

THE MODERN THEORY OF THE DIVISION OF LABOR: TECHNOLOGICAL IMPERATIVE OR IMPLICIT COLLECTIVE CHOICE?

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If Adam Smith's theory of development via increasingly specialized divisions of labor constituted neither a complete description of the multivocal processes of industrialization going on around him, nor a unique prescription for technological innovation and economic growth, why did it nevertheless come to occupy an axiomatic status in the modern consciousness? Words come to mean and acts to signify by virtue of the place they occupy within the contexts of practices that in concert comprise a society's forms of life. Accordingly, the purpose of this paper is to show that the theory gained its "overly-solid" status as the result of the ways in which it became hooked in to emerging conceptions of—serving as a guarantor for—societal order.

1. INTRODUCTION

In *The Man Without Qualities*, Robert Musil's penetrating study of Viennese society on the eve of the First World War, Ulrich, the novel's title character, is struck by this thought upon passing a cathedral:

...one could just as easily devour people as build such monuments or allow them to stand. The houses beside it, the firmament above, the indescribable harmony of all the lines and spaces that caught and guided the eye, the look and expression of the people below, their books, their morals, the trees along the street...it all seems as stiff as folding screens, as hard as a printer's die stamp...so complete and finished, that one is a mere superfluous mist beside it, a small, exhaled breath God has no time for anymore.

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His response is to wish that he were a man without qualities. Words come to mean and acts to signify by virtue of the place they occupy within the context of the network of practices—operative (social, political and economic), interpretive (the practices by which sociologists, political scientists, economists, etc. make sense of the former), and otherwise—that in concert comprise a community's language games and, more generally, forms of life.¹ Disembled them from their ambient contexts, for example by re-embedding them within the language games and forms of life of a different community, or appreciably alter these contexts, and they may come to mean (or signify) something entirely different, if indeed they mean anything at all. That which is the source of meaning and significance can be the source of false consciousness as well.²

By the end of the First World War, the Hapsburg empire had vanished, leaving behind only fleeting traces of its centuries-long influence. But this development was virtually impossible for all but the most intuitive Austrians to foresee. Even Ulrich was struck by the Hapsburg form of life, by its impressive ceremonies and Imperial palaces, replete with great corridors and vast salons, so much so that he was forced to admit to himself that "it was simply amazingly real." This sense of reality, however, turned out to be an illusion, the product of a false, or diseased, form of life.

Keeping this in mind, we can begin to grasp the logic behind Ulrich's defiant wish. To the extent that the practices comprising them emerge as historically contingent implicit choices, collectively and more often than not unintentionally made, it follows that the language games that give words meaning and the forms of life that give acts significance emerge contingently, and change continuously, as well. To realize this is to realize that what is need not have been, and perhaps to hope for something better. To long for the path potentially viable but not taken, to desire to look our own forms of life squarely in the face and see that the air of "solidity" they lend to our ways of being is an artifact of our own making, to want to recognize that we have ourselves to blame for the nagging sense of superfluousness beside them, is to wish to be without qualities.

The purpose of this essay is to propose that we need to take Ulrich's example to heart; we need to collectively aspire to an "economics without qualities." This is because of the role our interpretive practices have played in orchestrating a false form of life: the production practices by which we lead our lives, still on the whole spatially concentrated, hierarchically ordered and time disciplined, enjoy the "overly-solid" status of technological imperatives—necessary arrangements on the road to progress—rather than that of being the implicit collective choices which, in fact, they are. As this illusory status is partly of our own making, we blind ourselves to the possibility that there may be other viable possibilities. We shut the gate through which such, as yet unforeseen, ways of organizing the production, and thereby, distribution of wealth, might pass on their way into being.

Adam Smith's theory of the division of labor may have appeared to be a positive account, put forth by a keen observer, of the coherent, uni-dimensional pattern of

economic change springing up before him; but, on retrospect, this was not the case.³ His theory was appropriated in the main from his teacher, Francis Hutcheson,⁴ and from Mandeville before him.⁵ He is likely to have come across his prototypical pin factory, not in person, but rather in the form of an entry in a 1751 French Encyclopedia.⁶ Nor did the theory articulate *the* necessary preconditions for economic progress. A body of carefully implemented research undertaken in the last two decades demonstrates that there is no single tried and true formula for economic growth.⁷ Pockets of batch modes of production, with the customized goods they typically produce, general purpose machines they employ, and versatily skilled workforce necessary to operate them, have continued to flourish within a sea of mass production.⁸ Moreover, these and other craft economies have often been at the vanguard of technological innovation.⁹ In short, the predominance of the practices whereby the great-great grandchildren of artisans found themselves working on assembly-lines, far from being a technological imperative, was the result of implicit choices, in the making of which artisans, putter-outers, pastors, politicians and political economists—in addition to steam-powered looms—each had their say.

If the theory of production organized along the lines of an increasingly specialized division of labor is neither an apt description of the totality of modern modes of production nor a unique prescription for technological innovation and economic growth, why is it nonetheless so sharply etched into the modern consciousness? Why is it so hard for us to see that the practices which the theory articulates are of our (and our forbears') own making, endowed with an air of solidity that we ourselves have lent to them? In what follows, I will show that our blindness is itself implicitly chosen because the stakes involved are too high for us to choose to see otherwise. I will document the ways in which an increasing division of labor became hooked in to emerging conceptions of—serving as a guarantor for—societal order. To question the interpretive practices by which we make sense of production (and, thereby, distribution) practices is not simply to question the validity of a particular theory; rather, it is to call into question the legitimacy of a form of life, and thereby of a societal order.

2. PATTERNS OF ORDER AND DISCOVERY ARE WOVEN FROM THE SAME CLOTH

For John Donne, England at the dawn of the Seventeenth Century was a place in which:

'Tis all in peeces, all cohaernance gone;
All just supply, and all Relation:
Prince, Subject, Father, Sonne, are things forgot,
For every man alone thinkes he hath got

To be a Phoenix, and that there can bee
None of that kinde, of which he is, but hee.¹⁰

On hindsight, the poet and pastor's expression of dissonance and gloom seems remarkably prescient. In the years to follow, his country was to become engaged in: a humiliating military defeat at the hands of her weaker northern neighbor (the Bishop's War), a protracted civil war punctuated by the public execution of her king, and the increasingly chaotic period of the Interregnum. The situation was by no means fully stabilized by the restoration of the Stuart monarchy. In 1665, the restored monarchy's fifth year, England was devastated by an outbreak of the Bubonic plague. Only one year later, a fire burned down major portions of her capital city. Additionally, more explicitly man-made paroxysms, such as the sectarian uprisings, continued to shake the country on a nearly constant basis. As the Earl of Clarendon put it, "The King was not yet master of his kingdom, nor his security such as the general noise and acclamation, the bells and bonfires, proclaimed it to be."¹¹ In short, the English Nation in the seventh decade of the Seventeenth Century was a body politic in search of a working bodily political order.

The natural philosopher Robert Boyle may have been the most influential *political* visionary of modern times because of his seminal role in the development and dissemination of a form of life, which was embodied by a set of practices for experimentally producing (so to speak) matters of fact. This form of life came to fulfill the additional role of serving as a program for the restoration of order. This is because of the promise it was perceived to hold out for generating wide areas of universal assent while simultaneously providing a space—tightly controlled and strictly bounded—within the confines of which people might safely disagree.¹² So attractive was this promise to those seeking a way out of their "incoherent" times, that the experimental form of life eventually became an invaluable resource for Boyle's opponents as well as for his allies.¹³

Boyle's views on nature and Scripture, and the relationship between them, were forged out of his experience of the Interregnum. He joined Samuel Hartlib's circle of Protestant reformers in the 1640's and shared in their millennial vision—an earthly order of perfected morality, government and religion populated by sober, industrious Christians—writing in personal correspondences of 1651 and 1652 that he expected the coming "Revolution" to arrive imminently.¹⁴ While this Revolution was to be brought about by God, it was the duty of men to ready themselves for it by carefully studying His words and works, i.e., Scripture and nature. So convinced was Boyle of the complete harmony between the two, and the importance of studying one to illuminate the other, he was to later suggest that experimental trials should best be performed on Sundays as part of the worship of God.¹⁵ Moreover, he believed that the joint study of nature and Scripture served to promote peace, the task at hand leading people to submerge the differences dividing them in light of the profound truths which they were to uncover, and which would surely unite them on the most fundamental levels.

Boyle and his colleagues in the Hartlib circle had this in common with the Fifth Monarchists, Levellers, Diggers and other groups comprising the radical fringes of Puritanism: they each had their millennial visions. The content of their respective visions, however, could not have been more diametrically opposed. As these radical sects, drawing their numbers from the growing ranks of “masterless men,” prepared themselves for their millennia, they buffeted England with waves of social radicalism unlike anything it had experienced before.¹⁶ As Christopher Hill puts it, these sects sought to turn the world “upside down.”¹⁷ Among the many reforms advocated were the disestablishment of the Church of England, the abolition of tithes, the spread of lay preaching, and the democratization of the State. Those in the Hartlib circle actively dissociated themselves from such measures, believing as they did that a viable settlement could only be reached by a restoration—albeit accompanied by a reformation—of the monarchy and traditional structures of English society. They couched their reform rhetoric in conservative terms and took on projects of a noncontroversial nature, for instance, exploring the ways in which experimental methods might be used to increase food production.¹⁸ Many of these projects, and even some members (e.g., Boyle & William Petty) directly passed on from the Hartlib circle to what became the fledgling Royal Society in the first decade of the restored monarchy.

As venerable as it may appear on hindsight, the Royal Society in its early years, lacking as it was in meaningful Royal patronage, was far from certain to succeed. Recent work has demonstrated some of the ways in which Thomas Sprat’s *History of the Royal Society* (London: 1667), the production of which was sponsored by members of the Royal Society, responded to the specific political demands of its day by making an apologetic case for the experimental form of life as a vital link in the chain of a healthy post-Restoration order.¹⁹ Errors in the interpretation of Scripture²⁰ and nature were thought to be dangers to the establishment and maintenance of order: “One of the principal Causes (of) Disobedience (is) a misguided Conscience. . . opposing the pretended Dictates of God against the Commands of the Sovereign.” The source of this misunderstanding, as typified in the arguments of the Royal Society’s foe, Thomas Hobbes, and his system of deduction by “ratiocination” was arrogance: “the most fruitful Parent of Sedition is Pride, and a lofty conceit of men’s own wisdom.” By contrast, the experimental form of life was seen as nipping this source of sedition in the bud by requiring private opinions to be submitted to the judgement of others. True understanding, and the mutual assent that will surely follow it, are to be experimentally—thereby communally—achieved, not intuited; nature will reveal such truths to experimenters through the media of their senses. By its process of mutual give and take, the experiment was thus seen as giving “us room to differ without animosity: it permits us contrary imaginations upon it, without danger of Civil War.” As such, the experimental form of life was put forth as a model for an ideal society: “There we behold an unusual sight in the English Nation, that men of disagreeing parties, and ways of life, have forgotten to hate, and have met in unanimous advancement of the same works.”²¹

The capability of the experimental form of life to offer the simultaneous promises of room for dissent and the security that such dissent be kept at manageable levels was accomplished in two ways: a) by excluding all those calling into question the experimental “rules of the game” (i.e., form of life), and b) maintaining an official position of distance between experimental findings and their socially significant implications.²² Though Boyle and his colleagues often disagreed with Thomas Hobbes in print, each publishing numerous rejoinders to the other’s work, Hobbes, despite his prominence, was never invited to join the Royal Society. By contrast, Henry Power, who, as Hobbes was a declared plenist (and, as such, believed in a theory of matter whose social implications, as we will see, were an anathema to Boyle and the Society’s conservative members), nevertheless remained a fellow in good standing. The reason for the difference in the treatment of the two men was that Power was willing to play by the rules of the game of the experimental form of life while Hobbes rejected them.²³

According to Sprat, the experimenters of the Royal Society strenuously avoided “convers about affairs of state, or spiritual controversies (because) Civil differences and Religious Distractions (were) the first cause of our animosities, and the more they are rubb’d, the rawer they will prove.”²⁴

To more fully appreciate the novelty and impact of this stance, we need to briefly place it in a historical perspective. Consider the following passage from Bishop Charles Butler’s *The Feminine Monarchy* (Oxford: Joseph Barnes, 1609), in which he reports having placed two swarms of bees into a single hive:

Bees abhorre as well Polyarchie, as Anarchie, God hauing shewed in them vnto men, an expresse patterne of A PERFECT MONARCHIE, THE MOST NATURAL AND ABSOLUTE FORM OF GOVERNMENT.²⁵

The bees, it turns out, negotiated an agreement about which ruler should govern and attempted to execute the other. On the basis of this anthropomorphic interpretation of events, Butler explicitly argued that his experiment provided empirical support for a Union between the English and Scotch nations because they shared the same monarch. Such explicit interweaving of scientific and social themes was by no means unique to Butler. In 1657, writing in the shadow of Cromwell, and in particular, in the debate about whether he should assume the throne, Samuel Purchas, in his *Theatre of Politiaall Flying-Insects* (London), argued that the “commander” of bees ruled not by hereditary succession, but rather by natural authority: “by nature hath hee the Sovereignty over all, excelling all in goodliness, and goodness, in mildness, and majesty.”²⁶

These examples are just the tip of the iceberg. Having written two books in the late 1640’s about the subject himself, Alexander De Montfort estimated that he knew of 500 to 600 previous works on bees and beekeeping.²⁷ It is in the context of this long and recognizable tradition of explicitly interweaving scientific and political dimensions that Samuel Hartlib’s *Reformation of the Commonwealth of*

Bees stands out as a novel and powerful departure. Hartlib's book, in contrast to those typically preceding it, reads like an early modern scientific work: explicit political themes do not appear. The title-page of the book is devoid of Biblical inscriptions, a marked contrast to the covers of Hartlib's earlier works on husbandry. Moreover, he substitutes a bibliography for the moral prefaces he had offered in the past.²⁸ Is it possible that we are laying our eyes on the modern origin of the received "value-neutrality" of science, and the historical circumstance constituting its reason for coming into existence? It is not surprising then that such practices were passed on by the Hartlib circle to its progeny (i.e., the Royal Society), and that such practices' *raison de etre* were then clearly articulated by the society's appointed spokesman.

In retrospect, the turn towards self-censorship, noble in intention as it may have been, ironically marked the beginning of the modern predilection for engaging in false language games and forms of life. This is because such censorship transformed the domain of the social meaning of scientific practices from explicit to implicit, from overt to covert, but it did not render such meanings any less powerful as the products—and shapers—of science. Rather than stifle this ongoing dialectic, it made it increasingly more difficult for us to see (up to the point that connections which were obvious to people in early modern England required some of the most powerful thinkers of our time to rediscover them afresh in the 1950's and 60's), and thereby made us somewhat more unintentionally dishonest about it. That the socially meaningful consequences of scientific practices continued to powerfully influence those employing them is exemplified by the response of Robert Boyle to an offer of an ecclesiastical income by the Anglican Church. He turned down the offer on the grounds that "the irreligious fortified themselves against all that was said by the clergy, with this, that their it was their trade, and they were paid for it."²⁹

Simply put, for Boyle the task of studying God's works as a way of leading Dissenters back to a proper understanding of His words was best served by removing any traces of conflict of interest. His response belies that of someone profoundly concerned with the *uses* to which his experimental form of life might be put. The same profound concern for the social uses of science was displayed just as clearly by Isaac Newton: "Indeed however we cast about we find no other reason for atheism than this notion of bodies having, as it were, a complete, absolute, and independent reality in themselves."³⁰

A mechanism for putting science to its "proper" uses was institutionalized in 1691 through the generosity of Boyle.³¹ In his will, he provided the funds to establish a quarterly lecture series, the Boyle lectureship, "for proving the Christian Religion, against notorious Infidels, viz. Atheists, Theists, Pagans, Jews, and Mahometans, not descending lower to any Controversies, that are among Christians themselves."³² These lectures, which reportedly became a compulsory part of any educated person's fund of knowledge, were given by Latitudinarian (i.e., Low) Churchmen, and concentrated on three main themes: using the study of God's works (i.e., natural philosophy) to verify His word (i.e., Scripture), provid-

ing a basic, non-technical exposition of the Newtonian system, and developing arguments that the intricate designs of living things in nature provide compelling evidence of the existence of an Intelligent Creator.³³ What were the specific uses to which such scientifically grounded knowledge was put? How did these uses shape the scientific practices that these Latitudinarian thinkers employed?

In a sermon delivered in 1661, Dr. Robert South expressed this vision of solidarity between Church and King:

The Church of England glories in nothing more than that she is the truest friend to kings and kingly government, of any other church in the world; that they were the same hands that took the crown from the king's head and mitre from the bishops.³⁴

Though South was not a Latitudinarian, his sentiments are such that virtually all Latitudinarians would surely have agreed. Theirs was a vision of a world composed of dual realms, matter and spirit, mutually irreducible but interdependent, and in which the duty to administer the Providential plan rested with the King in the former realm and the Anglican Church in the latter one. Accordingly, any account of natural phenomena implying their self-sufficiency implicitly called into question the Anglican Church's justification of its own political authority.³⁵

Consider, for example, Boyle's aversion to the scientific hypothesis that water rises in a partial vacuum because fluids "abhor a vacuum," a view associated with political radicals.³⁶ To attribute abhorrence to matter is to ascribe to it a property of will, i.e., a property of the soul. If such properties of soul were the artifacts of matter, then who was to deny that the souls of men, by extension, were artifacts of the same kind? What then was the need for the Church as self-appointed intermediary between man and God, when the link between them could be directly established, there thus being no need for an intermediary at all?

To avoid this conflict while explaining the behavior of liquids in vacuum, Boyle developed a corpuscular theory of matter in which the latter was affirmed as "brute and stupid." Newton, in turn, built his own system upon this corpuscular conception of matter, so as to both affirm the ever-active role of God in running the universe, i.e., in animating "brute, stupid, and inert" matter, and explain the regularities of planetary and celestial motion.

Newton's reported assertion that "a continual miracle is needed to prevent the Sun and fixed stars from rushing together through gravity,"³⁷ in conjunction with the observed regularity of such celestial motion, placed enormous stress on the contemporary conception of a miracle.³⁸ If, as was commonly held (for example, by Boyle), that the miraculousness of a phenomenon lay in its apparent violation of the laws of nature, planetary and celestial motions could not be seen as miracles, and might thus be used as grist for the radicals' mill. Samuel Clarke, Boyle lecturer and Newton's close friend, attempted to resolve this tension by shifting the locus of a miracle from the phenomenon observed to the person observing it:

'tis only usualness or unusualness that makes the distinction... (There is) no such thing, as what Men commonly call the *Course of Nature*, or the *Power of Nature*...'Tis not therefore a right Distinction... to define a Miracle to be That which is against the Course of Nature.³⁹

In retrospect, this reinterpretation might be seen as a double-edged sword, the second blade having been too sharp for the Latitudinarians' own good. On the one hand, Clarke's reinterpretation allowed for miracles and laws of nature to coexist peacefully, and thereby provided the Newtonian cosmology with the internal consistency it needed. On the other, by blurring the boundary separating God and nature, it inadvertently provided radical thinkers with the opening they needed to exploit the experimental form of life for their own social uses. If regular planetary and celestial motion required a conception of miracle that placed God in nature, then nature could just as well be seen as suffused with spirit, a self-sufficient, self-organizing system. And in such a system, what was the need for, and therefore the justification for the authority of, the Anglican Church? As radical republican polemicist John Toland argued in his suggestively entitled work, *Christianity Not Mysterious* (London, 1696), the priestcraft is without legitimacy in claiming its authority on the basis of its monopoly on competence in a cynically manufactured mysterious realm.

The climate in the wake of the Glorious Revolution (i.e., the 1690's) was conducive to the flourishing of radical thought: the Licensing Act of 1662, effectively banning the printing of radical texts, expired in 1695, and the new King William III often forged working alliances with radicals so as to increase his power relative to that of the Anglican Church. It was a time in which radical thinkers increasingly appropriated with success the experimental form of life for their political ends. The experimental form of life as a medium for waging battles over differing visions of social order expanded to encompass a wider field of topics than cosmology alone. As we shall see, the battleground eventually shifted to physiology, to social theory, and to the branch of the latter that became economics.

3. THE ORIGINS OF SYMPATHY

The possibility that cosmology might be "turned" by the radicals and put to their own social uses was of great concern for Robert Boyle.⁴⁰ While clearly convinced that "the heavens declare the Glory of God," he nevertheless acknowledged that the simplicity and regularity of planetary and celestial motions made it difficult to combat the claim that they can be explained as the result of "circumvolutions of matter."⁴¹ True, Newton was in the process of shoring up cosmology as a resource for Anglican order. But could the common man be expected to grasp such esoteric arguments, much less their social implications?⁴²

I never saw any inanimate production of nature, or, as they speak, of chance, whose contrivance was comparable to that of the meanest limb of the despicable animal: and there is incomparably more art expressed in the structure of a dog's foot, than in the famous clock of *Strassburg*.⁴³

Boyle's sentiments indicate the type of argument he believed the common man would find compelling. Under his leadership, Latitudinarians increasingly applied the experimental form of life to the study of living things in nature.⁴⁴

By the middle part of the eighteenth century, the opposition between "brute, stupid matter," on the one hand, and "sentient, self-organizing matter," on the other, had found its way into physiology. Its influence could still be felt almost a century later; in 1822, clergyman-turned-physiologist, John Barclay, continued to invoke it upon summing up the state of his discipline:

Of all the opinions that have yet been enumerated respecting the cause of vital phenomena, we have met with none in which they are not ultimately ascribed to one or other of two causes: to a certain organism of the materials of which the visible structure is composed, or to a principle totally distinct.⁴⁵

Continuing to resonate as well were its range of social meanings; William Lawrence, speaking before the Royal College of Physicians of London in 1817, suggested that physiological theories locating the source of life outside the realm of material structure were "not only designed to show the nature and operation of the cause, by which vital phenomena are produced, but to add a new sanction to the great principles of morals and religion."⁴⁶

Even during their heyday in the late seventeenth and early eighteenth centuries, iatromechanical theories of the body, based on the view that it is a complex mechanical system, in essence, a collection of hydraulic pumps, were being met with resistance from an increasing number of physicians⁴⁷ and physiologists, particularly those oriented toward understanding the overall integration of bodily function. Buoyed by such discoveries as the complex properties of cellular tissue, the existence of spermatozoa, and the capacity of muscles to respond to nervous stimulus even after being severed from any connection with the spinal cord, these physicians and physiologists began articulating a different view of the body's functioning, one which hearkened back to the "animistic" doctrines developed by Joan Baptiste van Helmont (and Paracelsus before him) almost a century earlier.⁴⁸ For these "radical" thinkers, living organisms could no longer be credibly seen as clocks, infinitely more artful than the famous one in *Strassburg*, but no less in need of external winding. Rather, they were intelligent, self-organizing, self-reliant phenomena, animated not from without, but from within, by a spiritual life-force inhering in them.⁴⁹ Gradually, the perceived locus of this indwelling force shifted from the stomach and spleen to the nervous system.

By the 1770's, William Cullen and other resident physicians at Edinburgh's School of Medicine, had articulated a model of the body's functioning in which sen-

sibility, a property of the nervous system, played the central role.⁵⁰ *Sympathy*, a special case of nervous sensibility, insured bodily integration by acting as the channel through which feelings were communicated between the body's organs. Through sympathy, the body functioned as a decentralized "federation of organs;"⁵¹ through sympathy, the *polity* made up of the body's constituent parts was actualized.

Physiology was not the only discipline in which sympathy was made a crucial element. Cullen's good friend and fellow Edinburgher, David Hume, had earlier articulated a vision of human nature, with sympathy as its "most remarkable" quality, and of society, in which:

...the minds of men are mirrors to one another, not only because they reflect each other's emotions, but also because those rays of passions, sentiments and opinions may be reverberated, and may decay away by insensible degrees.⁵²

Moreover, in personal correspondence, Hume likened himself to an "anatomist."⁵³

In general, the boundaries separating Scottish Enlightenment physiology from Scottish Enlightenment social theory cannot be clearly drawn; this is partly so because these disciplines were often being put to the same social uses.⁵⁴ It is also because of the Lockean, sense-based, epistemology underpinning each of them. Sympathy, in the social theoretic sense, was a feeling *embodied* within the nervous system that gives life and intelligence to the body's ensemble of mechanical parts. The sympathy facilitating communication between people (thereby making society possible) and the sympathy facilitating communication between bodily organs (thereby insuring bodily integration) were thus seen as different manifestations of the same force. Sympathy, the manifestation of the notion of spirit diffused in matter, was the life force animating both the body politic and the body proper. With this in mind, we can understand why another good friend of Cullen's, Adam Smith, might have so effortlessly invoked both types of sympathy at once:

Persons of delicate fibres and a weak constitution of body complain, that in looking on the sore and ulcers which are exposed by beggars in the streets they are apt to feel an itching or uneasy sensation in the corresponding parts of their own bodies.⁵⁵

4. DIVISION OF LABOR: A CURE FOR THE "ENGLISH MALADY" AFFLICTING THE BODY POLITIC AND THE BODY PROPER

That which was the source of life could also be the source of disease and disorder. Ambivalence towards sympathy was expressed, for example, by John Locke's student, the Earl of Shaftesbury: "Such force has society in ill as well as in good passions."⁵⁶ Given the circumstances of his life, it is not surprising that Smith shared his predecessor's view. As a young student at Glasgow, his beloved mentor, Fran-

cis Hutcheson, and the latter's associates were frequently castigated, sometimes even tried for heresy, by the city's Calvinist clergy for their optimistic views of human nature.⁵⁷ While at Oxford's Balliol College as a Snell exhibitioner, Smith was forced to endure the taunts of Jacobite students and the tacit prejudice of Jacobite administrators, while his home country was under rebellion, the "Stuart Pretender," Charles IV, controlling Glasgow.⁵⁸ Returning home from Oxford (which he later confided he left in disgust) in August 1746, Smith may have had to disguise his identity from those English incited by their northern neighbor's rebellion to regard all Scotch as Jacobites.⁵⁹ In light of these incidents, it would have been difficult for him to see an ever-harmonizing sympathy at work.

There is perhaps an even more compelling reason as to why Smith should have developed an ambivalent view of sympathy. While at Oxford he became a victim of a hypochondriac disorder, a condition commonly known as "The English Malady" and commonly striking those, like Hume before him, whose sensibilities were most refined.

For William Cullen (with whom Smith consulted about his disorder,⁶⁰ "the nerves are more or less concerned in every disease."⁶¹ Those suffering from the English Malady were taken to be too refined, to the point of disability, in their nervous sensibilities—and accordingly, in their character. While the savage might be hung by his shoulders over the fire, while he and those watching him manifest complete indifference,⁶² those of too refined a constitution might "fall into a (hysterical) fit by seeing another person fall into the same."⁶³ As the English Malady made plain, in matters of sympathy, there could be too much as well as too little. The Malady's cure therefore required that its sufferer's nervous sensibilities be dampened by a regimen of discipline.⁶⁴

In what ways did the English Malady impinge upon Scottish Enlightenment social given the latter's intimate connection to Scottish the one Enlightenment physiology? For Smith, as for Hume and Hutcheson, society begins with "the nature and force of sympathy," a certain fellow-feeling making possible the transfer of feeling between men, whereby one feels joy or sorrow on another's behalf and forms a judgement as to the appropriateness of his "affectations" and actions.⁶⁵ The spectator, by an act of imagination must, so to speak, place himself in the shoes of whose expressions and acts he observes. For Smith, the same principle applies in judging one's own conduct: one should attempt to imagine how an impartial spectator would react to it.⁶⁶ For when "the original passions of the person principally concerned are in perfect concord with the sympathetic emotions of the spectator, they necessarily appear just and proper."⁶⁷

But people do not directly experience one another's histories and emotions. If their actions and expressions of feeling are to be judged to be proper, they must involve an element of self-restraint.⁶⁹ If others' hearts are to "beat time to... (one's) own," one must "lower... his passion to that pitch, in which... spectators are capable of going along with him. He must flatten... the sharpness of its natural tone, in order to reduce it to harmony and concord with the emotions of those

who are about him.”⁶⁹ The nervous activity that courses through the body, allowing its constituent organs, by the transfer of feeling, to form a body politic, must be “flattened” if it is not to lead to disorder. For the same reason, the nervous activity coursing through civil society—i.e., the complex of (economic) relations of production and distribution, which serve as the channel by which the constituents of the society communicate—must be “flattened” as well.

For Adam Smith, the division of labor provided such relations with the discipline they needed. He reveals this in a passage in *The Wealth of Nations*, in which he manifests a concern for the need to minimally educate the masses:

In the progress of the division of labor, the employment of the far greater part of those who live by labor...comes to be confined to a few very simple operations...The man whose whole life is spent performing very few operations...naturally...becomes as stupid and ignorant as it is possible for a human creature to become. The torpor of the mind renders him, not only incapable of relishing or bearing any part in rational conversation, but of conceiving of any generous, noble, or tender sentiment...⁷⁰

Shortly thereafter, he contrasts this state of mind with that typically found in more primitive peoples: “It is otherwise in the barbarous societies...In such societies...the mind is not suffered to fall into that drowsy stupidity, which, in a civilized society, seems to *benumb* the understanding of almost all inferior ranks of people” (emphasis added). As we have seen, the appellation of a neurological term to a social construct is neither inconsistent nor accidental. As Hume insisted, and Cullen seconded, the physiology of a day-laborer, as well as his sentiments, were different from those of a man of quality.⁷¹ An increasing division of labor was thus seen as holding profound implications for both the body politic and the body proper. In the former realm, it could serve as a bulwark against a macroscopic case of the English Malady. It could provide the necessary check on the kinds of societal hypersensitivity that would surely end up in societal disorder.⁷²

There is another piece of evidence attesting to the ways in which the division of labor insinuated itself into received conceptions of societal order. It comes from Richard Whately, Professor of Political-Economy at Oxford and Archbishop of Dublin.⁷³ In a lecture entitled, “How the Art and Science of Political-Economy Came to Exist,” published in 1832, Whately makes our case thus:

If men had always been secured in person and property, and left at full liberty to employ both as they saw fit; and had merely been precluded from unjust interference with each other...all would have proceeded so smoothly, that probably no attention would ever have been called to the subject. The transactions of society would have been like the play of the lungs, the contractions of the muscles, and the circulation of the blood, in a healthy person; who scarcely knows these functions exist. But as soon as they are impeded and disordered, our attention is immediately called to them. It is probable that anatomy and physiology would never have been thought of, had they not been called for in the aid of the art of medicine; and this, manifestly, would have had no existence, but for disease. In like manner it may be said to have been diseases...that in the first

instance directed the attention of men to the subjects about which Political-Economy is conversant.⁷⁴

5. CONCLUSION

I recently played a trick on my students. I requested them to read newspaper articles about the merger between Chemical and Chase Manhattan banks, and asked them for their assessments of remarks made by an anonymous banking industry analyst, working at a major investment bank. This “analyst” was none other than Karl Marx, and the source of his remarks a passage in *Das Kapital*, which I took the poetic license of paraphrasing in a more currently idiomatic way. While I have no doubt that I rhetorically led the witnesses, the consistent and overwhelming resonance of his remarks in my students ears nevertheless indicates that we and earlier residents of modernity still share much, perhaps uncomfortably much, in common. It is not that we have failed to develop the technical means by which to better our situation. Rather, it is that we lack the imagination to envision what a better situation might be. The best response to a simultaneous loss of faith in the “Keynesian compromise”⁷⁵ and the conservative creed that rising tides lift all boats is to cultivate our imagination. And this, as we have seen, requires that the interpretive practices we adopt to make sense of our social, political and economic practices must be self-aware enough to allow us to be more honest than we have heretofore been about how we happened to come upon where we are.

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NOTES

1. Wittgenstein (1953).
2. See Mischel (1997), who develops a broadly “Wittgensteinian” theory of alienation.
3. Kindleberger (1976).
4. Taylor (1965), pp. 20 and 55–58.
5. For example, the use of a garment to illustrate the number of specialties involved in manufacturing a single consumer item first appears in Mandeville’s *Fable of the Bees* (1924), pp. 356–358.
6. Taylor (1965), p. 60.
7. See Burt (1991), Cameron (1985), O’Brien (1986), Samuel (1977), and especially Berg (1994).
8. Scranton (1991).
9. Sabel and Zeitlin (1985).
10. “An Anatomy of the World,” lines 212–218; quoted in Toulmin (1990), p. 65.

11. Quoted in Shapin and Schaffer (1985), p. 286.
12. *Ibid.*, pp. 72–76, 337–341.
13. Miller (1993).
14. J.R. Jacob (1977), pp. 132–133.
15. Shapin and Schaffer (1985), p. 319.
16. Jacob and Jacob (1980), p. 254.
17. Hill (1975)
18. Jacob and Jacob (1980), p. 252. One such project was Samuel Hartib's *The Reformation of the Commonwealth of Bees* (1655, London), in which beekeeping was proposed as a way of enriching the English Commonwealth, and in which numerous contributors advanced scientific accounts as to how this course might be most propitiously pursued.
19. For example, see Wood (1980).
20. Attending a sermon given by republican leader Sir Henry Vane, Boyle rose and corrected Vane's interpretation of an Old Testament prophesy so "that the sense of the scriptures might not be depraved," cf. J.R. Jacob (1977), p. 138.
21. cf. Shapin and Shaffer (1985), p. 306, where the above passages are quoted.
22. *Ibid.*, pp. 329–331.
23. For example, Power maintained that natural knowledge "must needs be the Office of onely the Experimental and Mechanical Philosophers" (quoted in *ibid.*, p. 307), whereas Hobbes likened the experimenters to children playing with "pop-guns" (*ibid.*, p. 307) and mocked the Society's professed openness by answering the question "Cannot anyone who wishes come, since...they [members of the Royal Society] meet in a public place, and give his opinion on the experiment which they see...?" in the negative (quoted in *ibid.*, p. 350).
24. Quoted in *ibid.*, p. 306.
25. Quoted in Raylor (1992), p. 109.
26. Quoted in *ibid.*, p. 111.
27. Prete (1991), p. 133.
28. Raylor (1992), p. 112.
29. Quoted in Shapin and Schaffer (1985), pp. 313–314.
30. Quoted in Jacob and Jacob (1980), p. 262.
31. See M.C. Jacob (1976), chapters 4 and 5.
32. Quoted in *ibid.*, p. 144.
33. *Ibid.*, pp. 162–163.
34. Quoted in Bennett (1969), p. 155.
35. Jacob and Jacob (1980), p. 256.
36. Shapin (1980), pp. 135–139 and (1981), pp. 197–200, and Shapin and Schaffer (1985), pp. 202–205.
37. Quoted in Harrison (1995), p. 537.
38. *Ibid.*, pp. 537–541.
39. Quoted in *ibid.*, p. 538.
40. Gillispie (1987) and (1991).
41. Gillispie (1987), p. 26.
42. As we have seen, a number of Boyle lecturers did their level best to make sure he could.
43. Robert Boyle; quoted in Gillispie (1987), pp. 27–28.
44. For example, William Derham, Fellow of the Royal Society, clergyman and field naturalist devoted the 1711–12 Boyle Lectures to developing the claim that the "solicitous" study of living things reveals God's being and attributes, "especially to such as are unacquainted with the Subtilties of Reasoning and Argumentation; as the greatest Part of Mankind are." In doing so, he explicitly considered himself to be carrying on in Boyle's tradition; *ibid.*, p. 47.
45. Quoted in Jacyna (1983), p. 311.

46. Quoted in *ibid.*, p. 319.
47. Among these physicians was Bernard Mandeville; cf. Mandeville (1976), p. 132.
48. Moravia (1978), pp. 48–51.
49. See King (1967).
50. Lawrence (1979), pp. 23–28.
51. Moravia (1976), p. 56.
52. Quoted in Mullan (1988), p. 36.
53. *Ibid.*, p. 32.
54. See Lawrence (1979) for a discussion along these lines.
55. Smith (1976), I.i.1.3.
56. Quoted in Mullan (1988), p. 26.
57. Ross (1995), p. 59.
58. So disturbed was Smith by this treatment, he and other Snell Exhibitioners wrote to the Glasgow Senatus Academicus to air their grievances; cf. *ibid.*, p. 79.
59. *Ibid.*, pp. 79 and 137.
60. Barfoot (1991).
61. Quoted in Lawrence (1979), p. 28.
62. Smith (1976), V.2.9.
63. This was the opinion of Cullen's Edinburgh colleague, John Gregory; quoted in Lawrence (1976), p. 28.
64. In a 1730 text on the disorder, Mandeville recommends that his hypochondriac patient "afflict" himself "with the constant Variety of...Employments all Day long..." (1976), p. 341.
65. Skinner (1979), pp. 47–51.
66. "This deceit...is the source of half the disorders of human life. If we saw ourselves in the light in which others see us, or in which they would see us if they knew all, a reformation would be generally unavoidable. We could not otherwise endure the sight;" Smith (1976), III.4.6.
67. *Ibid.*, I.i.3.1.
68. Skinner (1976), p. 50.
69. Smith (1976), I.i.4.7.
70. Smith (1963), V.i.III., article 3d.
71. Lawrence (1979), p. 29.
72. An increasing division of labor had another order-preserving implication, one aimed primarily at those it most severely benumbed. Because "the amiable virtue of humanity requires...a sensibility much beyond what is possessed by the rude vulgar of mankind" (Smith (1976), I.i.5.5), society activity involving them must be cemented by more than sympathy alone. The division of labor supplies this mortar by means of the interdependence it forces.
73. By this time, the Anglican Church had long since made peace with Adam Smith's doctrines; cf. Waterman (1983).
74. Whately (1966), pp. 84–86.
75. See Brenner (1991).

REFERENCES

- Barfoot, Michael. (1991) "Dr. William Cullen and Mr. Adam Smith: A Case of Hypochondriasis?," *Proceedings of the Royal College of Physicians of Edinburgh*, 21: 204–214.
- Bennett, G.V. (1969) "Conflict in the Church." In Geoffrey Holmes (ed.), *Britain After the Glorious Revolution, 1689-1714*, London: St. Martin's Press.

- Berg, Maxine. *The Age of Manufactures: Industry, Innovation and Work in Britain, 1700-1820*, London: Routledge, 1994.
- Brenner, Yehojachin, S. (1991) "Deregulation and the Principle of Distribution," *Journal of Income Distribution*, 1: 4-45.
- Burt, Roger. (1991) "The International Diffusion of Technology in the Early Modern Period: The Case of the British Non-Ferrous Mining Industry," *Economic History Review*, 44: 249-271.
- Cameron, Renaldo. (1985) "A New View of European Industrialization," *Economic History Review*, 38: 1-23.
- Champion, J.A.I. *The Pillars of Priestcraft Shaken: The Church of England and its Enemies, 1660-1730*, Cambridge: Cambridge University Press, 1991.
- Gillispie, Neal, C. (1991) "Divine Design and the Industrial Revolution: William Paley's Abortive Reform of Natural Theology," *ISIS*, 81: 214-229.
- Gillispie, Neal, C. (1987) "Natural History, Natural Theology, and Social Order: John Ray and the 'Newtonian Ideology,'" *Journal of the History of Biology*, 20: 1-49.
- Harrison, Peter. (1995) "Newtonian Science, Miracles, and the Laws of Nature," *Journal of the History of Ideas*, 56: 531-553.
- Hill, Christopher. *The World Tuned Upside Down: Radical Ideas during the English Revolution*, Hammondsworth: Penguin Press, 1975.
- Jacob, James R. (1977) "Boyle's Circle in the Protectorate: Revelation, Politics and the Millennium," *Journal of the History of Ideas*, 38: 131-140.
- Jacob, James R. (1972) "The Ideological Origins of Robert Boyle's Natural Philosophy," *Journal of European Studies*, 2: 1-21.
- Jacob, James R. and Margaret C. Jacob (1980) "The Anglican Origins of Modern Science: The Metaphysical Foundations of the Whig Constitution," *ISIS*, 71: 251-267.
- Jacob, Margaret C. *The Newtonians and the English Revolution 1689-1720*, Ithaca: Cornell University Press, 1976.
- Jacyna, L.S. (1983) "Immanence or Transcendence: Theories of Life and Organization in Britain, 1790-1835," *ISIS*, 74: 311-329.
- Kindleberger, Charles, P. (1976) "The Historical Background: Adam Smith and the Industrial Revolution." In Andrew S. Skinner & Thomas Wilson (eds.) *The Market and the State: Essays in Honour of Adam Smith*, Oxford: Clarendon Press.
- King, Lester S. (1967) "Basic Concepts of Early 18th-Century Animism," *The American Journal of Psychiatry*, 124: 797-802.
- Lawrence, Christopher. (1979) "The Nervous System and Society in the Scottish Enlightenment." In Barry Barnes & Steven Shapin (editors) *Natural Order: Historical Studies of Scientific Culture*, London and Beverly Hills: Sage.
- Mandeville, Bernard. *The Fable of the Bees: or, Private Vices, Publick Benefits*, with an introduction by F.B. Kaye, Oxford: Clarendon Press, 1924.
- Mandeville, Bernard. *A Treatise of the Hypochondriack and Hysterick Diseases. In Three Dialogues*, New York: Delmar, 1976/1730.
- Miller, Peter N. (1993) "'Freethinking' and 'Freedom of Thought' in Eighteenth-Century Britain," *The Historical Journal*, 36: 599-617.
- Mischel, Kenneth. (1997) "Are We Too Thin for Our Own Good?," *The Philosophical Forum*, 28/29: 377-400.
- Moravia, Sergio. (1978) "From *Homme Machine* to *Homme Sensible*: Changing Eighteenth-Century Models of Man's Image," *Journal of the History of Ideas*, 39: 45-60.
- Mullan, John. (1988) *Sentiment and Sociability: The Language of Feeling in the Eighteenth Century*, Oxford: Clarendon Press.
- Musil, Robert. (1995) *The Man Without Qualities*, translated by Sophie Wilkens, New York: Alfred A. Knopf.

- O'Brien, P.K. (1986) "Do We Have a Typology for the Study of European Industrialization in the XIXth Century?," *Journal of European Economic History*, 15: 291–233.
- Prete, Frederick R. (1991) "Can Females Rule the Hive? The Controversy over Honey Bee Gender Roles in British Beekeeping Texts of the Sixteenth-Eighteenth Centuries," *Journal of the History of Biology*, 24: 113–144.
- Raylor, Timothy. (1992) "Samuel Hartlib and the Commonwealth of Bees." In Michael Leslie & Timothy Raylor (eds.) *Culture in Early Modern England*, Leicestershire: Leicestershire University Press.
- Ross, Ian Simpson. (1995) *The Life of Adam Smith*, Oxford: Clarendon Press.
- Sabel, Charles and Jonathan Zeitlin. (1985) "Historical Alternatives to Mass Production: Politics, Markets and Technology in Nineteenth-Century Industrialization," *Past and Present*, 108: 133–176.
- Samuel, R. (1977) "Workshop of the World: Steam Power and Hand Technology in mid-Victorian Britain," *History Workshop*, 3: 6–72.
- Scranton, Philip. (1991) "Diversity in Diversity: Flexible Production and American Industrialization, 1890-1930," *Business History Review*, 65: 27–90.
- Shapin, Steven. (1981) "Of Gods and Kings," *Isis*, 72: 187–215.
- Shapin, Steven. (1979) "Social Uses of Science." In G.S. Rousseau & Roy Porter (eds.), *The Ferment of Knowledge: Studies in the Historiography of Eighteenth-Century Science*, New York: Cambridge University Press.
- Shapin, Steven & Schaffer, S. (1985) *Leviathan and the Air-Pump: Hobbes, Boyle and the Experimental Life*, Princeton: Princeton University Press.
- Skinner, Andrew S. (1979) "Moral Philosophy and Civil Society." In Andrew S. Skinner, *A System of Social Science: Papers Relating to Adam Smith*, Oxford: Clarendon Press.
- Smith, Adam. (1976) *Theory of Moral Sentiments*, D.D. Raphael & A.L. MacFie (eds.), Oxford: Clarendon Press, 1764.
- Smith, Adam. (1963) *An Inquiry into the Nature and Causes of the Wealth of the Nations*, with an introduction by Mark Blaug, Hollywood, Illinois: Richard D. Irwin, Inc., 1776.
- Taylor, William L. (1965) *Francis Hutcheson and David Hume as Predecessors of Adam Smith*, Durham, North Carolina: Duke University Press.
- Toulmin, Stephen E. (1990) *Cosmopolis: The Hidden Agenda of Modernity*, Chicago: The University of Chicago Press.
- Waterman, A.M.C. (1983) "The Ideological Alliance of Political Economy and Christian Theology, 1798-1833," *Journal of Ecclesiastical History*, 34: 231–244.
- Whately, Richard. (1966) *Introductory Lectures on Political Economy*, New York: Augustus M. Kelley, 1832.
- Wittgenstein, Ludwig. (1953) *Philosophical Investigations*, Oxford: Blackwell.
- Wood, P.B. (1980) "Methodology and Apologetics: Thomas Sprat's *History of the Royal Society*," *British Journal of the History of Science*, 13: 1–26.