If man have thought so much of some one particular discovery as to regard him as more than man who has been able by some benefit to make the whole human race his debtor, how much higher a thing to discover that by means of which all things else shall be discovered with ease!—Bacon, Novum Organum
I. UNIVERSAL CAUSATION—JOHN STUART MILL:  
SYSTEM OF LOGIC (1843)

This is my Idea that if we could once attain the logical perfection of all we know we should pass by easy stages to all attainable knowledge.—George Henry Lewes, marginalia on Coleridge’s Essays on Method, The Friend

In his Autobiography John Stuart Mill wrote of the process whereby the prodigious young disciple of his father’s bloodless Utilitarianism discovered that his education “had failed to create . . . feelings in sufficient strength to resist the dissolving impulse of analysis.” Mill’s crisis led him to the revivifying poetry of the romantics, in particular Coleridge, “in whom alone of all writers I have found a true description of what I felt.” In the new beliefs that emerged, Mill sought to balance the claims of head and heart, utility and romanticism, the abstract needs of mankind and the demands of self. He was redeemed from the arid life of a reasoning machine by his vital discovery of “the internal culture of the individual.”

Mill turned again to the romantic thinker in an essay on “Coleridge’s Works” for the London and Westminster Review as a complement to his earlier piece on Jeremy Bentham. In that 1840 essay, Mill unknowingly revealed considerable affinity with Coleridge’s already-written but not-yet-published Theory of Life: “Contraries, as logicians say, are but quae in eodem genere maxime distant, the things which are farthest from one another in the same kind.” Bentham epitomizes the empirical school, Coleridge the intuitive; Mill proclaims them not “enemies” but “allies”: “The powers they wield are opposite poles of one great force of progression.” And Mill also recognizes this polarity within the Coleridgean doctrine itself: “It is less extreme in its opposition, it denies less of what is true in the doctrine it wars against, than has been the case in any previous philosophic re-action.” Coleridge, Mill argues, has much to offer the empirical successors to the psychology of Locke and Hartley: “His writings . . . are the richest mine from whence the opposite school can draw materials for what has yet to be done to perfect their own theory.”
There can be no doubt that Mill's essay on Coleridge had at least one admirer among the Victorian circle that this study depicts, particularly if one regards imitation as a sincere form of admiration. In the essay on Coleridge, Mill offers his classic definition of the "Germano-Coleridgean doctrine": "It expresses the revolt of the human mind against the philosophy of the eighteenth century. It is ontological, because that was experimental; conservative, because that was innovative; religious, because so much of that was infidel." In one of his earliest essays, "Modern Metaphysics and Moral Philosophy of France," published in the *British and Foreign Review* in 1843, young George Henry Lewes adapts Mill's definition to Lewes's own exploration of another reaction against the eighteenth century, Auguste Comte's *Cours de philosophie positive*. The echo of Mill is unmistakable: that positivist reaction, writes Lewes, "is dogmatical and constructive, where [the eighteenth century] was skeptical and destructive: it is spiritual where that was material; religious where that was opposed to religion."

Psychologist Alexander Bain first met George Henry Lewes (then 25) in 1842, and recalled that "he sat at the feet of Mill, read the *Logic* with avidity, and took up Comte with equal avidity. These two works, I believe, gave him his start in philosophy." Mill's letters to Lewes provide ample documentation of the student-teacher relationship in the early 1840s, as Mill criticizes young Henry's fledgling essays ("I return your Ms. with a good deal of pencil scratching at the back, for I have been, & intend to be, hyper-critical"; 1 March 1841). He also writes letters of introduction for Lewes to French *savants* (to Victor Cousin, 27 April 1842: "Celui que je vous adresse est beaucoup plus jeune: mais il a des connaissances et une capacité qui donnent de grandes expériences"); and in a similar vein to Auguste Comte, 9 June 1842) and British publishers (to the editor of the *British and Foreign Review*, who published Lewes's first essay, "Hegel's Aesthetics: Philosophy of Art," in 1842: "He is rather a good writer, has ideas (even in the Cole­ridgean sense) & he is a contributor worth having," 7 May 1841). It was Mill who introduced Lewes to John William Parker, the publisher of his first book, the *Biographical History*
of Philosophy (1845-46), using his influence to help the unknown young writer. The dates of Mill's Logic coincide with the period of Lewes's discipleship: it was completed at the end of 1841 and published—also by Parker—in the spring of 1843. In his introduction to the Biographical History, Lewes proclaimed it "perhaps the greatest contribution to English speculation since Locke's Essay." He was to cite the Logic as an authority again in his second book, Comte's Philosophy of the Sciences (1853).

The case of John Stuart Mill's Logic belies any simplistic arguments to be made about the influence of Lewes on his life's partner, George Eliot; Mill provides a strong example of the remarkable confluence of interests that Lewes and Eliot must have discovered when they met in 1851. George Eliot's enthusiasm for the Logic is evident in her letters. We have no idea when she first read the book herself, but she was eager to share the discovery with her closest friends. In October of 1849, she writes to Charles Bray that her old Foleshill acquaintance, John Sibree, had her copy, "which you will do well enough to ask him for—he keeps books long enough to take a manuscript copy of them." The Brays were evidently successful at retrieving the Logic (and may have been equally remiss in returning it), for two years later Eliot requests that Mrs. Bray "ask Mr. Bray to let me have Mill's System of Logic, which I don't suppose he wants at present. I shall be glad to have it by me for reference." Unlike Lewes, Eliot never shared a personal friendship with Mill; but her essays and notebooks provide further evidence of her continuing interest in the book from beginning to end of her career. Writing on "The Future of German Philosophy" for the Leader in 1855, Eliot's review of Otto Friedrich Gruppe's Gegenwart und Zukunft der Philosophie in Deutschland (1855) has as much to say about Mill as it does of Gruppe, since she contends that the "gist" of Gruppe's argument is an effort "to map out the road which John Mill (to whose work he seems to have given imperfect attention) has actually wrought out and made available."

George Eliot was introduced to Herbert Spencer in August 1851, and began to see him frequently after September of that
year. It seems likely that one reason for her request of the *Logic* from the Brays in October was to share it with Spencer. Although he had first encountered the *Logic* shortly after its publication, in his provincial days at the Derby Philosophical Society, and remembered vaguely agreeing with Mill (largely in sympathy with his "dissent from an orthodox doctrine"), Spencer dated his real acquaintance with the book to sometime in early 1852, when George Eliot presented him with a copy. In March 1852 Spencer wrote to his father that he was beginning the *Logic* as a "first step towards preparing for my 'Introduction to Psychology' which I mean to begin vigorously by and by." Spencer was still digesting the *Logic* in the summer of 1852, as he and Marian Evans strolled along the Kentish coast at Broadstairs, discussing his plans for the new work. Spencer's introduction was to become the *Principles of Psychology* (1855), whose earliest formulations are to be found in his essay on "The Universal Postulate." This essay appeared in the *Westminster* under Eliot's editorship in 1853, and was reprinted almost verbatim as chapters 2 and 3 of the *Principles*. Spencer claimed that it was written in large part in direct response to the *Logic*.

My readers will remember that Spencer had met George Henry Lewes in the spring of 1850; the rapid development of their friendship was founded on eagerly shared intellectual interests. Typically, the mutual intellectual influences among this circle are circular rather than linear. Spencer dated the inception of his interest in psychology to a reading of the *Biographical History*: "I had not, up to 1851, made the phenomena of mind a subject of deliberate study. I doubt not that the reading of Lewes's book . . . gave me an increased interest in psychology . . . at the same time that it served, probably, to give more coherence to my own thoughts." Thus Mill's *Logic* figures both directly in Spencer's intellectual development, via George Eliot; and indirectly, mediated by Lewes, himself inspired to the study of philosophy and psychology by Mill. In dissecting the loving friendships and friendly love affairs of both heart and head among Spencer, Lewes, and Eliot, it is often difficult to define cause and effect;
the role played in their lives and thought by Mill's *Logic* is
typical of the strong mutuality of ideas that links them all. But
the *Logic* was indisputably a shared interest, and, I will dem-
onstrate, a consequent influence on all three.

Indeed, it was a text that provided a foundation for the frame
of mind shared by all the members of this Victorian circle. When it appeared in the 1840s, John Stuart Mill's *System of
Logic* set off reverberations that spread extensively beyond the
philosophic academy. Looking back upon the previous cen-
tury, intellectual historian A. W. Benn eloquently summarized
the book's revolutionary appeal to the early Victorians. The
*Logic*

explained to English readers what they had never been taught be-
fore . . . how the vast edifice of physical science on which they
had been accustomed to gaze with stupid wonder, as on a fairy
palace, raised by magic arts, really owed its existence to a more
systematic application of the same processes by which we find our
way about in everyday life . . . by carrying into the study of mind
and morals, of society and government, the same method by which
the properties of space, the mechanism of the heavens, the com­
position of matter, and the conditions of animal life had been so
successfully unravelled.17

Mill himself announced that the *Logic* was intended to
counteract the influence of "the German, or *a priori* view of
human knowledge" with "a text-book of the opposite doc­
trine—that which derives all knowledge from experience, and
all moral and intellectual qualities principally from the direc­
tion given to the associations." The belief that truth can be
known by intuition rather than through observation and ex­
perience is, Mill feels, "the great intellectual support of false
doctrines and bad institutions." In the *Logic* Mill hoped to
meet the intuitive philosophers on their own ground, and to
offer an "explanation, from experience and association, of the
peculiar character of what are called universal truths."18 Mill's
position was not, of course, an original one. Lewes's compa­
rison of Mill and Locke in the *Biographical History* is no casual
juxtaposition. Much of the *Logic* is a rewriting of Lockean
philosophy in a distinctly Victorian vein.
It is not to my purposes here to scrutinize the more technical formulations of the Logic, or to attempt a comprehensive reading of this formidable academic classic. But the Logic offers much to the historian of Victorian ideas. Let me begin with a notion that may seem self-evident, but that was to have far-reaching implications for Mill and his contemporary followers: a comprehensive logic can be formulated only if one believes in a world that operates according to rational, consistent, universal principles of cause and effect. Inductive reasoning, generalizations founded upon observation and experience, cannot take place unless nature’s course is governed by universally applicable laws. Mill makes this point emphatically and repeatedly: “The ultimate major premise of all inductions” is “the uniformity of the course of nature.”

Like Samuel Taylor Coleridge, Mill aspires to a monistic world view, searching for “separate threads of connection between parts of the great whole which we term nature.” Mill finds his unification of part and whole, observed particular and reasoned generalization in the “general character of regularity” which “along with and in the midst of infinite diversity, pervades all nature.” These uniformities he calls “Laws of Nature.” Much like Coleridge, Mill seeks for a single law that will subsume unto itself all of the multiplicitous laws of nature. This ultimate law is “the Law of Causation”: “The truth that every fact which has a beginning has a cause is so co-extensive with human experience.” Mill reminds his reader that this law of causation is really but “the familiar truth that invariability of succession is found by observation to obtain between every fact in nature and some other fact which has preceded it, independently of all considerations respecting the ultimate mode of production and phenomena.”

Mill’s dry academic prose may seem far from incendiary to the twentieth-century reader. But his disregard for any “ultimate mode of production” was quickly recognized by the Victorians as a denial of the active presence of God in the world. Universal causation goes hand-in-hand, if not with atheism, then with a negation of the traditional ontological pieties, the creative God of Genesis. When George Eliot wrote her first es-
say for the Westminster, a review of R. W. Mackay's The Progress of the Intellect, in 1850, she showed herself fully aware of the theological implications of the law of causation. Eliot finds in Mackay a new, and quite heterodox, version of divine revelation: "The master key to this revelation, is the recognition of the presence of undeviating law in the material world. . . . It is this invariability of sequence which can alone give value to experience and render education in the true sense possible." Twenty years later, writing on "The Influence of Rationalism" for the Fortnightly Review, Eliot reiterates her belief in Mill's causal, ungodly universe, emphasizing "the supremely important fact, that the gradual reduction of all phenomena within the sphere of established law, which carries as a consequence the rejection of the miraculous. . . . The great conception of universal regular sequence . . . is the most potent force at work in the modification of our faith." Similarly, Herbert Spencer claims in his Autobiography that he was predisposed to Mill's logical version of heterodoxy virtually from infancy, its message inwrought with his deepest sensibility: "The notion of causation was thus rendered much more definite in me than in most of my age, there was established a habit of seeking for causes, as well as a tacit belief in the universality of causation. Along with this there went absence of all suggestion of the miraculous." It is important to emphasize here, however, that although Mill's Logic may have seemed inimical to conventional religious beliefs, it provided a credo of its own. Mill's affirmations of faith are most clearly stated in the concluding book of the Logic, "On the Logic of the Moral Sciences," where he makes the first practical applications of his theoretical views on causality. In Book 6, as throughout the Logic, Mill is indebted to John Locke. In the Essay on Human Understanding, Locke had declared himself "confident . . . that if Men would in the same method, and with the same indifferency, search after moral, as they do mathematical Truths, they would find them to have a stronger Connection one with another . . . and to come nearer perfect Demonstration, than is commonly imagined." Mill opens his discussion of the logic of the moral sci-
ences with a question: "Are the actions of men like all other natural events, subject to invariable laws? Does the constancy of causation, which is the foundation of every scientific theory of successive phenomena, really obtain among them?" The answer to this rhetorical question leads directly to the conclusion that Mill embodies in his title for chapter 3: "That There is, or May Be, A Science of Human Nature."

This disarmingly simple assertion was to have profound ideological implications. If mind is subject to the same universal laws as matter, psychology more properly belongs to the scientist than to the philosopher; scientific method may be applied both to the mechanism of the individual mind and to its aggregate manifestation, society. It is in the Victorian age that psychology proper enters the realm of natural science. And also in this period that social science as we know it today is born. In a wide variety of ways, every Victorian thinker in this circle addresses himself to the implications of what Herbert Spencer calls the "universality of law—law in the realm of mind as in matter—law throughout the life of society as throughout individual life . . . [and] the correlative idea of universal causation." George Eliot speaks for all her Victorian compatriots when she asserts in "The Progress of the Intelect" that "undeviating law" is present in the moral as well as the material world. She urges a plan of action to be adopted in a wide variety of ways by the Victorian sages who surround her: the "invariability of sequence which is acknowledged to be the basis of physical science" must no longer be "perversely ignored in our social organization, our ethics, and our religion."

I began my discussion of the *System of Logic* with Mill's own assertion of its grounding in the British empiricist tradition. But Mill is more than a Victorian Locke; we find in this admirer of Bentham and Coleridge a true sense of Coleridgean polarity and a desire for that dynamic interpenetration Coleridge emphasizes in the *Theory of Life*. In "The Future of German Philosophy," George Eliot defends Mill against Gruppe's objection to his methodological emphasis on deduction: "De-
duction, as Mill shows, is not properly opposed to induction but to experiment," she writes. This passage, which Eliot is paraphrasing from the Logic, made a deep impression on George Henry Lewes as well; he quotes it in the introduction to his Biographical History: "The opposition is not between the terms Inductive and Deductive, but between Deductive and Experimental." Mill believed that induction and deduction can, in fact, operate in tandem. Throughout the Logic Mill presents his reader with a series of polarities: they are titled, variously, induction and deduction, the experimental and the analytical methods of investigation, science and philosophy, the chemical and the geometrical models—but all have in common the fundamental opposition of the particular vs. the general. The scientist concerns himself with the observation of particulars; he begins with effects, and experiments in order to arrive inductively at causes. His method is "chemical," or concrete. In contrast the philosopher deals in abstract or "geometrical" propositions. He works deductively, from analysis of causes to an understanding of their effects. The scientist moves from the many to the one, the philosopher from the one to the many; the scientist's universe is Copernican, the philosopher's, Ptolemaic.

Mill hopes to reconcile these polarities through the "concrete deductive method," a method that he intends as both a science and an art: "science . . . following one cause to its various effects, while art traces one effect to its multiplied and diversified causes and conditions." This method attempts to sophisticate our notions of linear cause and effect, working "deductively indeed, but by deduction from many, not from one or a very few original premises; considering each effect as (what it really is) an aggregate result of many causes, operating sometimes through the same, sometimes through different mental agencies, or laws of human nature."

The concept of a science of psychology provides Mill with a perfect model for his new method, a discipline that draws upon the skills of both philosopher and scientist. In order to achieve this balance, Mill proposes to add an entirely new sci-
ence, which he calls "ethology," as a companion to psychology. Mill defines psychology as the "science of the elementary laws of mind"; ethology as the "ulterior science which determines the kind of character produced, in uniformity to those general laws, by any set of circumstances, physical and moral." Psychology is based on observation and experiment, the dissection of those "mechanic" laws whereby the individual mind functions; ethology is to be a deductive science, placing the individual within the larger social whole (it would be impossible to put heredity, environment, society under a microscope—the elements involved are too vast and too complex). The principles of ethology, writes Mill, lie somewhere between induction and deduction; they are the "axiomata media . . . of the science of mind: as distinguished, on the one hand from the empirical laws resulting from simple observation, and on the other from the highest generalizations."

Without exception, these Victorians embraced Mill's doctrine of universal causation. It provided the cornerstone of their intellectual foundations. But unanimity of response stopped there: some felt Mill went too far with his new method; and some, not far enough. Mill's inclusion in my circle must be qualified. For all his theoretical claims of axiomata media, Mill finally remains firmly entrenched in Cartesian cogitations rather than donning a laboratory coat and approaching the dissection table. His assertion of law in the realm of mind as well as matter stops short of the next logical step: mind as matter. "Whilst we are destitute of senses acute enough, to discover the minute particles of Bodies, and to give us Ideas of their mechanical Affectations, we must be content to be ignorant of their properties and ways of Operation," wrote Locke in the Essay on Human Understanding.* Despite the intervening generations of scientific progress, Mill essentially remained in agreement with Locke, stopping short of a physiological psychology: "The successions . . . which obtain among mental phenomena, do not admit of being deduced from the physiological laws of our nervous organization." Mill's "science of mind" still owes more to the philosopher
than to the biologist, to the seventeenth century than to the nineteenth.

Both phrenologists and evolutionists were to disagree, and take Mill's law of nature one logical step further. Phrenologist Charles Bray, for example, bemoaned the tendency of his contemporaries to stray from "the right path of the true cerebral physiology," and placed blame squarely on Mill as "principally responsible for turning a whole generation out of the way." Evolutionist Herbert Spencer also qualified his admiration: "Though in Mr. Mill's *System of Logic*, the doctrine of causation receives full and critical exposition; yet by him, as by the Utilitarians generally, there has not been that full study of physical science at large which conduces to an ever-present and vivid consciousness of cause."

Yet when Spencer's essay on "The Universal Postulate," inspired in opposition to Mill, is juxtaposed to his above comments on the *Logic*, an apparent paradox is revealed; and in that paradox we can recognize the distinctive nature of these synthetic Victorian thinkers. Spencer himself would have found no inconsistency in the fact that he could condemn Mill in the *Autobiography* for his lack of practical scientific investigations on one hand; and, in "The Universal Postulate," controvert Mill's empiricism in favor of the more intuitive philosophy of William Whewell, Mill's arch-opponent in matters philosophical.

Herbert Spencer, an early believer in phrenology and later in the pre-Darwinian development hypothesis, sought to know (in a scientific spirit) but also to believe (if not necessarily in accord with the Thirty-Nine Articles). He writes "The Universal Postulate" in search of "some primordial belief of which no proof can be given." Spencer claimed to have found that belief in Whewell's *Philosophy of the Inductive Sciences*—or rather, in reading Mill's criticisms of Whewell's philosophy in the *Logic*. In "The Universal Postulate," Spencer quotes Mill quoting Whewell: "A necessary truth is a proposition the negation of which is not only false but inconceivable." The "universal postulate" as defined by Spencer scarcely
differs: "A belief which is proved, by the inconceivableness of its negation, to invariably exist, is true."\textsuperscript{58}

Spencer agrees with Mill's empirically-based universal causation, but it is not adequate to satisfy him: "In passages controverting the doctrine enunciated by Dr. Whewell, he had . . . ignored that criterion of belief to which we all appeal in the last resort, and further, he had not recognized the need for any criterion." Though he has no use for God, Spencer, unlike Mill, does quest for "ultimate modes of production," some version of a final cause, a belief that transcends empirical proof: "Belief is the fact which . . . is antecedent to, and inclusive of, all other facts."\textsuperscript{59} (Let me note here that in another turn of the Victorian screw, Spencer attempts to turn Whewell's intu­ition back upon empiricism by means of evolutionary biology—and herein lies the genesis of the \textit{Principles of Psychology}, of which I shall have much more to say in chapter 4.)

In October 1853 George Eliot, the young editor of the \textit{Westminster Review}, wrote to her friend Sara Sophia Hennell: "I hope you will be pleased with our present number. If you don't think the Universal Postulate first-rate, I shall renounce you as a critic."\textsuperscript{40} I shall return later to the early intellectual relationship between Eliot and Spencer; but if we remember here that Eliot was a sympathetic audience for "The Universal Postulate," it will help in understanding why she chose the three epigraphs she did for her notebooks in the late 1870s, from Mill's \textit{Logic}, Aristotle's \textit{Ethics}, and Locke's \textit{Essay on Human Understanding}. I reprint the three passages here in full, for they have a great deal to tell not only about George Eliot's response to the \textit{Logic}, but also of her attitude towards a scientific psychology of the sort Mill proposes.

The generation of one class of mental phenomena from another, whenever it can be made out, is a highly interesting fact in psychological chemistry; but it no more supersedes the necessity of an experimental study of the generated phenomenon, than a knowledge of the properties of oxygen & sulphur enables us to deduce those of sulphuric acid without specific observation & experiment. [Mill, \textit{Logic}, 2:637]
We must not look for equal exactness in all departments of study, but only such as belongs to the subject matter of each, and in such a degree as is appropriate to the particular line of enquiry. . . . Nor again must we in all matters alike demand an explanation of the reason why things are what they are; in some cases it is enough if the fact that they are so is satisfactorily established. This is the case with first principles; and the fact is the primary thing—it is a first principle. [Aristotle, *Ethics*, 1.7.18]

If by the help of microscopical eyes (if I may so call them) a man could penetrate farther than ordinary into the secret composition & radical texture of bodies, he would not make any great advantage by the change, if such an acute sight should not conduct him to the market & exchange; if he could not see things he was to avoid at a convenient distance, nor distinguish things he had to do with, by those sensible qualities others do. He that was shortsighted enough to see the configuration of the minute particles of the spring of a clock, & observe upon what particular structure & impulse its elastic motion depends, would no doubt discover something very admirable; but if eyes so framed could not view at once the hand and the characters of the hour-plate, & thereby at a distance see what o'clock it was, their owner could not be much benefited by that acuteness, which while it discovered the secret contrivance of the parts of the machine, made him lose its use. [Locke, *Essay*, 2:23, par. 12]41

Mill, Aristotle, and Locke are three philosophers who share much common ground. But it seems to me that the passages from Aristotle and Locke also provide an implicit—and corrective—commentary on the first passage, from the *Logic*.

True to the mediating impulse of the concrete deductive method, Mill emphasizes the necessary coexistence of deduction and induction, general laws (those of “psychological chemistry”), and observed particulars (“experimental study”). But his primary emphasis is on the importance of the empiricist’s observation and experiment. Mill makes a case for an empirical science of psychology: we can study the “chemical” workings of the human mind just as we do the “properties of oxygen & sulphur.” From her earliest days as a believer in phrenology, Eliot would remain in agreement with Mill’s application of empiricism, according to the tenets of universal
causation, to the study of the human mind. Long after her ad­
vocacy of phrenology had been qualified, she would remain
convinced of the necessity of a truly scientific psychology.

The passages from Locke and Aristotle do not so much con­
trovert as refine the passage from Mill. "We must not look for
equal exactness in all departments of study," says Aristotle; the
"whys" of the human mind are considerably more complex
than the principles of a chemical equation, even if we do be­
lieve that it operates according to empirically verifiable scien­
tific laws. And not only is the science of psychology—more
particularly, when it enters the realm of ethics—an immensely
difficult one to formulate with exactness, as the passage from
Aristotle suggests: suppose we did have the "microscopical
eyes" to give us, with perfect accuracy, every detail of observa­
tion and experiment? Locke, confident empiricist as he is,
nonetheless emphasizes that a lucid view of every part does not
equal the larger vision, "at a distance," of the whole; without
universals we can make no sense of particulars; the detail is
meaningless without the generalization. The final line of the
passage from the Essay is particularly provocative: "That
owner could not be much benefited by that acuteness, which
while it discovered the contrivance of the parts of the machine,
made him lose its use."

Remembering Spencer’s universal postulate: knowledge
must not stifle belief; one must allow for an intuitive formu­
lation of the whole as well as a reasonable dissection of every
part; scientific understanding of a man’s mind must not dis­
place a sympathetic apprehension of his heart. The opening
paragraphs of Eliot’s own notes that follow these three epi­
graphs provide variations on the same theme. Eliot’s first state­
ment asserts the necessity of a scientific study of man: "Ethics
is a mixed science to which conduct is the corresponding art.
From the scientific point of view you have to consider the
forms of force or energy concerned. . . . Hence it seems an
unfruitful attempt now to consider ethics apart from social &
psychological evolution." This is followed by an apparently
antithetical statement, a Coleridgean polar opposite: "A great
deal of 'right action' is sure to be done . . . from sympathetic impulses.” So much for a “scientific” ethics; Eliot explicitly disavows the rational Utilitarian analysis of human behavior: “Why have multitudes of mankind been tender to their mothers”? “Not because they were contemplating the greatest happiness of the greatest number of mankind.” Thus Eliot’s thesis and antithesis. The synthesis follows; it is here that we find that notebook quotation from *Adam Bede* with which I closed my prelude: “Feeling is a sort of knowledge.” But George Eliot’s emphasis here is not the supremacy of feeling over knowing; rather, their complementarity. These Victorians would find in John Stuart Mill’s universal causation the “microscopical eyes” they needed for their quest; but Auguste Comte could promise the vision of the cosmic clock.

II. THE POSITIVE PLAN—AUGUSTE COMTE: *COURS DE PHILOSOPHIE POSITIVE* (1830–1842)

In that essay on “The Modern Metaphysics and Moral Philosophy of France” which echoed Mill’s “Coleridge,” George Henry Lewes concluded with an extended summary of Auguste Comte’s recently-completed *Cours de philosophie positive* (which had appeared in six successive books: 1830, 1835, 1838, 1839, 1841, 1842). It was the first of many glowing reports that Lewes would write of the French philosopher in the decade to come, and one of the earliest English expositions of Comte. Young Lewes enthusiastically predicted that Comte’s *Cours* would “be the most memorable work of the nineteenth century. He will have founded a science and furnished its fundamental law. He will be at once the Bacon and the Newton of the nineteenth century.” On the same page, Lewes footnotes as his authority his mentor John Stuart Mill’s *Logic*: the *Cours* was “at once the most profound, the most complete, and the most masterly in its exposition of any work on the subject, and is invaluable to every cultivation of philosophy,” Mill avows.

Although the first public notice of Comte in England did not come until 1838, with physicist Sir David Brewster’s review
of the first two volumes of the *Cours*, Mill wrote privately to John Pringle Nichol in December 1837 that "this said book is, I think, one of the most profound books ever written on the philosophy of the sciences. . . . I shall be much astonished if this book of Comte's does not strike you more than any logical speculations of our time." In his *Autobiography* Mill explains that he had encountered the *Cours* while in the process of writing the *Logic*, arriving at his own theory of induction "by a different road," yet acknowledging that Comte's book "was essential service to me in some of the parts which still remained to be thought out," particularly Book 6, "On the Logic of the Moral Sciences." Significantly, Mill claimed his indebtedness to Comte for the important conception of the inverse deductive method, discussed above. After Mill's discipleship waned in the early 1850s, he would return to the French thinker in a more critical vein in two extended essays for the *Westminster Review* (April and July 1865), which took book form as *Auguste Comte and Positivism* in 1865. But in the earlier blush of enthusiasm, Mill had written in his first letter to Comte, 8 November 1841: "Je le lis et le relis avec une véritable passion intellectuelle."

Seven months later, 9 June 1842, Mill was to write Comte an ingratiating letter of introduction on behalf of Mon jeune ami Lewes, qui se réjouit très vivement de vous avoir vu. Je n'ai pas osé demander pour lui cet avantage parce qu je savais qu'avec d'excellentes dispositions, et une certaine force d'esprit, il manque des bases essentielles d'une forte éducation positive. Je trouve très honorable à son caractère et à son intelligence la vive admiration qu'il éprouve pour vous, avec des moyens si imparfaits d'apprécier votre supériorité scientifique. Lewes quickly acquired that "education positive," and by 1848 had briefly taken Mill's place in Comte's eyes as the new apostle of positivism in England. The *Biographical History of Philosophy* (1845-46) heralded the advent of the Comtean age in its concluding "Eleventh Epoch: Philosophy finally relinquishing its Place in favor of Positive Science"; Lewes expanded a series of *Leader* articles into *Comte's Philosophy of*
the Sciences: Being an Exposition of the Cours de Philosophie Positive of Auguste Comte (1853), the first full-length discussion of Comte in England, which appeared in the same year as Harriet Martineau's English translation. Though by the mid-1850s, Lewes's relations with Comte had also cooled, he too returned to Comte in the next decade in a series of essays for the *Fortnightly Review*. He there confessed himself a "reverent heretic," but Lewes's later views of Comte were far less negative than Mill's. One critic has even called Lewes's tempered later critique "an excess of charity": "If anything was likely to popularize Positivism, it was Lewes's two articles of 1866 in the *Fortnightly*."  

Herbert Spencer's vehement disavowal of Comte's influence on his thought were loud and long; Spencer even went to the trouble of printing a lengthy fifty-year-old letter to George Henry Lewes as "Appendix B" to his *Autobiography*, chronicling an ongoing argument wherein Lewes levelled at Spencer the psychologically sophisticated accusation that his "antagonistic attitude toward Comte has tended to suppress the growth of any consciousness of indebtedness." Be that as it may, Spencer could honestly claim that the only source of Comte's ideas for him was Mill's *Logic*, which he had read two years after the "positivistic" *Social Statics* was written.

In this appendix Spencer parenthetically reminds his reader that the *Logic* was lent him by George Eliot; and turning back to 1852, we find that Spencer's companion was urging the *Cours* upon him at the very same time: "In the course of the spring the name of Comte came up in conversation. She had a copy of the *Philosophy Positive*, and at her instigation, I read the introductory chapters of 'Exposition.'" Though admitting to an inadequate knowledge of French and a "neutral" attitude to Comte's doctrine of the three stages, Spencer expressed a "pronounced dissent" from the other major tenet of the *Cours*, Comte's classification of the sciences. He found young Marian Evans "greatly surprised: having, as she said, supposed the classification perfect." It was Spencer who prevailed in the debate (as he remembered it!): "She was but little given to argu-
ment; and finding my attitude thus antagonistic, she forthwith dropped the subject of Comte's philosophy, and I read no further.'"\(^{55}\)

But George Eliot most certainly did not drop the subject in the simultaneously emergent friendship with George Henry Lewes, which turned to love during the same era in which Lewes held forth on Comte for the \textit{Leader}. She became more intimate with both the manuscript of \textit{Comte's Philosophy} and its author than she cared to admit publicly, chiding publisher John Chapman: "How came you to mention to Miss M. that you saw the proof of Mr. Lewes' book 'in [my] Miss Evan's room'? I think that you must admit that your mention of my name was quite gratuitous. So far you are naughty—but never mind."\(^{56}\)

The intrigue involved here was professional as well as sexual, for "Miss M.," Harriet Martineau, was engaged in something of a rival work: the translation of the \textit{Cours}, to be published by Chapman, Eliot's coeditor at the \textit{Westminster}. The plan for a translation had been in the works even before Eliot's editorship officially began (29 September 1851), and her early opinions of Martineau's qualifications for the undertaking were not generous.\(^{57}\) However, as relations between Eliot and Martineau—and Martineau's mentor George Henry Atkinson—warmed, Eliot's position changed considerably. Martineau herself went so far as to make Eliot "joint trustee" with Atkinson of a fund for Comte's publication, in March 1852.\(^{58}\) It was Eliot herself who reviewed Martineau's translation for the \textit{Leader} (3 December 1853), and confessed (in editorial plurality) that as she read, "Our misgivings changed into approbation."\(^{59}\) Comte himself thought so highly of the translation and abridgement that he had the work retranslated into French and proclaimed it the official text of the \textit{Cours}! Martineau's work encouraged Eliot to tackle Herbert Spencer on the subject of Comte once again; we find him writing to his father in February 1854 that "I am reading Miss Martineau's abridged translation of Comte . . . as two of my friends, Mr. Lewes and Miss Evans, were in large measure adherents of Comte's views,
I was curious to learn more definitely what these were."  

George Eliot's first published reference to Comte is to be found in the opening paragraph of her first essay for the Westminster Review, on "The Progress of the Intellect" (January 1851), in which she claims the truth of Comte's view "that the theological and metaphysical speculation have reached their limit, and . . . the only hope of extending man's sources of knowledge and happiness is to be found in positive science, and in the universal application of its principles." Eliot did qualify her agreement with the warning that positivism should not obviate the necessity of an historical viewpoint, a study of the "true process of development"—a point later to be reiterated by her evolutionary friend Herbert Spencer. Eliot had concluded her review of Martineau's translation of the Cours with an exhortation: "May this work find its way to every sincere student of philosophy!" As with her enthusiasm for Mill's Logic, George Eliot was a "sincere student" of Comte well before her first meeting with his English disciple, George Henry Lewes. It seems a likely possibility that her first acquaintance with Comte came through Mill's Logic.  

Having established the biographical interweaving of these two, I would now like to turn more directly to the relationship between the System of Logic and the Cours de philosophie positive, to trace both some sympathetic resonances between the two works and some very consequent areas of disagreement. These Victorians were attracted to Comte's positivism for many of the same reasons they read Mill; but it is in the significant differences between the two thinkers that they found much of what was in fact most attractive to them in Comte. Like Mill's Logic, the Cours made the radical claim that the scientific method could be extended far beyond the laboratory—to psychology, ethics, social science. Unlike Mill, Comte was willing to carry the implications of this claim to their logical limits.

In Auguste Comte and Positivism, Mill provides an excellent starting point for any discussion of the major tenets of the Cours. By juxtaposing Mill's definition of the fundamental
doctrine of positivism with my above discussion of the *Logic*, it becomes clear just why Mill read and re-read the *Cours* with such “passion intellectuelle”:

We have no knowledge of anything but Phaenomena; and our knowledge of phaenomena is relative, not absolute. We know not the essence, nor the real mode of production, of any fact, but only its relations to other facts in the way of succession or of similitude. These relations are constant; that is, always the same in the same circumstances. The constant resemblances which link phaenomena together, and the constant sequences which unite them as antecedent and consequent, are termed their laws. The laws of phaenomena are all we know respecting them. Their essential nature, and their ultimate causes, either efficient or final, are unknown and inscrutable to us.

Comte’s positivism, like Mill’s logic, is predicated upon “the uniformity of the course of nature.” Like Mill, Comte seeks for methodological unity in the midst of nature’s diversity: Mill’s universal causation is essentially one with Comte’s positive law. Comte’s method, like Mill’s, has significant theological implications; just as Mill denies we can know the “ultimate mode of production of phaenomena,” Comte disclaims “ultimate causes.” Comte makes the heterodox consequences of his philosophy more explicit than does Mill, however, in asserting the fundamental positivistic law of the three stages. According to Comte, every branch of our knowledge “passes successively through three different theoretical conditions: the theological, or fictitious; the metaphysical, or abstract; and the scientific, or positive.” Once the positivistic apotheosis is reached, the outmoded theology and metaphysics of past ages will be easily jettisoned.

The second central tenet of the *Cours*, Comte’s famous hierarchy of the sciences, is closely linked to this three-stage process. Each book of the *Cours* is devoted to one of the six sciences, in an ascending hierarchy: mathematics, astronomy, physics, chemistry, biology, and “social physics.” Comte’s principles of organization can be categorized in several ways: he moves along a spectrum from the most abstract (mathemat-
ics) to the most concrete (the social sciences); or from the most
deductive to the most inductive; or from the inorganic to the
organic. Comte believes that each science, at its own pace,
must go through the three stages: again, one can range
Comte's sciences along a spectrum, from mathematics, which
was always purely "positive," to Comte's own newly-defined
science of "social physics," which according to him had yet to
emerge from the murky metaphysical realm—that is, prior to
Comte. Like Mill, Comte believes that man—both individ­
ually, through a scientific psychology; and collectively, by
means of "social physics" (Mill's "ethology")—can be studied
according to the same "positive" or empirical experimental
principles as constellations or chemical reactions.

But this brief summary must emphasize that Comte's fun­
damental concern is with identity rather than diversity. After
all, Comte's positivist is engaged in much the same essential
occupation as his theologian or his metaphysician: "to repre­
sent all phenomena as particular aspects of a single general
fact"; "to find the one rational order among a host of possible
systems." The difference merely lies in the monistic principle
of explanation: the theologian's God has been transformed
into Comte's Law. This same impulse toward unity character­
izes the Comtean hierarchy: the sciences are "branches from a
single trunk." Once they reach the positive stage, all science
becomes one: "The only necessary unity is that of method." 67

Induction and deduction will work together in the concrete
deductive method; observed scientific particulars find true har­
mony with reasoned generalizations. Lewes sums up this pos­
itive promise in the *Biographical History*:

In the present state of things the speculative domain is composed
of two very different portions,—general ideas and positive sci­
ences. The general ideas are powerless because they are not posi­
tive; the positive sciences are powerless because they are not gen­
eral. The new [Positive] Philosophy . . . is destined to put an
end to this anarchy, by presenting a doctrine which is *positive*,
because elaborated from the sciences, and yet possessing all the de­sired *generality* of metaphysical doctrines, without possessing
their vagueness, instability, and inapplicability. 68
Social science stands at the apex of Comte's hierarchy; it deserves its exalted rank because it is at once the most general and the most particular of sciences. As Eliot writes in her essay on "The Natural History of German Life" (1856), "Social science, while it has departments which in their fundamental generality correspond to mathematics and physics, namely, the grand and simple generalizations which trace out the inevitable march of the human race as a whole . . . has also, in the departments of government and jurisprudence, which embrace the conditions of social life in their complexity, what may be called its Biology." According to Comte, social science effects the fullest identity of organic and inorganic. It is the study of "man or humanity," in which "sociology is subordinated to the whole of organic philosophy, which discloses to us the laws of human nature," but equally addresses the "medium or environment" in which man lives, a subject that "is connected with the whole system of inorganic philosophy." Thus social science takes the via media, between man and his environment, organism and medium: "The study of the external world and of man is the eternal business of philosophy, and there are two methods of proceeding: by passing from the study of man to that of external nature or from the study of external nature to that of man. Wherever philosophy shall be perfect, the two methods will be reconciled."

Herein, I believe, lies Comte's potent appeal to a Victorian frame of mind characterized by a strong mediating sensibility. In reconciling psychology and natural history, attempting to study man the organism within a social medium, Comte parallels Coleridge's notion of individuation, the idea that the highest form of development is that in which each individual is most uniquely himself, yet simultaneously most fully integrated into the whole: "The superiority of the social to the individual organism is . . . the more marked speciality of the various functions fulfilled by organs more and more distinct but interconnected, so that unity of aim is more and more combined with diversity of means." The foundations are laid for a cosmology in which universal causation unifies the macro-
cosm and the microcosm within a single model.

Lewes summarizes it well in his chapter on "Passage from Inorganic to Organic" in Comte's Philosophy: "Thus in an ascending series of evolutions from the simple to the complex . . . we learn to gather the phenomena of the universe into one majestic Whole, and learn that all lines of demarcation are subjective only."\(^72\)

Lewes's choice of the word "subjective" provides the clue to Mill's ultimate divergence from Comte. Mill recognized in the Cours a foreshadowing of the more mystical tendencies of Comte's later work, the attempt "to systematize . . . knowledge from the human or subjective point of view, the only one, he contends, from which a real synthesis is possible." Mill objects on two grounds: to the subjectivity, and to the synthesis, both of which are entirely too near a monistic mysticism for Mill's reasoned empiricist taste. Mill finds Comte's "ethical science" dangerously "metaphysical." He even goes so far as to claim that Comte relies on the "a priori philosophy," "erecting a mere creation of mind into a test or norma of external truth."\(^73\)

Significantly for my purposes here, Mill detects a fundamental sympathy with Comte's departure from a posteriori empirical reasoning in Herbert Spencer's "Universal Postulate." In Auguste Comte Mill bemoans this peculiar hybrid—what we might call a positivist metaphysics—as it manifests itself, not in "those who still adhere to the old opinions," but in "one of the most vigorous as well as the boldest thinkers . . . full of the scientific spirit, Mr. Herbert Spencer"; and, "following in his steps," that "able expounder of the positive philosophy . . . Mr. Lewes," both of whom contend "that the ultimate test of the truth of a proposition is the inconceivableness of its negative." Mill ruefully concludes that "when those from whom it was least to be expected" turn from the objective to subjective grounds of proof, "we must admit that the metaphysical mode of thought still rules in higher philosophy, even in the department of inorganic nature, and far more in all that relates to man as a moral, intellectual, and social being."\(^74\)
Thus John Stuart Mill finally remains more fundamentally Benthamite than Coleridgean, strongly committed to the association psychology of his empiricist predecessors. Comte's position is quite different: when he turns to the "Intellectual and Moral, or Cerebral Functions" in the Cours, he launches a direct attack on the "fundamental principles of interior observation" of the association psychologists; "the absurdity of the supposition of a man seeing himself think." Furthermore, says Comte, this approach to psychology has another "radical fault": "a false estimate of the general relations between the affective and the intellectual faculties." Comte contends that all prior approaches to psychology have erred in making "the intellect . . . almost exclusively the subject of their speculations." To the contrary, Comte asserts, "daily experience shows that the affections, the propensities, the passions, are the great springs of human life." The opposition between Comte and Mill on this point is striking: "To say that men's intellectual beliefs do not determine their conduct, is like saying that the ship is moved by the steam and not by the steersman," counters Mill.

Let me pause here. I have traveled some distance from the point at which this discussion of the Cours de philosophie positive began: Mill's summary of the fundamental doctrine of positivism, with its reasoned, constant sequences of antecedent and consequent, its positivist laws that had so much in common with Mill's universal causality, its promise of the positivistic millennium in which the scientific or experimental method will rise newborn from the dead husks of outmoded theology and metaphysics. Yet are not the "affections," "propensities," and "passions" more at home in the sanctuary of the Christian theologian or the metaphysical speculations of the romantic nature-worshipper?

This same potential confusion can be found in Comte's critics. After accusing Comte of "concessions to the metaphysical method," "follow[ing] Kant" in admitting the unknowable, "essences beyond our comprehension," A. W. Benn then goes on to claim positivism as nothing new to England, but rather
"resuscitating old ideas originally peculiar to this island and afterwards discredited by the religious revival." Benn finds Comte's philosophy presaged in Hume's *Essay on Human Understanding* and Brown's *Treatise on Cause and Effect*, and considers positivism an offshoot of eighteenth-century empiricism rather than romantic transcendentalism. Conversely, in defining positivism for *The Encyclopedia of Philosophy*, Nicola Abbagnano begins by stating that "it opposes any kind of metaphysics and . . . any procedure of investigation that is not reducible to scientific method," but goes on to point out that positivism has affinities with the "absolute idealism" of the nineteenth century, and "belongs with it in the general range of romanticism." As early as 1860, Lewes summed up the characteristic confusion of the Comtean critic: "Comte is frequently written against by those who know him only at second hand, as offensively dry, hard, materialistic, and irreligious; while by those who have more or less acquainted themselves with his writings, he is frequently condemned as a mystical, sentimental, and despotically moral pontiff." What is Comte? — a pantheistic idealist, or an empirical logician — or both?

Let me first present the simple solution, which has had considerable currency among both Comte's contemporaries and later historians, disciples and critics alike. This explanation could be termed "the two Comtes." It accounts for the divergence temporally: the early Comte of the *Cours*, with its emphasis on science and philosophy, and the later Comte of the *Politique Positive* (1851–54) and beyond, the "moral pontiff" of the "Religion of Humanity" (a religion replete with all the ceremonial trappings, including prayers to the new "Father"—Auguste Comte!). W. M. Simon has recounted the inbred warfare among Comte's English disciples after the first wave of philosophical and scientific Comteans, led by Mill and Lewes, gave way to the more "religious" leadership of Richard Congreve. The religion of humanity is "Catholicism minus Christianity," sneered T. H. Huxley; on the contrary, retorted Congreve: it is "Catholicism plus science."
There was, undeniably, a considerable distance between the *Cours* and Comte's later, more messianic, thought. Lewes provides an apt analogy from the annals of the Oxford movement to suggest the wide range of applications for the term "positivist": "It is as if the disciples of Dr. Newman who refused to follow him to Rome, were confounded with the disciples who followed him everywhere."\(^{82}\) Lewes may have been an early believer in the *via media*, but he never went over to Rome. Yet as early as 1852, reviewing the recently-published *Système de Politique Positive* for the *Westminster Review*, Lewes himself suggested that the seeds of the "second" Comte were already present in the "first": "This regeneration, though extremely important, is only a *development*, not a *change* of view: all that he now preaches he preached before. . . . In his [Cours de] 'Philosophie Positive,' he elaborated from the sciences a philosophy of science; in his 'Politique Positive,' he aspires to convert that philosophy into a religion." Although his objections to the more literal realizations of Comte's religion were legion, Lewes praised the *Système* for its consistent reiteration of the same view of human nature to be found in the *Cours*: "that intellect is not the highest aspect of humanity, and that it must be the servant, not the lord, of the heart."\(^{83}\)

Indeed, Auguste Comte was capable of inspiring an emotional conversion experience long before his post-*Cours* proclamations of positivist priests and prophets. In 1851 Harriet Martineau finished her *Letters on the Laws of Man's Nature and Development*, a book predicated on "the grand conception,—the inestimable recognition,—that science, (or the knowledge of fact, inducing the discovery of laws) is the sole and the eternal basis of wisdom—and therefore of human morality and peace." Thus predisposed she opened the *Cours de philosophie positive* for the first time. As she recounts the "rapture" she experienced in the process of her translation, Martineau provides a case in point of Comte's affective supremacy: "Many a passage of my version did I write with tears falling into my lap." Writing to Maria Weston Chapman, Martineau states explicitly that her positivism was a product
of faith, not doubt: "Positive philosophy is at the opposite pole to skepticism . . . it issues in the most affirmative (not dogmatical) faith in the world, and excludes unbelief as absolutely as mathematical principles do . . . positive philosophy is, in short, the brightest, clearest, strongest, and only irrefragable state of conviction that the human mind has ever attained." In her preface to the translation, Harriet Martineau speaks directly to the emotional needs fulfilled by the *Cours* in an age "alienated for ever" from the old faiths, finding in Comte a tonic "to retrieve a vast amount of wandering, of unsound speculation, or listless or reckless doubt, and of moral uncertainty and depression." Yet Martineau's preface reveals at the root of this emotive salvation a set of beliefs as intellectual, as rational, as logical as Mill's universal causality could require. The redemption that Comte offers Martineau takes a distinctly reasoned tone: "We find ourselves suddenly living, not under capricious and arbitrary conditions, unconnected with the constitution and movements of the whole, but under great, general, *invariable laws*, which operate on us as part of the *whole*," she writes.

Thus the appeal of the *Cours* to these Victorians in the 1840s and early 1850s was on one hand identical with that of the *Logic*: the promise that regular, rational laws rule the universe and that thus the methods of natural science could be extended to new human sciences. This new positive plan would account for the particularity of the individual at the same time that each individual could be viewed as part of the larger whole—both the whole of society, and even more important, the whole of inorganic and organic creation. But Auguste Comte does not so much controvert John Stuart Mill as he goes one step further: where Mill, like Comte, seeks to reconcile deductive with inductive methods, experiment and observation with abstract reasoning, particular with general, Comte extends the mediating impulse even further, to attempt a more fundamental reconciliation of intellect and emotion.

Comte's philosophy was as likely to be repudiated by the scientist as by the theologian. "Men of science will reject with a
sneer the subordination of the Intellect to the Heart,—of Science to Emotion,” writes Lewes, “and the unscientific, feeling the deep and paramount importance of our Moral Nature, will be repelled from a philosophy which rests solely upon a scientific basis.” It is Comte, not Mill, who is finally the true heir to the Coleridgean communion of intellectual and moral. “Logic and Sentiment—to use popular generalizations—have long been at war, and men reject Comte’s system, because it seeks to unite them,” asserts Lewes in his preface to *Comte’s Philosophy.* Coleridge’s description of his ideal system could be grafted neatly onto Comte’s: “a Philosophy, that will unite in itself, the warmth of the mystics, the definiteness of the Dialectician, and the sunny clearness of the Naturalist, the productivity of the Experimenter and the Evidence of the Mathematician.”

Basil Willey has written that “Comte is, in a sense, the century in epitome, so that to study him is to find the clue to much that the Zeitgeist . . . was doing.” Mill’s universal causation articulated a fundamental premise upon which this Victorian world view was founded. But Auguste Comte both qualifies and extends that premise. In so doing he provides the prototype of both the temperamental and the intellectual foundations for the applied science, new faiths, and synthetic philosophies shared by this Victorian circle.

NOTES


7. Mill, Earlier Letters, 13:628. Mill writes Parker, "I have a very high opinion of Mr. Lewes's qualifications for undertaking it."


11. George Eliot to Mr. and Mrs. Charles Bray, George Eliot Letters, 1:310, 363. Her letters reveal that Eliot was to re-read the Logic at least once more, in 1866, and to write in 1875 that she had studied it "with much benefit" (4:233; 5:163).


15. See Spencer, Autobiography, 1:482. The "Universal Postulate" appeared in the Westminster Review 60 (October 1853):515-50. As Eliot read "The Universal Postulate," she volunteered a "better form for the axiom which is the basis of the syllogism as explained by Mill"; Eliot told Sara Sophia Hennell that Spencer responded to her suggestion with "intense delight," claiming "how important [it] was to him in his work on Psychology" (George Eliot to Sara Sophia Hennell, George Eliot Letters, 2:145). He acknowledged the assistance of this "distinguished lady—the translator of Strauss and Feuerbach" in The Principles of Psychology itself (p. 162 n; see also Haight, George Eliot Letters, 1:145 n).


17. Alfred William Benn, The History of English Rationalism in the Nineteenth Century (London, 1906), 1:431-32. Benn's lucid and valuable work is the only study that discusses all the members of this Victorian circle.

18. Mill, Autobiography, p. 135. This is what Spencer also claims to do in The Principles of Psychology.

In her essay on "The Future of German Philosophy," George Eliot similarly claims that "a system of logic . . . which assigns the first place to general ideas . . . inverts the true order of things"; "universality" has its "origin purely in the observations of the senses" (in Pinney, p. 151).


34. Charles Bray, *Phases of Opinion*, p. 66. Similarly, Henry George Atkinson writes of Mill's "lamentable" "inability to discern the value of physiology as the necessary and essential basis of mental science" (letter to Charles Bray, in *On Force*, p. 164).
37. This conversion by contraries was characteristic of Spencer. Similarly, he was converted to Lamarckism by reading Lyell's attack on Lamarck (see *Autobiography*, 2:7).
41. Eliot, "More Leaves," 365. Pinney dates these essays between 1872-73, but I would suggest it more likely that they were written around December 1876, the date in Eliot's copy of Locke's *Essay*; they abound with references to Locke. I print here the Rackham translation from the Loeb Classical Library; in Eliot's Ms. the passage is in the original Greek.


56. George Eliot to John Chapman, *George Eliot Letters*, 2:132. See also 2:126 n; Eliot’s copy of Lewes’s *Comte* is inscribed “Marian Evans from G. H. L."

57. “It is true that Harriet Martineau’s style is admirably adapted for the people, clear, spirited, idiomatic, but I should have less confidence in the equal fitness of her calibre of mind for rendering a trustworthy account of Comte’s work” (George Eliot to John Chapman, *George Eliot Letters*, 1:361).


60. Spencer, *Autobiography*, 1:517; though Spencer ultimately proved no more receptive, concluding that “the only indebtedness I recognize is the indebtedness of antagonism” (ibid.). Eliot did write to Bray that Spencer, “who never praises but upon compulsion,” had at least acknowledged Martineau’s translation “perfectly lucid” (*George Eliot Letters*, 2:140).


63. In her journal for 7 June 1865, Eliot mentions she is reading Mill’s “second article on Comte, to appear in the Westminster,” lent her by Herbert Spencer (George Eliot Letters, 4:196). Although my study is limited to the *Cours*, let me note here that her interest in Comte was lifelong (see *George Eliot Letters*, 7:326, 335, 341). Only weeks before her death, she was reading Bridges’ translation of the *Politique* aloud with husband John Walter Cross, who was to write afterwards: “For all Comte’s writings she had a feeling of high admiration, intense interest, and very deep sympathy. I do not think I ever heard her speak of any writer with a more grateful sense of obligation and enlightenment” (quoted in Simon, *European Positivism*, p. 211).


64. In his *History of Rationalism*, Benn discusses the *Logic* and the *Cours* side-by-side, asserting the significance of their convergence in “rescuing the physical sciences from pietistic or hypocritical specialists” (1:449).


NOTES


68. Lewes, *Biographical History*, p. 779. Eliot echoes Lewes in her essay on "The Natural History of German Life": "In the various branches of social science there is an advance from the general to the special, from the simple to the complex, analogous with that which is found in the series of sciences, from mathematics to biology" (*Westminster Review* 66 [1856]), rpt. in Pinney, 289-90.


71. Comte, *Cours*, pp. 163, 270. Note the similarity here to Coleridge's "individualization."


75. Comte, *Cours*, pp. 184, 185.


80. "Great Teacher and Master, Auguste Comte, Revealer of Humanity to all her children, Interpreter of her Past, Prophet of her Future, Founder of her Religion, the one, the Universal Religion" (quoted in Simon, "Auguste Comte's English Disciples," p. 167).

"In fact," observed one Comtean worshipper at Congreve's services, "it was just like a church: there was Lord Houghton fast asleep" (Spencer, *Autobiography*, 2:110-11).


85. Harriet Martineau, "Preface" to Auguste Comte, *Cours de philosophie positive* (London, 1885), 1:v, x.; my emphasis.

86. Lewes, *Comte's Philosophy*, p. 5.

87. Basil Willey, *Nineteenth Century Studies* (1949; rpt. New York, 1966), p. 188. Appropriately, Willey's description of Comte is a direct echo of his words on Coleridge: "Coleridge's literary and spiritual insight placed him upon a point of vantage from which he could overlook the nineteenth century in front of him, and reply in advance to all that the Zeitgeist would thereafter bring forward" (p. 40).