

ROUTLEDGE STUDIES IN NINETEENTH-CENTURY
PHILOSOPHY

Mill's A System of Logic

Critical Appraisals

Edited by
Antis Loizides



Mill's *A System of Logic*

John Stuart Mill considered his *A System of Logic*, first published in 1843, the methodological foundation and intellectual groundwork of his later works in ethical, social, and political theory. Yet no book has attempted in the past to engage with the most important aspects of Mill's *Logic*. This volume brings together leading scholars to elucidate the key themes of this influential work, looking at such topics as his philosophy of language and mathematics, his view on logic, induction and deduction, free will, argumentation, ethology and psychology, as well as his account of normativity, kind of pleasure, philosophical and political method and the "Art of Life."

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Critical Appraisals
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Mill's *A System of Logic* Critical Appraisals

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Foreword

Mill's reputation as a philosopher—as against a noble figure and public thinker—went through a very bad batch in the earlier half of the twentieth century. In contrast, it has been recovering remarkably over the last forty years or so. The pattern is not particularly unusual. *Post mortem* slides of reputation, typically accompanied by severe or even perverse misunderstandings, seem to happen quite regularly to influential philosophers, especially to great philosophers who have a comprehensively worked-out view across the whole of philosophy. Locke, Hume, Kant and Hegel all come to mind. There is something in the sheer scale and breadth of their work, the daunting demand to grasp it as a whole, that discourages and dispirits a reader. Moreover, when vast comprehensiveness combines with great influence it is bound to annoy in some respect or other across the range of topics of which it treats—especially if it incorporates active political polemicism and attracts an admiring crowd, as in the case of Mill.

Still, even though Mill's reputation has been recovering for some time, the recovery has not yet reached the full range of his philosophy. There are signs of change, there is interest in Mill's treatment of a few disconnected topics outside moral and political philosophy, yet, overall, contemporary interest in Mill remains too one-sidedly restricted to his ethical and political writings. This is unfortunate. It is important to develop and familiarize an accurate picture of Mill as a *philosopher*, a philosopher who sought to integrate his interests in ethics and politics into his overall philosophy, rather than as a primarily political thinker with somewhat unaccountable side interests in philosophy. Mill worked out quite fully a naturalistic liberal humanism. Its epistemological side is just as important as its ethical side, today as in his own time. Critics as well as proponents should aim to understand it accurately and in detail. Nor is this just about understanding Mill. A balanced understanding of how philosophy developed in the nineteenth century must take proper account of the substance and point of the *A System of Logic* and the *Examination of Sir William Hamilton's Philosophy*.

These two works took up a large amount of Mill's time and thought. Coming toward the beginning and towards the end of his career, they are the groundwork of his standing as a philosopher. In them he expounds his

philosophy of language, his naturalistic epistemology, his account, within that naturalistic and semantic framework, of induction, logic and mathematics, his conception of the moral sciences, his view of aprioricity and necessity, his phenomenalistic metaphysics. Both works have to be studied to get a full view of Mill as philosopher—nonetheless, all the topics just mentioned apart from the last can be found in the *System of Logic*. I would not want to condone neglect of the *Examination*, since behind its unappetizing title there lies some of Mill's most penetrating and probing thought. Still, the *System of Logic* is the work to which he gave the most time in his years of first maturity, and it is, as it says it is, a systematic treatise, whereas in the *Examination* Mill's own views are set out in the context of a sometimes strident polemic against Hamilton.

Mill himself thought that his two longest surviving works would be the essay on *Liberty* and the *System of Logic*. But whereas work on *Liberty* never comes to an end, and can sometimes seem to be multiplying *praeter necessitate* (I am, I admit, one of the culprits), work on the *System of Logic* cries out to be done. There is scholarly work to do—and the time is ripe to do it. For one thing, the history of philosophy has begun to move on, having fully caught up with Kant, to the fascinating complications of the nineteenth century. For another, current pluralism and diversity in philosophy makes it much easier to appreciate Mill, along with other nineteenth century philosophers, than was possible fifty or more years ago, when philosophical orthodoxy was so strongly at odds with most of their views, and certainly with Mill's.

It is extremely encouraging to see this renewal taking place. Mill's reputation as a philosopher who dealt comprehensively with the questions of philosophy is important even for his reputation as a moral philosopher. A just estimate will I believe show his philosophy to be one of the cornerstones of nineteenth century thought, still fresh and interesting today. I hope and believe that this excellent collection of papers will move his reputation strongly forward, and as one of the admirers of Mill I am grateful to the editor and contributors for the hard work they have devoted to a very worthwhile task.

—John Skorupski

Preface

John Stuart Mill's *A System of Logic* (1843) established him as a leading figure among his peers, dominating university education in the second half of the nineteenth century. He himself considered the *Logic* as the methodological foundation or intellectual groundwork for his later works in economic, ethical, social and political theory. And for the past sixty or so years Mill's ethical, social and political philosophy has been reassessed, rediscovered and even reinvented in light of it. It is a book that Mill saw through the press several times, each time making substantial revisions. Since Mill claimed, while in the process of writing it, that he was a "Logician" rather than anything else, the *Logic* became more than just a book—it was the book that would set the terms of the intellectual renovation he sought. As the Introduction to this volume discusses, the *Logic* was greeted as a monumental contribution to philosophical studies of the time, by friends and foes alike. Criticism was almost never absent, but no one ever questioned that they were "in the presence of a master."

A conscious effort has been made to enlist to this project individuals who have worked previously on Mill, could give a good look at Mill's *Logic* from the inside and could make connections between the *Logic* and other aspects of Mill's thought (and influence), as well as scholars with expertise on subjects with which Mill engaged in the *Logic* but who could have a critical look on Mill from the outside and make connections between Mill and contemporary analytical philosophy. The benefits of such a combination of expertise seemed to outweigh the costs—but whether it indeed did or not, remains to be seen. Moreover, as Mill's *Logic* touches upon an immense range of subjects, the contributions to this volume do not attempt to cover, or uncover, all of its aspects. Although much remains to be done—both philosophically and historically—for a full exploration of Mill's *Logic*, the volume does pay particular attention to some of its most important themes.

In Chapter 1, Stephen P. Schwartz critically examines Mill's theory of names, especially Mill's theory of proper names and of general terms. Schwartz brings out both the advantages and the shortcomings of Mill's theories compared with contemporary theories in the philosophy of language. In Chapter 2, Steffen Ducheyne and John P. McCaskey explore the sources and highlight the traditions that were important for Mill's *Logic*; they discuss how Mill reacted against certain traditions and trends as far as his views on ratiocination and

induction are concerned. In Chapter 3, Mark Balaguer shows that Mill's philosophy of mathematics cannot account for contemporary mathematics or even the mathematics of his own day and attempts to offer an explanation for what Mill should have said about mathematics, given his background philosophical commitments. In Chapter 4, Elijah Millgram examines the famous exchange between Mill and William Whewell. The Mill-Whewell debate has traditionally been cast as a disagreement about whether inference to the best explanation has a place in science, but Millgram suggests that it is best understood as the clash of competing views in the philosophy of logic. In Chapter 5, Frederick Rosen highlights the philosophical tradition, associationist psychology and utilitarian logic, in which Mill wrote by focusing on his thirty-year relationship with Alexander Bain, which is depicted in terms of a double helix, linking Mill's *System of Logic* of 1843 with Bain's *Logic* of 1870. In Chapter 6, Bernard Berofsky examines Mill's theory of free will, comparing it to that of David Hume. Berofsky suggests that an adequate defense of the regularity theory, which has failed to satisfy critics, resting on a revised account of systematization may be found in the comments of Mill himself. In Chapter 7, Christopher Macleod compares Mill and Kant as regards their appeal to the validity of our spontaneous propensities as reasoning agents; Macleod offers an interpretation of Mill's account of theoretical and practical reason that attempts to do justice to the neglected fact that Mill's demonstration of the principle of utility runs parallel to his demonstration of the principle of induction. In Chapter 8, Jonathan Riley makes use of Mill's *System of Logic* to clarify what Mill means by different kinds of pleasures, and to confirm that, for him, a difference of quality is an infinite difference, that is, an intrinsic difference irrespective of quantity. In Chapter 9, Hans V. Hansen takes the view that Mill's contributions to informal logic and the study of argumentation are considerable. Not only did Mill's work, Hansen argues, contribute to the practice of argumentation, it was also an important precursor of the development of informal logic in the late twentieth century. Chapter 10 examines whether the method of politics Mill sketched in *Logic* corresponds to the one employed in his *Considerations of Representative Government*; to this effect, the discussion draws on Mill's discussion of the method appropriate to arts and sciences and his criticisms of the traditional methods of politics, either deductive or inductive. Finally, Chapter 11 forms Alan Ryan's "second sailing" with Mill's "Art of Life," revising some ideas on this aspect of Mill's thought that originally appeared fifty years ago, when he first engaged with Mill's architectonic *technê* of living.

I would like to express my gratitude and indebtedness to all contributors for their willingness to participate in this project, their hard work preparing their chapters (and related tasks) and their patience with unforeseen delays. I am especially indebted to John Skorupski, Alan Ryan, Jonathan Riley, Fred Rosen, Stephen Schwartz, Elijah Millgram, Georgios Varouxakis and Kyriakos Demetriou for advice and guidance during the completion of this project. Hopefully, this volume will prove to be useful and interesting to all students of John Stuart Mill, of the history of philosophy and of philosophy in general.

Introduction

Antis Loizides

Twenty two years after its original publication in 1843 a sixth edition of John Stuart Mill's *A System of Logic* appeared in bookstores and on bookshelves. By then Mill was confident, though reluctant to admit it publicly, that all that he had to worry about was "how to make the best use of my influence during such years of life & work as remain to me."¹ Already by 1847, the *Logic*'s success had given Mill much "capital," i.e., much leeway with publishers, that he could spend by promulgating radical opinions which would offend and scandalize "ten times as many people as" they pleased² and which would eventually establish him as "one of England's greatest sons."³ Two more editions of the *Logic* appeared before his death on 8 May 1873, twelve days short of his sixty-seventh birthday. Surveys of Mill's life and works would soon parade through the press. For some, Mill was "[t]he great intellectual pointsman of our age"; he was "the man who has done more than any other of this generation to give direction to the thought of his contemporaries." "[W]e are left," the commentator added, "to measure the loss to humanity by the result of his labours."⁴ The two works selected by Mill himself to survive longer than anything else he had labored on were *On Liberty* (1859) and *A System of Logic*.⁵

Seldom do students of Mill's works pause and think just how much Mill had worked on *A System of Logic*, taking fifteen years from inception to completion.⁶ For most, at the time, Mill's *Logic* was "inestimable" and "a revolution."⁷ Some were not so generous; according to Abraham Hayward, Mill's *Logic* was "a book which no one would read for amusement, hardly, indeed, except as a task; his style, always dry, is here at its driest." However, Hayward did note that "the circumstance of the work having reached an eighth edition in 1872 is, therefore, a conclusive proof of its completeness as a system and a text-book." Still, Mill, the author concluded, "with all his errors and paradoxes, . . . will be long remembered as a thinker and reasoner who has largely contributed to the intellectual progress of the age." Hayward's estimate of Mill's accomplishments, being part of a stinging—to say the least—*Times* obituary, had caused great annoyance among Mill's admirers and friends. However, it is indicative of Mill's status in the late

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nineteenth century that Hayward's claim regarding the "completeness as a system and a text-book" of the *System of Logic*—a very contentious claim to make by 1873—was never challenged; rather it was deemed insufficient to balance the charges of dryness, error and paradox.⁸

It is quite difficult, if it is even possible at all, to estimate Mill's contribution "to the intellectual progress of the age"; more so with regard to isolating the impact of one specific work by a prolific writer such as Mill—Mill's "methods" being of no help here. Nevertheless an attempt must be made at such an assessment, focusing on some aspects of the reception of Mill's *Logic*—however imperfect and incomplete that attempt may be.

I.

The story of Mill's early study of logic found in his *Autobiography* (1873a) is well known⁹—though perhaps not as well known as his story of his learning ancient Greek and of first reading Plato at the ages of three and seven respectively.¹⁰ In his critical biography of Mill, Alexander Bain (1818–1903) found Mill's early training in logic, commencing at twelve with Aristotle's *Organon*, "the one thing, in . . . [Bain's] judgment, where Mill was most markedly in advance of his years." Comparing Mill with his contemporaries, Bain claimed that he had "never known a similar case of precocity." Mill had not only "read treatises on the Formal Logic, as well as Hobbes's *Computatio sive Logica*, but . . . he was able to chop Logic with his father in regard to the foundations and demonstrations of Geometry."¹¹ In contrast, Bain was not quite as impressed with regard to Mill's attainments in Greek, noting that Mill's early reading "could be nothing but an exercise in the Greek language." The two stories however interconnect. And Mill made it clear how:

The Socratic method, of which the Platonic dialogues are the chief example, is unsurpassed as a discipline for correcting the errors, and clearing up the confusions incident to the *intellectus sibi permissus*, the understanding which has made up all its bundles of associations under the guidance of popular phraseology.¹²

Mill's "strong relish for accurate classification," acquired by school logic and Plato's dialogues, was another sense in which his early education was a "course of Benthamism." Most importantly, the application of the Benthamite standard of the "greatest happiness" to law, ethics and politics (to which Mill was referring when he argued that his early education had been a "course of Benthamism") came a few years later than that of studying the

close, searching *elenchus* by which the man of vague generalities, is constrained either to express his meaning to himself in definite terms, or to confess that he does not know what he is talking about; the perpetual

testing of all general statements by particular instances; the siege in form which is laid to the meaning of large abstract terms, by fixing upon some still larger class-name which includes that and more, and dividing down to the thing sought—marking out its limits and definition by a series of accurately drawn distinctions between it and each of the cognate objects which are successively parted off from it[.]¹³

According to Mill, dissecting bad arguments and identifying fallacies was the “first intellectual operation in which . . . [he] arrived at any proficiency.”¹⁴ As this is not the place to pursue the link between Mill’s Socratic and logical studies in any depth,¹⁵ suffice it to say that his proficiency in logic did come in handy in the “polemics of the day.” Bain was right in claiming that Jeremy Bentham (1748–1832) and James Mill (1773–1836) were at “war against vague, ambiguous, flimsy, unanalyzed words and phrases . . . in the wide domains of Politics and Ethics.”¹⁶ And this was a battle in which the younger Mill joined, with “Socratic dialectics” as the weapon of choice.¹⁷ As we shall see later on, Mill’s *Logic* was intended as a blow both to intuitionist ethico-political views as well as their metaphysical underpinnings.

In Bain’s “estimate of Mill’s genius,” Mill “was first of all a Logician, and next a social philosopher or Politician.”¹⁸ But Mill was not the one without being the other. William Leonard Courtney (1850–1928) seemed thus to have been closer to the truth in his own biography of Mill:

James Mill wished to educate his son to carry out his own work, to make a thinker after his own likeness, and especially to save his pupil from some of what he deemed the wasteful and unnecessary parts of his own development. The son, therefore, need not go through the same steps as the father, but commence almost at the very point which the older thinker had attained. He must begin by being at once a radical politician, a free-thinker, and a logician.¹⁹

At the height of the parliamentary reform debate, John Stuart Mill came to test the strengths of his early education—logical, economical, ethical and political—in the press, in journals, at clubs and societies; reason, the domain of logic, rather than feeling was employed in the assessment of educational, social, legal and political practices. In praise of the intellectual aspect of his early training, Mill, later in life, was “persuaded that nothing, in modern education, tends so much, when properly used, to form exact thinkers, who attach a precise meaning to words and propositions, and are not imposed on by vague, loose, or ambiguous terms” than “school logic.” However, this did not mean that school logic itself was passively received: the young Utilitarians—branded “the Brangles” by Harriet Grote (1792–1878)—took up the study of syllogistic logic as a group in the mid-1820s, aiming to master it as well as to improve it.²⁰ Around this time—and due to his “Brangles” meetings—Mill began putting his ideas for a book on logic on paper.²¹

Yet it was not the abovementioned aspect of the young utilitarians' logical studies that formed part of their general perception. At the time, all that Mill, and his friends, waving high the banner of utilitarianism, "thought of was to alter people's opinions; to make them believe according to evidence, and know what was their real interest" ("evidence" being an operative word in the Benthamic dictionary²²). Their "youthful fanaticism" and "sectarian spirit" thus led to the emergence of the caricature of a "Benthamite", i.e., "a dry, hard logical machine."²³ As Frederick Denison Maurice (1805–1872), whose insight that "all differences of opinion when analysed, [are] differences of method" guided Mill in the composition of the *Logic*,²⁴ noted in 1835: "The most University-hating priest-hating sect in England has taken Logic under its patronage; and scholastic pedantries, which would have furnished playwrights in the last age with excellent jokes against College Fellows, are now oftentimes the youthful Utilitarian's best passport to reputation." He immediately added: "The end which the Benthamites propose to themselves, is the detection of fallacies in the writings or speeches of Whigs, Tories, and, above all of Churchmen."²⁵ The error of these "dictators," Maurice argued, was setting logic up "as an *ἐμπειρία* [i.e., a skill or a routine] for the accomplishment of a specific purpose, instead of studying it as a branch of humanity," convincing only those who "had implicitly adopted all their opinions beforehand."²⁶

In his *Autobiography*, Mill admitted that Maurice's view of the Benthamites was roughly an accurate description of himself during that period of his life.²⁷ But he soon underwent a great change in his opinions, following the well-known crisis in his "mental history." Reflected in his writings at the turn of the decade, this change led Mill to seek the company of Maurice and John Sterling (1806–1844) as well as Thomas Carlyle (1795–1881)—individuals not only free from the "narrowness" of Mill's circle up to the late 1820s but also highly critical of the utilitarian sect. For this reason, while the younger Mill was engaged in writing the *Logic*, James Mill's old associates viewed the younger Mill's "enlargement-of-the-utilitarian-creed" project with skepticism; Graham Wallas reported in his biography of Francis Place (1771–1854), "the radical tailor of Charing Cross," that Place thought that the younger Mill by 1838 had "made great progress in becoming a German metaphysical mystic"; Harriet Grote herself had called John Stuart Mill in a letter to Place a "wayward intellectual deity."²⁸

However, particularly in his correspondence with Sterling and Carlyle, John Stuart Mill, as he made progress with the *Logic*, increasingly identified his "vocation" to be that of a "Scientist," rather than that of the "Artist."²⁹ He was less "wayward" than his radical friends supposed; still, the *Logic* seemed to offer an opportunity to be treated as a thinker in his own right. Writing to Carlyle in 1837, Mill noted his hope that he did not "overrate the value of anything I can do of that kind [that is, a treatise on logic] but it so happens that this, whatever be its value, is the only thing which I am sure I can do & do not believe can be so well done by anybody else whom I know

of.”³⁰ Importantly, he considered it to be part of his “task on earth” to say the things he had in mind on logic.³¹

Mill had already given a glimpse of what a writer on logic should attempt to do almost a decade earlier when asked to review George Bentham’s (1800–1884) *An Outline of a New System of Logic* (1827); that is, “not only *be* superior, but *prove* himself to be superior, in knowledge of the subject, to the author[s] whom he criticizes.” The readers, according to Mill, should see that the author differs from others on logic “because he knows more” than they do.³² Having convinced himself that he had something original to say, by 1832 he had already made considerable progress in writing the *Logic*. But he was soon led to a halt “on the threshold of Induction.” In 1837, William Whewell’s (1794–1866) books on the history and philosophy of inductive sciences gave Mill the push he needed, like Dugald Stewart’s (1753–1828) five years earlier—Auguste Comte’s (1798–1857) *Cours de Philosophie Positive* (1830–1842) provided much help too (especially with Book VI).³³ In August 1837, he was “so immersed in Logic and . . . [was] getting on so triumphantly with it that . . . [he] loathe[d] the idea of leaving off to write articles” for the *London and Westminster Review*.³⁴ The *Logic* was advancing rapidly, as Mill was untying all the “hard knots” that he found along the way.³⁵ In December 1841, following complete rewriting—which provided the opportunity to incorporate reflection on Comte’s and Whewell’s new books—Mill’s *magnum opus* was ready for the press. According to Sterling, who had written an introduction for Mill to a prospective publisher, the *Logic* was the product of “labour of many years of a singularly subtle, patient, and comprehensive mind. It will be our chief speculative monument of this age.”³⁶

Right at the outset, Mill explained that his book was a product of “practical eclecticism”;³⁷ he did not aim “to supersede, but to embody and systematize, the best ideas” on the subject. In laying no claim to originality other than this synthesis, he did acknowledge however that what he had attempted was no small feat:³⁸

To cement together the detached fragments of a subject, never yet treated as a whole; to harmonize the true portions of discordant theories, by supplying the links of thought necessary to connect them, and by disentangling them from the errors with which they are always more or less interwoven; must necessarily require a considerable amount of original speculation.³⁹

On one hand, in the early draft of his *Autobiography*, Mill confessed that “eclecticism,” “looking out for the truth which is generally to be found in errors when they are anything more than mere paralogisms, or logical blunders,” was part of his process of breaking through the narrowness of his former education. On the other hand, Mill informed the readers of his autobiography that his expectations were limited to “keeping the tradition

unbroken of what . . . [he] thought a better philosophy,” having to combat “the opposite school of metaphysics, the ontological and ‘innate principles’ school.”⁴⁰ In the past, too much stress had been given to the first, giving rise to the caricature of Mill “as a good-natured but slack-minded eclectic,” as Alan Ryan put it.⁴¹ In the last half-century or so, too much stress on the second has given rise to the caricature of Mill as a “systematizer,” one who obsessively, and ingeniously, attempted to follow wherever it led him what he “thought a better philosophy,” even when it led him to absurdities. Scholars have thus pointed out a tension with regard to Mill’s *Logic*. Did Mill want “to do justice to the opinions of philosophers outside his own tradition,” as William Kneale and Martha Kneale noted?⁴² Or were the “goals, method, and characteristic style of Mill’s philosophy . . . to a great extent intelligible in terms of his dislike of . . . intuitionism”?⁴³

In his *Autobiography*, Mill claimed that “the *System of Logic* supplies what was much wanted, a text-book of the opposite doctrine [to the “German, or *à priori* view of human knowledge, and of the knowing faculties”]—that which derives all knowledge from experience, and all moral and intellectual qualities principally from the direction given to the associations.” There was much value, according to Mill, in the “analysis of logical processes” and in “possible canons of evidence,” i.e., in what they could do “towards guiding or rectifying the operations of the understanding,”—a value of logic that Mill had come to appreciate in walks with his father while he was still growing up.⁴⁴ More than three decades later, Mill provided an insight, both as to the rationale behind writing the *Logic* and writing it the way he did, which deserves to be quoted at length:

The notion that truths external to the mind may be known by intuition or consciousness, independently of observation and experience, is, I am persuaded, in these times, the great intellectual support of false doctrines and bad institutions. By the aid of this theory, every inveterate belief and every intense feeling, of which the origin is not remembered, is enabled to dispense with the obligation of justifying itself by reason, and is erected into its own all-sufficient voucher and justification. There never was such an instrument devised for consecrating all deep seated prejudices. And the chief strength of this false philosophy in morals, politics, and religion, lies in the appeal which it is accustomed to make to the evidence of mathematics and of the cognate branches of physical science. To expel it from these, is to drive it from its stronghold: and because this had never been effectually done, the intuitive school . . . had in appearance, and as far as published writings were concerned, on the whole the best of the argument. In attempting to clear up the real nature of the evidence of mathematical and physical truths, the *System of Logic* met the intuition philosophers on ground on which they had previously been deemed unassailable; and gave its own explanation, from experience and association, of that peculiar character of what are called necessary truths, which is adduced as proof that their evidence

must come from a deeper source than experience. Whether this has been done effectually, is still *sub judice*; and even then, to deprive a mode of thought so strongly rooted in human prejudices and partialities, of its mere speculative support, goes but a very little way towards overcoming it; but though only a step, it is a quite indispensable one; for since, after all, prejudice can only be successfully combated by philosophy, no way can really be made against it permanently until it has been shewn not to have philosophy on its side.⁴⁵

However, Mill wrote of his polemical intentions in composing the *Logic* approximately a decade after the *Logic*'s original publication. The following is from his introduction to the *Logic*: "I can conscientiously affirm, that no one proposition laid down in this work has been adopted for the sake of establishing, or with any reference to its fitness for being employed in establishing, preconceived opinions in any department of knowledge or of inquiry on which the speculative world is still undecided."⁴⁶ How could Mill, in just a decade—while revising the *Logic* for a new edition—make these conflicting claims?⁴⁷

II.

Mill was not unaware that his book would be at odds with what was, as he claimed, the dominant philosophical school of the day. But to the best of his ability, he told Sterling, he tried to "keep clear" of the debate regarding "the perception of the highest Realities by direct intuition."⁴⁸ Writing to Carlyle, Mill had argued that logic was not the art of "knowing things" but "of knowing whether you know them or not";⁴⁹ discovering "truth" did not fall within the domain of logic, but deciding whether what one has found out was indeed "truth."⁵⁰ As Mill argued, his book

professes to be a logic of *experience* only, & to throw no further light upon the existence of truths not experimental, than is thrown by shewing to what extent reasoning from experience will carry us. Above all mine is a logic of the indicative mood alone:—the logic of the imperative, in which the major premiss says not *is* but *ought*—I do not meddle with.⁵¹

Restricting logic "to the laws of the investigation of truth by means of extrinsic evidence whether ratiocinative or inductive," as Mill attempted to do, would still contradict some parts "of the supersensual philosophy"—though only subordinate, not fundamental, parts.⁵² Logic offered a way of testing experience—finding that "outward standard, the conformity of an opinion to which constitutes its truth."⁵³ Mill argued that he had not developed any final thoughts on the "great matters" of the time⁵⁴—he even admitted that may have had "something to learn on this subject from the German philosophers."⁵⁵ Mill did seem to seriously take under consideration Sterling's

advice on reading a few German books on logic, contemplating postponing his plans for revising the *Logic*.⁵⁶

In his epistolary discussions with Sterling, Mill noted that understanding each other on the definition, and domain, of logic required “a good deal of explanation.”⁵⁷ Maurice, as we saw, protested to viewing logic as merely a skill; his underlying assumption seemed to be that logic combined with metaphysics would provide access to higher “truths.” Mill took up the question of the scope of logic in the *Logic*’s Introduction. First, Mill considered whether logic was the science and art of reasoning. But defining logic as the analysis of what takes place when one reasons as well as the rules, based on that analysis, for reasoning correctly (to reason, in this sense, as Mill immediately added, “is simply to infer any assertion, from assertions already admitted”—including both deductive and inductive processes), Mill answered, was too limiting.⁵⁸ Second, Mill wondered whether logic was “the science which treats of the operations of the human understanding in the pursuit of truth.” Some such operations included naming, classification, definition but also conception, perception, memory and belief. But this definition, according to Mill, included too much. The province of logic was distinct from that of “metaphysics” (i.e., trying to determine “what part of the furniture of the mind belongs to it originally, and what part is constructed out of materials furnished to it from without”). Mill did not consider the distinction between what the mind “receives from and what it gives to, the crude materials of its experience” as essential to the study of logic:⁵⁹

The province of logic must be restricted to that portion of our knowledge which consists of inferences from truths previously known; whether those antecedent data be general propositions, or particular observations and perceptions. Logic is not the science of Belief, but the science of Proof, or Evidence. In so far as belief professes to be founded on proof, the office of logic is to supply a test for ascertaining whether or not the belief is well grounded.

According to Mill, logic was nothing short than the master science, “the science of science itself”; though it does not observe, invent or discover, logic judges whether conclusions follow from data; logic illustrates the conditions under which facts may prove other facts: “Logic, then is the science of the operations of the understanding which are subservient to the estimation of evidence: both the process itself of advancing from known truths to unknown, and all other intellectual operations in so far auxiliary to this.” Mill’s aim was thus to define “a set of rules or canons for testing the sufficiency of any given evidence to prove any given proposition.”⁶⁰

Mill’s *Logic* consisted of six books. Book I dealt with names and propositions. In this Mill followed tradition, in commencing a book on logic with a discussion of terms; he argued that correct usage of language (i.e., the “signification and purposes of words”) eliminates an important source of

poor reasoning.⁶¹ At the same time, however, with the discussion of types of names (general or singular; concrete or abstract; connotative or non-connotative; relative or absolute; univocal or equivocal), Mill included a discussion of types of “nameable things” (feelings, or states of consciousness; minds; bodies; relations).⁶² What was important to logic with regard to the subject and the predicate of a proposition, Mill argued, was not the relation of two ideas but of the two phenomena that the ideas express—true propositions depended on what was denoted by the subject possessing the attributes connoted by the predicate.⁶³ In Book II, Mill began discussing the two kinds of reasoning involving such propositions: induction and ratiocination, or reasoning from particulars to generals (i.e., “inferring a proposition from propositions *less* general than itself”) and reasoning from generals to particulars (i.e., “inferring a proposition from propositions *equally* or *more* general”).⁶⁴ In his treatment of the *dictum de omni et nullo*, and the axiom that Mill favored in its place—“whatever possesses any mark possesses that which it is a mark of”—Mill laid the groundwork for his own theory of induction, against the background of the traditional relation between deduction and induction.⁶⁵ As William Hamilton (1788–1856) argued in 1833:

The Deductive and Inductive processes are elements of logic equally essential. Each requires the other. The former is only possible through the latter; and the latter is only valuable as realizing the possibility of the former. As our knowledge commences with the apprehension of singulars, every universal whole is consequently only a knowledge at second-hand. Deductive reasoning is thus not an original and independent process. The universal major proposition, out of which it develops the conclusion, is itself necessarily the conclusion of a foregone Induction, and, mediately, or immediately, an inference—a collection, from individual objects of perception, and consciousness. Logic, therefore, as a definite and self-sufficient science, must equally vindicate the formal purity of the synthetic illation, by which it ascends to its wholes, as the analytic illation by which it re-descends to their parts.⁶⁶

However, according to Mill, only induction involves “real” inference, that is, inference from known truths to unknown, since ratiocination cannot prove anything other than what is contained in the premises. Distinguishing between the registering part and the inferring part of reasoning, Mill argued that only the major premise of a syllogism can be thought as a product of inference, but in reality, even that was merely an “intermediate halting-place for the mind, interposed by an artifice of language between the real premises and the conclusion”:

All reference is from particulars to particulars: General propositions are merely registers of such inferences already made, and short formulae for making more: The major premise of a syllogism, consequently, is

a formula of this description: and the conclusion is not an inference drawn *from* the formula, but an inference drawn *according to* the formula: the real logical antecedent, or premise, being the particular facts from which the individual instances from which the general proposition was collected by induction.⁶⁷

The syllogism thus, Mill argued, involved a *petitio principii*, but there was value in the rules of the syllogism, i.e., as a “system of securities for the correctness” of the reasoning process—going from the “real” (inductive) premises to the conclusion.⁶⁸

Mill went as far as to argue that even mathematical reasoning followed the same process.⁶⁹ According to Mill, mathematical truths were not necessary, at least in the sense usually assigned to the term “necessary.” Mill argued that a person failing to conceive the opposite of a truth does not make that truth necessary—it is merely an instance of the psychological law of indissoluble or inseparable association. To this effect, whatever necessity is affirmed of arithmetic or the conclusions of geometry consists merely in that they follow correctly or legitimately from previous assumptions, whose certainty is not to be questioned. Thus the “peculiar certainty attributed” to such “truths” is an “illusion”: all first principles are generalizations from experience, and as such are dependent on evidence and observation, since no science can be “conversant with non-entities.”⁷⁰ The propositions of arithmetic and geometry are not “verbal” but “real” as they are grounded on experience.⁷¹ These mathematical sciences followed the usual route of demonstrative or deductive sciences, i.e., reasoning from hypotheses: “tracing the consequences of certain assumptions; leaving for separate consideration whether the assumptions are true or not, and if not exactly true whether they are a sufficiently near approximation to the truth.” The hypothetical element in the “Science of Number,” Mill explained, was that “all the numbers are numbers of the same or of equal units,” i.e., that $1 = 1$.⁷²

The first two books aimed at establishing Mill’s view that logic was both ratiocinative and inductive; that all inference and all proof (and all discovery of not-evident truths, but Mill did not expand on this in Books I and II) comprises of inductions and interpretation of inductions. However, this brought Mill to an important question that Books III and IV aimed at answering: under what conditions can an induction be legitimate? This was the main question of logic, according to Mill—one that had been entirely ignored.⁷³ It was a question that led Mill to attempt a “reduction of the inductive process to strict rules and to a scientific test, such as the Syllogism is for ratiocination.”⁷⁴ Mill thus attempted to provide those great desiderata in logic, identified by James Mill almost three decades prior to the publication of his son’s *Logic*: “an accurate map of the inductive process” and “a complete system of rules, as complete, for example, as those which Aristotle provided for the business of syllogistic reasoning,” aiming to direct “the inquirer in the great business of interpreting nature, and adding to the stock of human

instruments and powers.”⁷⁵ This was what the younger Mill attempted to do; and for some he did it better than other things he tried to do in *Logic*.⁷⁶

Mill defined induction as the operation of discovering and proving general propositions; it is a process of inference, proceeding from the known to the unknown, that is, “the process by which we conclude that what is true of certain individuals of a class is true of the whole class, or that what is true at certain times will be true in similar circumstances at all times.” If the whole class is already known, then there would be no induction involved, but merely a “short-hand registration of facts known,” that is a “Colligation of Facts,” in Mill’s use of William Whewell’s term. In this way, according to Mill, induction, in a scientific study, does not simply describe facts, but explains or predicts them. Drawing a correct inference from facts leads to one correct explanation (and prediction), whereas a number of descriptions may be true of a collection of facts—induction includes colligation, not vice versa.⁷⁷ Induction had a dual function—inference as well as investigation.⁷⁸

As generalizing from experience involves explanation and prediction, there is a central assumption, Mill argues, in every induction: “that there are such things in nature as parallel cases; that what happens once, will, under a sufficient degree of similarity of circumstances, happen again, and not only again, but as often as the same circumstances recur,” i.e., that the course of nature is uniform. This axiom is not a self-evident truth; it is itself an induction, a (not so obvious) generalization founded on prior generalizations. However, by being the ultimate major premise of all inductions, when put into the form of a syllogism, it is itself not proved nor does it contribute to proving the conclusion, but forms a necessary condition of the conclusion being proved.⁷⁹ The process of reaching that ultimate major premise was not unlike every other process of scientific induction. There is an “unprompted tendency of the mind . . . to generalize its experience, provided this points all in one direction; provided no other experience of a conflicting character comes unsought.” In a way, the uniformities existing among phenomena that people experience “force themselves upon involuntary recognition.”⁸⁰ Philosophers and scientists investigate those phenomena, revealing the limits of these spontaneous generalizations or showing that their truth is contingent on other previously unobserved circumstances.⁸¹

According to Mill, scientific induction gives accuracy and precision to the process of determining certain and universal inductions, beyond “the loose and uncertain mode of induction *per enumerationem simplicem*,”⁸² allowing further enquiry into causes and effects. The law of universal causation seemed to follow, or evolve, from the uniformity of nature.⁸³ Mill summarized the practice of experimental scientists in four methods (and five canons)—that are now known as “Mill’s methods”—the method of agreement, the method of difference (and the joint method of agreement and difference), the method of residues and the method of concomitant variations.⁸⁴ Mill’s underlying idea was that phenomena that regularly appear or occur together are more likely to be causally connected; these methods assisted in

the identification of causal relations, replacing—or rather, improving—the “unscientific” inductive reasoning by simple enumeration with a stricter process.⁸⁵ However, there were limits to what these experimental methods could do, especially when dealing with complex phenomena. For this reason, Mill re-introduced in his discussion a three-fold Deductive Method (induction, ratiocination, verification): reasoning from a general law to a particular case by identifying which result would fulfill the law ascertained by direct induction and then verifying it by specific experience.⁸⁶ If a hypothesis is used to fill in some blanks in the process of understanding a phenomenon, however perfectly it does, the absence of a better hypothesis does not amount to a proof of the one employed. Hypotheses can only be considered plausible conjectures in the process of making sense of chaos, i.e., by decomposing it “into single facts,”⁸⁷ at least until they meet the criteria Mill established.⁸⁸

Books III and IV, in which induction, and what Mill called subsidiary operations to it (i.e., naming, conception, abstraction, observation, etc.), took the center stage, do much to show why Mill claimed that his *Logic* was a “logic of *experience* only.” As he noted, “we need experience to inform us, in what degree, and in what cases, or sorts of cases, experience is to be relied on.”⁸⁹ Mill seemed to be taking at face value his father’s distinction, noted in the last pages of the elder Mill’s *Analysis of the Phenomena of the Human Mind* (1829), between the “theoretical” and “practical” part of the “doctrine of the human mind.” According to the elder Mill, the latter contained “the Practical Rules for conducting the mind in its search after Truth.”⁹⁰ This seems to throw some light on why the younger Mill considered himself justified in claiming, almost fifteen years after his father’s attempt to undermine the “intuition school,”⁹¹ that logic “is common ground on which the partisans of Hartley and Reid, of Locke and of Kant, may meet and join hands.”⁹² Repeating time and again that logic was the science of proof and of evidence, “the entire theory of the ascertainment of reasoned or inferred truth,”⁹³ Mill held it to be irrelevant to the debates on the “reality of Noumena, or Things in themselves.” This allowed him to claim even in 1865 that “every essential doctrine of . . . [the *Logic*] could stand equally well with” either “metaphysical” school.⁹⁴ But if he was right in 1843 in claiming that his *Logic* was “neutral,” it was only because he failed in estimating just how far his opponents’ “metaphysics” blended with their logic.⁹⁵ By 1854, when Mill was working on the first draft of his *Autobiography*, he had come to see that the *Logic* took its “place as the standard philosophical representative in English (unhappily now the only one) of the anti-innate principle & anti-natural-theology doctrines.”⁹⁶

Mill thought that he had put the fundamental “theoretical” issues that divided the partisans of the two schools aside by viewing the problem of the definition of logic to be simply a matter of choice between the narrow and the broad definitions of logic. The narrow definition viewed logic as formal logic, the logic of consistency; the broad definition had to do with what Mill called the logic of truth. In the fourth edition, more than a decade after the *Logic*’s publication, and following the first reviews of his work, he added a footnote in the Introduction acknowledging that he was working

with a different definition of logic than that used by William Hamilton and his students, i.e., logic as “the Science of the Formal Laws of Thought.” From Mill’s perspective, this definition, to be accurate, required limiting “thought” to “reasoning,” while “laws of thought” should refer to “immediate” rather than “ultimate” laws. On the other hand, this definition, Mill added, should be expanded to include “*all* the processes which the mind goes through when it proves a proposition, or judges correctly of proof.”⁹⁷ Mill’s point, as he clarified in later editions, was that he was not simply trying to construct a system of the logic “of consistency,” but that “of truth”:

The Logic of Consistency is a necessary auxiliary to the logic of truth, not only because what is inconsistent with itself or with other truths cannot be true, but also because truth can only be successfully pursued by drawing inferences from experience, which, if warrantable at all, admit of being generalized, and, to test their warrantableness, require to be exhibited in a generalized form; after which the correctness of their application to particular cases is a question which specially concerns the Logic of Consistency.⁹⁸

Hamilton and others had taken formal logic to be the whole of logic, but as Mill seemed to understand it, formal logic was a part, not the whole, i.e., an “instrument of the human intellect in the discovery of truth.”⁹⁹ The logic of truth involved the distinction between “things proved and things not proved, between what is worthy and what is unworthy of belief.”¹⁰⁰ Truths that a person comes to know intuitively, i.e., by direct consciousness—not by means of other truths—did not fall within the domain of logic, Mill argued. But to certain types of questions, when inference is involved (often people mistake truths inferred for self-evident truths, Mill added) and when the answer is supplied only by means of evidence, logic does provide the requisite tests for deciding whether a proposition is true or false.¹⁰¹

Thus, Mill seemed to occupy the middle ground on the “logic question,”¹⁰² by trying to move beyond the “old scholastic-Aristotelian formal logic,” while keeping logic and metaphysics as far from each other as possible. Still, in moving beyond scholastic logic, he was unwilling to follow his contemporaries who at the time were breaking new ground in formal logic by quantifying the predicate. Having acknowledged that the “Science of Number” was the “grand agent for transforming experimental into deductive sciences,” Mill’s criticism of Augustus De Morgan’s (1806–1871), George Boole’s (1815–1864) and William Stanley Jevons’s (1835–1882) works on logic highlight just how much Mill’s “broad” view of logic was still an offspring of his Benthamite background:

[Jevons] is a man of some ability, but he seems to me to have a mania for encumbering questions with useless complications, and with a notation implying the existence of greater precision in the data than the questions admit of. His speculations on Logic, like those of Boole and De Morgan,

and some of those of Hamilton, are infected in an extraordinary degree with this vice. It is one preeminently at variance with the wants of the time, which demand that scientific deductions should be made as simple and as easily intelligible as they can be made without ceasing to be scientific.¹⁰³

Logic was not meant only for a “school exercise.” There was philosophical value in what these thinkers were doing, but Mill questioned if the results of their labors were “worth studying and mastering for any practical purpose”:

The practical use of technical forms of reasoning is to bar out fallacies; but the fallacies which require to be guarded against in ratiocination properly so called, arise from the incautious use of the common forms of language; and the logician must track the fallacy into that territory, instead of waiting for it on a territory of his own.¹⁰⁴

Logic was not the science of science only; it was equally applicable to business and life: “if the principles and rules of inference are the same whether we infer general propositions or individual facts; it follows that a complete logic of the sciences would be also a complete logic of practical business and common life.”¹⁰⁵ Mill, as John Skorupski has noted, tried “to bring pure philosophy into contact with life and thought.”¹⁰⁶

Logic, John Stuart Mill argued in his Rectorial Address at the University of St. Andrews in 1867, “is the great disperser of hazy and confused thinking; it clears up the fogs which hide from us our own ignorance, and make us believe that we understand a subject when we do not.”¹⁰⁷ That “master vice of the understanding,” James Mill scribbled down in his private notes half a century earlier, “mental partiality,”

depraves the judgement, makes men bad reasoners, both for speculation, and for practice—Makes men bad husbands, bad fathers, bad judges, bad legislators, bad every thing. This is the very source of injustice.—Strength of mind consists in the vigilant habit of attending to evidence, and estimating accurately its force.¹⁰⁸

For this reason, for the elder Mill, “[o]ne of the grand objects of education should be, to generate a constant and anxious concern about evidence; to accustom the mind to run immediately from the idea of the opinion to the idea of its evidence, and to feel dissatisfaction till it is known that the evidence has been all before the mind, and fairly weighted.”¹⁰⁹ Similarly, the younger Mill argued that

Logic compels us to throw our meaning into distinct propositions, and our reasonings into distinct steps. It makes us conscious of all the implied assumptions on which we are proceeding, and which, if not true, vitiate the entire process. It makes us aware what extent of doctrine we commit ourselves to by any course of reasoning, and obliges us to look the

implied premises in the face, and make up our minds whether we can stand to them.¹¹⁰

For the younger Mill, logic guards against “bad deduction,” but also against “bad generalization, which is a still more universal error. If men easily err in arguing from one general proposition to another, still more easily do they go wrong in interpreting the observations made by themselves and others.”¹¹¹ John Stuart Mill’s preoccupation with the “practical purpose” of logic is most evident in the final two books of his *Logic*.

“The philosophy of reasoning,” Mill wrote in Book V, “to be complete ought to comprise the theory of bad as well as of good reasoning.” Mill’s “Philosophy of Error” aimed in inculcating habits of proper examination of the opinions one comes to hold—in scientific matters, or in everyday matters—examining whether they are grounded on “real” or “apparent” evidence.¹¹² A fallacy is committed, Mill argued, when one has inferred some fact from some other fact that does not really prove it, unifying the two facts by admitting a general proposition that is nevertheless groundless. It may be groundless because the inference supporting it was erroneous (the error was committed in collecting, using or interpreting the facts) or because it was not based on extrinsic evidence at all—i.e., being grounded on “natural prejudices.” Mill examined five classes of fallacies: fallacies of observation, generalization, ratiocination and confusion and *a priori* fallacies. In classifying these fallacies, Mill moved beyond the false opinions individuals happen to have to the way in which individuals come to have them.¹¹³ Book VI of Mill’s *Logic*, as it dealt with the “Logic of the Moral Sciences,” has not escaped the attention of students of Mill’s moral and political thought. It contains what Mill called the best chapter of the whole work, “Liberty and Necessity,”¹¹⁴ a sketch of the “new science” of character formation, i.e., “Ethology,” complementing his ideas on psychology and sociology, but also a plan of a “Doctrine of Ends,” which has been used in revisionist interpretations of his utilitarian theory.¹¹⁵ Book VI also examines the two dominant methods of examining moral and political matters, and rejects them for a third one that, according to Mill, combines what’s best in them—the Deductive Method in its two versions, the direct and the inverse.¹¹⁶ These two books, with the exception of the chapter on “Liberty and Necessity,”¹¹⁷ were the least discussed parts in reviews of the *Logic*; and while, for the most part, Book VI dominates treatments of Mill’s *Logic* today, the relation of Book V to other works has not had the fortune of a similar rediscovery.¹¹⁸

III.

Mill’s *A System of Logic* was published in spring 1843, alas with limited expectations.¹¹⁹ Making his worry known to his friends, he noted: “I don’t suppose many people will read anything so scholastic, especially as I do not profess to upset the schools but to rebuild them—& unluckily everybody

who cares about such subjects nowadays is of a different school from me.”¹²⁰ However, his expectations were exceeded. Mill never did really understand “[h]ow the book came to have, for a work of the kind, so much success, and what sort of persons compose the bulk of those who have bought [it]”—he was reluctant to say “read it.”¹²¹

The book, and its reviews, became part of a revival in the study of logic taking place in the second quarter of the nineteenth century in Britain. According to a contemporary, “Not a month passes which does not bring us new publications on Logic.” Mill, Hamilton and Richard Whately (1787–1863) were acknowledged to be the “revivers” of logic in England.¹²² “Such writers,” another reviewer remarked, “as Whewell, Mill, Boole, Spencer, Bain . . . have . . . a large and growing audience.” That Mill’s book marched steadily from edition to edition, the reviewer added, was an “unmistakable fact” showing that there was “a solid demand for solid books on abstract subjects.”¹²³

Mill placed his hopes for immediate attention to the *Logic* “on the polemical propensities of Dr. Whewell,” whom Mill expected to respond to his critical remarks soon after making their appearance.¹²⁴ Indeed, following the publication of Whewell’s *Of Induction: With Especial Reference to Mr. J. Stuart Mill’s System of Logic* (1849), the comparison between Mill and Whewell became a frequent theme in reviews; their controversy was recast as a *lutte corps à corps* between the “experience” and the “intuition” schools.¹²⁵ Richard Hold Hutton (1826–1897) was the first to make an extensive comparison in his joint review of Mill’s and Whewell’s accounts of induction.¹²⁶ Importantly, according to Hutton, Mill’s

writings appear to have quite subdued the not very independent spirit of English philosophy. The prolonged silence with which his book has been received by English critics seems to imply a surrender without terms; and in fact the qualities of Mr. Mill’s mind are eminently calculated to impress and frighten our countrymen into silence, even when unconvinced.¹²⁷

However, both Mill’s and Hutton’s estimates were mistaken. On the one hand, Mill did not need Whewell to bring his book into notice after all; as Bain noted:

From the moment of publication, the omens were auspicious. Parker’s trade-sale was beyond his anticipations, and the book was asked for by unexpected persons, and appeared in shop windows where he never thought to see it. Whately spoke handsomely of it; and desired his bookseller to get an additional copy for him, and expose it in the window.¹²⁸

In just a year and a half, Mill expected that the book would be soon out of print, having gotten “into the hands of almost everybody who could be

supposed to read such a book.”¹²⁹ In 1849, Whewell himself acknowledged that Mill needed no help from him in getting notice: “Mr. Mill’s work has had, for a work of its abstruse character, a circulation so extensive, and admirers so numerous and so fervent, that it needs no commendation of mine.”¹³⁰ Almost immediately after the publication of Mill’s *Logic*, some claimed that it had “obtained just celebrity.”¹³¹

On the other hand, even though plans for prospective reviews in *Edinburgh Review* and *Quarterly Review*, the periodicals with the widest circulation, did not come into fruition,¹³² in the 1840s, as in the 1850s and the 1860s, Mill’s *Logic* was noticed regularly in periodicals and books, leaving no stone unturned (especially as regards the work’s first three books).¹³³ Bain’s remark that Mill’s *Logic* had “been about the best attacked book of the time” was not wide off the mark.¹³⁴ By 1872, Mill saw the book through the press seven more times after its original publication, each time making revisions as well as replying to criticisms.¹³⁵

The first notice of Mill’s *A System of Logic*, came out in April 1843 in the *British Critic*; the author however was reluctant “to express a confident judgment on the details of Mr. Mill’s work,” not having sufficient time to study it. But despite Mill’s “immoral and unchristian” views, which made their way into the *Logic*, the author noted, it was a work that combined “power, depth, originality, precision, and completeness of thought in a most unusual degree.”¹³⁶ The reviewer, showing knowledge of Mill’s earlier essays, promised to discuss the work in greater detail at a later issue; one did eventually appear in October 1843.

William George Ward’s (1812–1882) “adverse criticism,” Bain reported, “gave Mill very great satisfaction, all things considered.”¹³⁷ However, even though quite long, Ward’s review did not receive serious consideration from Mill, partly because Ward knowingly did not focus much on “matters of logical principle.”¹³⁸ Ward had a specific point in mind to criticize: “if Mr Mill’s principles be adopted as a full statement of the truth, the whole fabric of Christian Theology must totter and fall.” Thus, Ward put particular emphasis on that view, and its various manifestations, which he thought to undermine “religious faith,” i.e., that all knowledge derives from experience.¹³⁹ Before moving on to consider *a priori* moral knowledge, Ward focused on Mill’s discussion of axioms of geometry—his sole object being “to vindicate against Mr. Mill the existence of *a priori* sources of knowledge.” Ward charged Mill with serving “the necessities of a theory, which he is unwilling to relinquish,” by failing to recognize that “the means by which we derive our *first idea* of line and angle” is but a trivial difference between his theory and the *a priori* school. Once one has acquired these ideas, Ward argued, Mill himself had admitted that

we are free from all further dependence on the senses; that by a mere mental process, we are able to arrive at an indefinite number of new truths; and that these truths will be absolutely certain, neither dependent

for their trustworthiness on any proof of the uniformity of the laws of nature, nor liable to overthrow from the progress of experiment.¹⁴⁰

Intuitions were divided by Ward into “sensible” and “à priori”; he seemed to follow established practice in considering mathematical axioms and notions such as time and space to be of the second kind.

When Ward did get around to discussing the “information derivable from our conscience or moral perception,” he did not refer to Mill’s *Logic*, but to Mill’s earlier works, as this was a subject that Mill purposely avoided in *Logic*. Anticipating Mill’s *Utilitarianism* (1861), having had Mill’s essays on Adam Sedgwick (1835) and Bentham (1838) in mind, Ward argued that Mill was inconsistent with his principles: denying *a priori* moral knowledge, “by means of which all of us . . . introduce the balance of eternal and immutable morality, to test, value, and compare withal, as to their real essence, the appearances of this sensible world,” while at the same time recognizing “man as a being capable of pursuing spiritual perfection as an end; of desiring, for its own sake, the conformity of his own character to his standard of excellence, without hope of good or fear of evil from other source than his own inward consciousness.”¹⁴¹ Ward argued that indeed “certain pleasures are more permanent, intense, satisfying, than certain others; that they disqualify us less for intellectual speculation, or sympathetic feeling, or the business of life; all this may doubtless be gathered from experience.” However, he added, “when we apply such epithets as ‘high,’ ‘noble,’ ‘elevating,’ ‘worthy of rational creatures,’ and the like to those rather than these, we are using mere unmeaning sounds, deceiving ourselves by words without ideas, unless we have the faculty, which Mr. Mill denies us, of direct communion with the spiritual world.”¹⁴² As Bain noted, Ward’s review “was not so much a review of the *Logic*, as of Mill altogether.”¹⁴³

In May 1843 a review of Mill’s *Logic* appeared in *Westminster Review*, by Alexander Bain, who had used the sheets from the printers to prepare it. It “was even more laudatory than Mill liked,” Bain admitted.¹⁴⁴ That Bain did not engage critically with Mill in 1843—he would do so in later works—was owed perhaps to the role he himself had in Mill’s final revisions to the *Logic* just prior to its publication.¹⁴⁵ He began his review with a warning to readers: “[t]he name *Logic* does not and cannot convey to the reader any notion of the contents of Mr Mill’s book, because they are such as no reader has seen under this or any other title.”¹⁴⁶ Mill, Bain added, discussed everything that has to do with the discovery and proving of truth, except those parts that have been discussed in other books on logic—in the parts that Mill did seem to be treading on familiar ground, Mill “harmonized and summed up into positive results” the “best thoughts” of the “great thinkers” on the subject at hand.¹⁴⁷

Bain attempted to give a respectful summary of Mill’s *Logic* “without any attempt at a general estimate or balanced critique of its worth.”¹⁴⁸ Unlike other reviews, Bain spent considerable time in illustrating the implications