about labour and wealth creation. In the 1820s, the two approaches came into conflict in debates about the desirability of establishing Mechanics' Institutes to provide a scientific education for working men.

Introduction

In the debate among social reformers, clergymen, parliamentarians, and political economists about Mechanics' Institutes in Britain in the 1820s, the emerging discipline of political economy challenged an older discourse concerned with the preservation of a hierarchical socio-economic order. The opponents of the Institutes argued that national prosperity depended upon working men's cultivation of sobriety and deference which required religious virtue rather than a scientific education. Drawing upon the principles of political economy, the supporters of the Mechanics' Institutes argued that prosperity depended upon the law of supply and demand in relation to labour. They assumed that removing distortions in the labour market such as collective action by workers and poor relief would create the conditions under which it was safe for workers to pursue their own self-betterment. The advocates of Mechanics' Institutes argued that a rising standard of living for workers was compatible with national prosperity and that a scientifically-educated workforce would contribute to both.

A full history of adult education for working people that stretched back to the eighteenth century is beyond the purview of this study. The debates surrounding the establishment of Mechanics' Institutes for working men, however, provide an opportunity to examine the intellectual shift in thinking about wealth creation which took place in the late eighteenth and early nineteenth centuries. This study begins by briefly outlining two approaches to the comparison of conceptual frameworks for analysing social systems in different historical periods. It then sketches the eighteenth-century householding conception of society and the rival discourse of political economy. This is followed by a discussion of the heated and public exchange of views about the establishment of Mechanics' Institutes which followed the publication of Henry Brougham's *Practical Observations on the Education of the People addressed to the Working Class and their Employers* in 1825.

The debate about Mechanics' Institutes brings into focus the fundamental transformation in ideas about wealth creation and social relationships represented by the emergence of political economy. For the first time since the evolution of private property, the promotion of the social aspirations and material desires of ordinary men and women became a central concern of government in Britain. The new understanding of human behaviour allowed the advocates of Mechanics' Institutes to move beyond the belief that driving down wages was necessary in order to secure social stability.

Historical Comparison of Social Systems

The early nineteenth-century debate in Britain about Mechanics' Institutes is of particular interest because it brings into focus two different visions of the "moral purpose of the state." Reus-Smit (1999) argues that in different historical periods, European states have been characterised by differing complexes of values which define a desirable social order as well as the nature and limits of the authority of the state. The core of these values is a prevailing belief about the moral purpose of the state which embodies the reasons held by historical agents for organising political life within a territorially-bounded unit. Such purposes are moral because they always entail a conception of the individual or social good served by the state (13-15). They provide the foundation for a set of fundamental institutions that are peculiar to different historical and cultural contexts. Changes in values generate new social identities and new institutions (30-33).

Reus-Smit's (1999) understanding that the identity and moral purpose of participating states are characterized by particular institutions and practices is similar to the notion of political rationality used by Anglo-Foucauldian scholars to delineate forms of wealth creation and different modes of government in different historical periods. Using this Foucauldian approach, Rose and Miller (1992) focus on four political rationalities that correspond broadly with specific historical periods: *raison d'état* and its accompanying science of police in the eighteenth century, liberalism in the nineteenth century, and welfarism and neoliberalism in the twentieth century. Here "police science" refers to the construction of a detailed web of regulations and decrees through which centralized administrations sought to impose order upon the population within their national territories. It was founded on the assumption that social order required detailed moral supervision of the wage-earning population. In this study,

the term “householding” is used to refer to the form of the state in eighteenth-century England, in preference to either “absolutism” or “police,” terms favoured by Anglo-Foucauldians.

Householding Model of the State

Arguments against the establishment of Mechanics’ Institutes in the 1820s draw upon assumptions about the moral purpose of the state that are characteristic of the householding conception of government. This view predominated in Britain and continental Europe for much of the eighteenth century but was challenged and eventually displaced by political economy. A decisive event in the displacement of the householding conception of governing was Adam Smith’s *An Inquiry into the Nature and Causes of the Wealth of Nations*, published in 1776. The view, however, that detailed supervision of the labouring population was necessary and that wage-earners should live at or close to subsistence continued to inform public debate well into the nineteenth century.

In the householding model, the moral purpose of the state was defined as the preservation of a natural hierarchical social order, symbolised by the patriarchal household. The ideal state reflected the division of labour and authority structure of a well-ordered family in which individuals were fully subordinated to both the authority of the head and the needs of the larger unit. The most extensive elaboration of the householding conception of government in the English language is found in James Steuart’s *An Inquiry into the Principles of Political Oeconomy*, published in 1767. According to Steuart, in the administration of the state, the sovereign, statesman, or legislature occupies a role analogous to the head of a family. At the level of the state, “the whole economy must be directed by the head” in order to provide for the “nourishment, the other wants and employment of every individual” (15).

The householding model of government was formulated in the absence of the notion of “the economy” in its contemporary sense of a self-regulating system. Helliwell and Hindess (1999, 10) argue that until the late eighteenth century, the inability to see the economy as an independent reality subject to its own laws meant that wealth creation was regarded as an artefact of government action. Tribe (1978) makes a similar case. He contends that eighteenth-century writers such as Steuart (1767) discuss trade, agriculture, and manufacturing as distinct entities unable to combine spontaneously to form a self-regulating system. Prosperity and social stability are conceived as products of the sovereign’s ability to create stable and productive interrelationships between these disaggregated domains. According to Tribe, the creation of wealth could not be conceived without the “presence of the monarch’s guiding [hand] to place the activity within some ordered framework” (82). This constant anxiety about the need to regulate economic activity, common in eighteenth-century thought, does not preclude a growing awareness of the role of supply and demand in setting prices but it suggests that commentators had little confidence in the notion that economic activity, if left to itself, was self-regulating.

Since economic activity was not regarded as self-regulating, eighteenth-century commentators working within the householding framework assumed that governments needed to intervene continually to prevent crises of unemployment and uncompetitive exports. Steuart (1767, 190-191) explained the crises or “vibrations” as a consequence of the failure of supply and

demand to fall into equilibrium. If the statesman allows “natural consequences to follow upon one another,” the result is “violent competition” between workmen and those who buy from them which results in either mass unemployment or a permanent rise in profits, wages, and prices, making English manufactures uncompetitive in foreign markets. The crisis-prone nature of economic life leads Steuart to compare superintending the process of wealth creation to taking care of watches “which are continually going wrong” (217). Josiah Tucker (1755), lauded by Hayek (1947, 7; 1967, 100-101; 1985, 135, 259) as an early advocate of economic freedom, also stressed the need for vigilant monitoring of the processes of wealth creation and the imposition of taxes and duties to correct possible threats to national prosperity.

Calls for government interventions of various kinds were frequently expressed in terms of the statesman or legislature's concern for the labouring population. References to the “tenderness” (Hanway 1767, ii) of the ruler for his subjects, however, were not, in the eighteenth century, incompatible with the acceptance that inequality was a necessary element of national prosperity. John Gwynn (1767, 2) dedicated his tract, which argued that working men must live close to subsistence to a “prince whose supreme happiness consists in promoting the good and welfare of his subjects.” Material and social differences were regarded as natural and inevitable and could not be removed without a nation losing ground in competition for international markets and risking social chaos at home. Gwynn (1767, 10) pointed out that “no man in his senses would argue for an equality among mankind[;] to destroy distinctions would be to destroy all order and decorum.”

The assumption that inequality was necessary for national prosperity is evident in eighteenth-century thinking about wages and consumption. Until the latter part of the century, a concern with the price of exports, of which wages were believed to be the major determinant, served to reinforce the idea that wages should be kept as low as was compatible with the reproduction of the labour force. Likewise, the assumption that the prosperity of England depended upon the working population living close to subsistence levels made it impossible for most thinkers to believe that a rising standard of living for wage-earners was desirable. The consumption by labourers of non-necessary items could only be thought of as a sign that wages were too high, with a consequent negative effect upon the price of goods for export. The level of individual wealth and well-being of labourers was not assumed to be identical with national wealth. Wealth creation was pursued by constraining the standard of living of the working population.

Political Economy: Self-regulating Domains and Social Laws

The proponents of the Mechanics' Institutes worked within a conceptual framework which emerged from the “fundamental and deep seated upheaval” (Wittrock, Heilbron and Magnusson 1998, 1) which took place in the late eighteenth and early nineteenth centuries in Britain. In this transformation, the values and practices that constituted the householding model of the state were challenged and eventually displaced by a new way of thinking about the moral purpose of the state which was embodied in the emerging discipline of political economy. Political economists assumed that human behaviour was governed by social laws similar to the laws that govern the physical world. Furthermore, they argued that these laws

were susceptible to discovery and articulation by systematic intellectual investigation. The proponents of Mechanics' Institutes made the further argument that if the behaviour of workers conformed to the laws governing the economy, forcing down wages and controls upon consumption was rendered unnecessary for social order and the creation of wealth.

Helliwell and Hindess (1999) note that at the end of the eighteenth century, the idea emerged that the behaviour of individuals could be governed by their interactions with others without the need for detailed regulation by external authorities. They give as an example Adam Smith's argument in *The Wealth of Nations* (1776) that wealth will be optimised where economic agents are free to interact on the basis of prices that they themselves determine through the market. According to Helliwell and Hindess (1999, 14), Smith uses the relationship between prices and the unconstrained economic choices of individuals to suggest that the process of wealth creation forms a self-regulating system that is independent of the sphere of government.

Reus-Smit (1999, 127-128) sees the changing attitude towards individual choice found in Smith as constitutive of a shift in the moral purpose of the state. He argues that in the course of the eighteenth century, the values that were linked to creating a hierarchical social order modelled on the patriarchal household were displaced by a moral purpose grounded in human striving for betterment. In contrast to the holistic or collective orientation of earlier forms of rule, the moral purpose of the state in the nineteenth century was the construction of a social, economic, and political order that augmented individual capabilities and interests. In the political sphere, the image of a divinely-ordained social organism modelled on the patriarchal household was replaced by the idea of a community of free and at least notionally-equal individuals.

The assumption that human strivings produce order rather than chaos was linked to the idea that individuals are endowed with a capacity for autonomy and self-regulation. This capacity was thought to be less well developed in some settings or among some groups (Hindess 1996, 73). In the case of wage-earners, the capacity for self-regulation was judged by the individual's ability to maintain himself and his family without recourse to welfare relief provided under the *Poor Laws*. The theme of wage-earner independence runs through discussions of public policy from the late eighteenth century and it challenged the householding model in which responsibility falls to the government to provide employment and food for those in need. This challenge is fundamental to the work of Malthus (1798) who argued that accepting that the process of population growth is subject to its own natural laws makes the idea that government can provide employment and sustenance for all the nation's inhabitant's "arrogant," "absurd," and an "absolute impossibility." He warned his readers that "Canute, when he commanded the waves not to wet his princely foot, did not in reality assume a greater power over the laws of nature" (I: 36).

To ensure that the processes of population growth and wealth creation were able to achieve stable self-regulation, Malthus advocated the abolition of the *Poor Laws*. Interference with the operation of the laws of supply and demand for labour, either through subsidizing wages or the provision of public relief, was condemned as a cause of poverty, distress, and social disorder among the wage-earning population. Malthus argued that abolition would ensure that any increase in population would take place only with an increase in the food supply needed to support it. Wages set by market mechanisms would remove the tendency of

supply to outstrip the demand for labour which the *Poor Laws* encouraged. Malthus assumed that moving the poor off public welfare was the key to both individual well-being and national economic prosperity.

The Mechanics' Institutes Debate

The two approaches to wealth creation and social order outlined above can be discerned in the heated debate following the publication in 1825 of Henry Brougham's *Practical Observations upon the Education of the People, Addressed to the Working Classes and their Employees*. The purpose of the pamphlet was to encourage employers and the wealthy to support the Mechanics' Institute movement. The first fully-fledged Institute was established in Edinburgh in 1821, building on the early work of George Birbeck, who from 1799 to 1804, provided a course of lectures in practical science for working men and upon the work of his successor Andrew Ure (Kelly 1970). It was followed in 1823 by an Institute in Glasgow and in 1825 by the London Mechanics' Institute of which Brougham was a keen supporter. By 1826, over 100 Institutes existed. Although some Institutes were established by working men themselves, their survival depended upon middle-class and aristocratic support (Kelly 1970). *Practical Observations* was intended to set out the principles underlying the movement and to engage the support of the middle and upper classes.

At the time of the publication of his pamphlet in 1825, Henry Brougham was a prominent Whig statesman and educational reformer, with a long history of championing educational reform. In 1830, he was Lord Chancellor in Grey's government and later, a contributor to the passing of the *Reform Act* of 1832. From his entry into Parliament in 1810, Brougham was an untiring advocate for working-class education through articles, public speeches, and parliamentary debate. In 1816, he chaired the Select Committee on the Education of the Lower Orders and subsequently produced proposals for the reform of charity establishments using the more efficient monitorial system as his model. His *Education Bill* of 1820 proposed a national system based on the provision of buildings by owners of manufacturing concerns with running costs to be met from rates, endowments, and fees. The plan necessitated a degree of compromise by both the Established Church and the Dissenters, and this deprived the bill of the universal support needed for success. The failure of his *Education Bill* did not weaken Brougham's conviction that education for the working class was a key factor in promoting national prosperity, and providing working men with a share of that prosperity. He continued his efforts to expand elementary education, played a leading role in the establishment of Mechanics' Institutes and the Society for the Diffusion of Useful Knowledge, and was a founder of London University.

According to Kelly (1957), Brougham's *Practical Observations*, which set out proposals for the establishment of Mechanics' Institutes, had a "tremendous influence," and it went through twenty editions in its first year. New (1961, 336-337) recounts that the pamphlet quickly became "the Bible" of the Mechanics' Institute movement and found its way into many of Britain's remotest villages. Its price made it accessible to almost anyone who could read. Both Tylecote (1957, 20) and Stewart (1985) remark upon its undoubted influence.

The enthusiasm with which founders and supporters of Mechanics' Institutes quoted from the pamphlet was matched by the virulence with which it was condemned by opponents of a scientific education for working men. Kelly (1970) states that the supporters of the Mechanics' Institutes tended to be Whigs and Dissenters, particularly Unitarians. Tories and Anglicans "either stood aside or were openly hostile" (123). The radical and Whig newspapers, particularly the *Edinburgh Review*, were strong supporters. Right-wing papers such as *Bell's Weekly Messenger* were opposed and provided a voice for those who distrusted Brougham and saw the Institutes as a threat to property (Kelly 1957). Tylecote (1957) also notes that among public figures, support for the London Institute came almost exclusively from Whigs and that many Institutes were faced with "persistent opposition" from the Tory party with some exceptions such as the Liverpool Institute. She agrees with Kelly (1957) that the Dissenters were prominent supporters of the Mechanics' Institutes, while opposition was often led by Established Church clergy.

The appearance of the pamphlet prompted several negative replies which themselves became the subject of critique in the pages of the *Edinburgh Review* and *Blackwood's Magazine* throughout 1825 and 1826. The present study uses the arguments presented by Brougham, Henry Martin, James Walker, and the counter-arguments employed by Reverend E. Grinfield, Reverend G. Wright, and A Country Gentleman (the *nome de plume* of one of Brougham's most trenchant critics) as an instance of the wider cultural and intellectual shift that occurred in the early nineteenth century. The following section of the study begins by outlining the arguments for Mechanics' Institutes set out by Brougham in *Practical Observations* and the support given to them in Martin and Walker's pamphlets.

Arguments for the Establishment of Mechanics' Institutes

In the second decade of the nineteenth century, the desire to assist working men to improve those capacities which were most intimately connected to their own self betterment and more broadly to the nation's prosperity led to proposals for a scientific education through the establishment of Mechanics' Institutes. The purpose of the Institutes was to build upon the foundation of elementary education by enhancing individual productivity and providing an avenue for self-improvement. The proponents of the Mechanics' Institutes presented a more optimistic view of commercial society than that of Malthus in his earlier writings.¹ Their advocacy of education as a means of self-improvement for working men was more in keeping with Malthus' later view that access to a higher standard of living could provide the motivation for men to limit the size of their families in order not to jeopardize their new-found material comfort (1989, II: 85).

The aim of the Institutes was to enable and encourage working men to better themselves personally and materially through education. The association between education and improvement was expressed by Brougham, who assumed that the "pleasure and improvement to be derived from reading. . . is the surest way to raise our characters and better our condition" (1825, 1). Although Brougham saw the Institutes as a way to "improve morals, expand the understanding and refine the taste" (12) he was also keenly aware of the material advantages for individual workers and for national economic security. He advised that "instruction in the

principles upon which the arts depend, will repay in actual profit those who live by the arts, far more than the cost of learning. An artisan, a dyer, an engine maker, will gain the more in money or money's worth for being an expert chemist or mechanic; and a farm servant or bailiff, for knowing the economy and diseases of cattle" (12). The possibility of advancement extended to those from poor backgrounds who applied themselves to scientific studies. Brougham recounted the story of how "a young man in humble life had been selected from among many applicants, to fill a considerable place in the manufactory on account of his proficiency in science" (12).

Other supporters of the Institutes stated the aims in more philosophical terms. They connected the establishment of the Institutes to the natural progress of knowledge which, they believed was spreading to the labouring population (Hodgskin 1824; Walker 1825; Martin 1826). In his pamphlet supporting Brougham's proposals to provide a scientific education for the working classes, Henry Martin (1826, 11) observed that "an almost insatiable thirst for information has spread over the nations, the floodgates must be opened - this is inevitable and the only subject that remains for our consideration is the direction of the stream." James Walker (1825, 3), the pioneer of a successful book exchange scheme for workers and apprentices in Liverpool, supported the establishment of more Institutes on the grounds that "the human mind indeed is a tablet which the more it is polished the more it becomes beautiful in brightness and adamant in strength." Despite the poetic tone of his introduction, Walker went on to argue that Mechanics' Institutes were synonymous with increased national prosperity because wealth depends upon the utilization and improvement of the talents of individual workmen.

The necessity to preserve the economic independence of wage-earners upon which the principles of population and wealth creation rested were prominent in public discussion of Mechanics' Institutes. The various newspaper articles, pamphlets, and speeches proposing the establishment of the Institutes took up the problem of how the middle and upper classes could assist the wage-earners to build upon the education received in day schools without in any way compromising their economic and social autonomy. Promoters of the Institutes argued that government interference in the provision of elementary schools for children was legitimate on the grounds that children were a dependent population. Interference in the lives of workers, either by governments or well-meaning private citizens, however, was seen as detrimental because it weakened the independence which motivated them to maintain themselves and their families through participation in the labour market without recourse to assistance provided under the *Poor Laws* (Brougham 1825, 9).

Brougham proposed two measures to ensure that the Mechanics' Institutes did not compromise the independence of the community of working men for whom they were to cater. The first was that working men must pay for their education. Brougham (1825, 1) maintained that "the people themselves must be the great agents of their own instruction" which meant that "in forming these institutions, it is a fundamental principle that the expenses be defrayed by the mechanics themselves" (15). The second was that working men should undertake the running of the Institutes. To achieve this goal, Brougham advised that the role of middle and upper-class supporters should be restricted to helping with the initial establishment. Wealthy supporters were encouraged to contribute organisational expertise and cash advances but

warned that any further interference would be counter-productive if not disastrous. Brougham concluded his discussion of non-interference by pointing out that the value of the knowledge gained by workers from their attendance at the Institutes would be lost if acquired at the cost of independence. He advised middle and upper-class supporters that if they “keep the management entirely in their own hands they enforce the appeal to gratitude by something very like control; and they hurt the character of those whom they would serve” (17).

Proponents of the Institutes rejected both the argument that the only function of education should be to teach moral restraint and the fear that encouraging working men to pursue a higher standard of living would lead to social upheaval. In response to the first, Henry Martin (1825, 16) conceded that “no education can be of lasting benefit either for the individual or the community which has not religion as its basis,” but went on to insist that he would not “thrust religion into every institution established for the purpose of conveying instruction.” He acknowledged that religious knowledge was necessary for producing independence and moral restraint but advised that once these attributes were established, working men could safely enter, “without danger”, into scientific studies “where the introduction of religious systems would be irrelevant.” For the proponents of the Institutes, education ceased to be perceived solely in the negative as a means of producing abstinence and frugality and began to emerge as a means of enabling individuals to pursue their own strivings for betterment.

In response to the argument that the working man could only better his condition at the expense of the wealthy, the advocates of the Mechanics' Institutes adopted the position that a society organised in conformity with the mechanism of the market would result in betterment for all. Brougham (1825) and Walker (1825) abandoned the notion that profits and wages were inversely proportional and espoused the idea that material improvement for the working population was both practical and desirable, provided that profits increased at the same time as wages. This was possible because “the increased command over inanimate nature would lead to new discoveries; every product of art would be of a superior quality; for it is chimeral to suppose that human ingenuity may not be exerted in an infinitely greater degree than at present upon the mass of inexhaustible materials which commerce and locality place within our reach” (Walker 1825, 21). In reply to those who claimed that the working man could only satisfy his desire for self-improvement at the expense of individuals above him in the social hierarchy, the same writer assured his readers that “if the artisan arrived at a state of ease, when in place of a contracted room he could afford a house equal to his present master, no alarm need be entertained lest the higher classes would suffer by this change; on the contrary the master would be provided with a better mansion and the genuine nobleman with a palace” (22). Belief in human ingenuity and the inexhaustibility of natural resources opened up the possibility that working men, like their employers, could contribute to general prosperity by pursuing their own.

Promoters of the Mechanics' Institutes believed that only education that increased the skill and productivity of workers could contribute to the twin goals of national prosperity and individual well-being. For this reason, they insisted on a practical scientific education which had an obvious connection to workers' everyday lives. In his outline of the curriculum proposed for Mechanics' Institutes, Brougham (1825, 10) advised that the “doctrines of Algebra, Geometry and Mechanics” be illustrated by “examples calculated to strike the imagination,”

making clear “their connection with other branches of knowledge and the arts of common life.” Other recommended subjects were Natural Philosophy (physics), Mechanical Philosophy, Chemistry, Astronomy, and Geology. Since the development of speculative or philosophical thought was deemed impractical for working men who must earn their living through long hours of physical labour, for them to “go through the whole steps of that beautiful system, by which the most general and remote truths are connected with the few simple definitions and axioms” was unnecessary. The focus was on increasing the workman's economic value to himself and his employer through immediately useful information and skills. “[T]o impart an accurate knowledge of the most useful fundamental propositions, with their application to practical purposes” (9) was sufficient.

The proponents of the Institutes believed that in addition to increasing productivity and wage earning capacity, acquaintance with the rudiments of practical science also taught the working man that the physical world was governed by natural laws. The study of science pointed out the “relationships and the presence of a practical design of which the worker would otherwise be unaware” (Shapin and Barnes 1977, 36). This prepared the mind of the worker to understand that his social and economic relations were also subject to natural laws because, “in being brought to perceive the rational organisation of nature, he would perceive, (metaphorically or directly) the rational organisation of society also” (42). Proponents such as Brougham and Hodgskin believed that this understanding should be formalised by the study of political economy. According to Hodgskin (1824, xxiii), “a knowledge of the natural laws which regulate the production of wealth, and consequently the progress of civilisation, is equally, if not more, essential to the welfare of man, than a knowledge of any other part of the wide creation.”

For Brougham and his supporters, the teaching of political economy was intended to safeguard working men from the deceptions of those who advocated collective action in strikes and civil disobedience as the most effective way to increase wages. Union activity was condemned as an interference with the natural laws of wealth creation because it limited the freedom of the labourer to pursue his own self-interest by depriving him of what Hayek (1947, 170) was later to call the “signal-function of prices” necessary to guide the sale of his labour. Brougham believed that strikes and combinations were a result of the failure of working men to understand the true relationship between profit and wages, a deficiency which could be remedied by the study of political economy. Arguing for its inclusion in the curriculum of the Institutes, he stated: “I can hardly imagine a greater service being rendered to the men than by expounding to them the true principles and mutual relations of population and wages” (1825, 5).

Finally, supporters of the Institutes believed that technical education, as with education in general, encouraged ways of reflecting and calculating which were useful in opportunities for increased consumption. They saw technical knowledge as an efficacious adjunct to religious knowledge because both were able to offer the labourer ways of inspecting, ordering, and evaluating his desires. Men such as Brougham believed that continued independence from public welfare rested on the working man's ability to adopt a perspective that took proper account of the consequences of individual choices beyond their immediate, and especially sensory, satisfactions. A scientific education was useful because it provided the ability to make

calculations about both the evils and advantages of a particular course of action, placing passing desires in a stable intellectual framework suitable for the assessing of their gratification against a hierarchy of other interests (Shapin and Barnes 1977, 48). The study of science was credited with accustoming “the mind to a method and correctness of reasoning” (Rose 1991, 683) which provided practical tools for calculation of the monetary costs and benefits of differing choices.

Arguments Against the Institutes

The confidence that a scientific education could contribute to a social milieu in which the aspirations and desires of ordinary working men were compatible with social order and national prosperity was not shared by the opponents of Mechanics’ Institutes. Their arguments were based on a hierarchical model of society in which the majority must accept their place within the social order and perform their allotted function within an unequal division of labour. Reverend Grinfield, Reverend Wright (both Established Church clerics), and A Country Gentleman were representative of the majority view in the Church of England and many, but not all Tories, who argued that a scientific education would destroy the established pattern of social relations. They assumed that the majority of the population must live near subsistence in order for the nation to avoid falling into decay, and echoed the argument, common in the eighteenth century, that frugality and social order were intimately connected. Both the nineteenth-century opponents of vocational education and the eighteenth-century householding model of the state shared the assumption that human strivings, if unrestrained, are disruptive and unpredictable.

The belief of the opponents of the Mechanics’ Institutes that the labouring population must live at subsistence level arose from the conception of society as a finely-balanced social hierarchy, dependent for its stability on the existing distribution of the population into graduated levels. According to Harrison (1961, 173), this view was common among Established Church clergy, and Altick (1957) records that it was shared by conservative political opinion. Grinfield (1825), Wright (1826), and A Country Gentleman (1826) all assumed that any movement up the scale by some necessitated movement downwards by others. An increase in the standard of living of the working classes was interpreted as a movement up the scale; Grinfield and Wright assumed that social stability and national prosperity depended upon labourers’ acceptance of their place at the bottom of the social order.

At its most extreme, the argument against Mechanics’ Institutes warned that the kind of education proposed in *Practical Observations* would lead to violent social upheaval. A Country Gentleman (1826) advised his readers that a scientific education would upset the present system of limited monarchy, leading to demands for a democracy. He castigated Brougham’s optimistic view of human nature, arguing that “it is the passions and prejudices, not the reason, of the people that bear undisputed sway when they have the power” (53). Reverend Wright (1826, 15) voiced similar alarm. He cautioned that the curriculum of the Mechanics’ Institutes would lead working people to mix “their own passions and feelings with the subject,” resulting in “those extremes to which strong impulses always verge.” They would doubtless have agreed with the lawyer who, at a meeting to organise the Southwark Mechanics’ Institute, warned that

as a consequence of teaching algebra, botany, navigation, and astronomy to working men, “[s]ociety would be uprooted, the marks which distinguish different classes thrown down, the government overturned and a state of anarchy would be the ultimate result” (cited in New 1961, 343).

In addition to the fear that scientific education would undermine the existing social order, many, especially the Church of England clergy, feared that it would lead to irreligion and immorality. Brougham and Birbeck claimed that “education would necessarily make men more virtuous” (Kelly 1957, 107) to which Wright (1826, 4) countered that “[s]ome persons of perverted minds have recently adopted a strange idea, viz. that to teach the use of reasoning powers, independent of all religious or moral culture[,] is education.” Grinfield (1825) acknowledged that the time had passed when labourers could be denied education but was strongly of the view that their education must be “subservient to their advancement in piety and morals” because a scientific education concerned only with “the present life” would not contribute to their eternal salvation. Rather than diverting resources to education for adults, he urged all supporters of the Church and state to rally behind the National Schools of the Established Church as the best means of teaching “godliness with contentment.”

Grinfield (1825) and Wright (1826) also argued that Mechanics’ Institutes would have detrimental effect on family life. The men, Grinfield felt, would go from the Institute to the alehouse or tavern, after which they would return home “quite unfitted to join in the domestic circle” (1825, 16). He felt it would be much better to extend circulating libraries containing religious works and cheap editions of books by popular authors, vetted by the upper classes, which men could read at home. Such provision would permit the working man “the advantages of reading at home by the cottager’s fireside and in the midst of his own family”² (20). For Grinfield, Wright, and all those whose conceptual horizons were bounded by the householding model of society, it was impossible to conceive that education had any legitimate purpose beyond its function of forming obedient individuals capable of exercising personal restraint through conformity to a moral code. They simply could not accept that individual personal strivings were compatible with the public good.

Conclusion

The debate about the desirability of a scientific education for working men illustrates a fundamental transition in thinking about the nature of commercial society. The opponents of Mechanics’ Institutes based their arguments upon the assumption that the moral purpose of the state was to preserve a natural hierarchical order, modelled on the patriarchal household. In such an order, prosperity and social stability needed government intervention to ensure that the working population lived close to subsistence levels. Similar to their eighteenth-century counterparts, the nineteenth-century opponents of vocational education assumed that human strivings for material betterment, if unrestrained, were disruptive and unpredictable. They argued that a scientific education would awaken inappropriate ambition and weaken wage-earners preparedness to accept their appointed place in an unequal division of labour.

The opponents of a scientific education for wage-earners could not conceive that individual personal strivings were compatible with national prosperity and social order. In contrast, the assumption that a stable social order based on a free labour market could sustain itself without detailed moral supervision or external restraint was a critical element of the moral purpose of the state which emerged at the beginning of the nineteenth century. The moral ethos oriented to creating a social order modelled on the patriarchal household was displaced by a moral purpose founded upon individual striving for betterment. The conditions under which human strivings and national economic security were mutually reinforcing was articulated in the emerging discipline of political economy. Political economists assumed that if distortions in the labour market were removed, labourers could be encouraged to pursue their own material improvement. Critical to the removal of distortions was a rejection of a redistributive role for the state, evidenced in proposals for the abolition of the *Poor Laws*.

The idea that working class people should be free to pursue their own self-betterment was linked to voluntary participation in self-funded education within the context of a free labour market. Improvement in the material circumstances of wage-earners became a matter of individual effort and motivation in which education played a critical role. In the thought of its proponents, a scientific education, to borrow a phrase from Corrigan and Sayer (1985), was a means by which labour in society could be normalised and individualised while simultaneously labour as a commodity could be made more productive. The ability of education to reconcile these two functions accounts for its privileged place in the public policy of liberal governments from the early nineteenth century to the present day.

Notes

1. In the 1798 edition of *An Essay on the Principle of Population*, Malthus argued, based on his observation of the English labourers, that manufactured goods and luxuries should be banned from America because of their negative effect upon morals and well-being. In the 1817 edition, Malthus introduced the idea that the limited consumption of non-necessary items (luxuries) could become a means to induce the poor to work more regularly and more diligently.
2. Reverend Wright shared Grinfield's concern that the Institutes encouraged misplaced social ambition and were destructive of family life, as evidenced in his ironic expression of concern for the wives of labourers. Wright accused Brougham of being so "engrossed" by the men's needs that he had "quite neglected their wives." He pointed out "[n]ot a word is said throughout the pamphlet about their education, not any measure devised for obtaining the accomplishments of music, drawing etc. Perhaps Dr Birbeck intends to take the ladies under his protection on another occasion" (1826, 22).

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