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## **Scottish Philosophers, Scotch Reviewers, and the Science of Mind**

In the eighteenth and early nineteenth centuries, the study of the mind was in a transitional phase—no longer an official handmaid to theology and not yet an official aspect of neurobiology. In Scotland several generations of philosophers found themselves inspired or perplexed by the hope expressed at the conclusion of Sir Isaac Newton's *Opticks* (1704), the hope that inductive reasoning might be applied in moral as well as natural philosophy.<sup>1</sup> These Scottish thinkers did not have a sophisticated knowledge of the electrical and chemical aspects of man's cognitive life. That was a disadvantage that they shared with their age. But, in their desire to learn from Francis Bacon and to emulate Newton, they attempted to be scientific—to comprehend a wide range of phenomena under a few principles or laws, all the while aware of the danger of confusing speculation with the scientific statement of observed phenomena. In exploring the proper role of hypothesis, the limits of induction, and the nature of causal relationships, they were not only studying the mind (or phenomena called "mental") but also studying the study of the mind, clarifying the methods and assumptions of an introspective philosophy and of the physical sciences. This essay is concerned with one stage of that adventure, a public debate in the early nineteenth century that involved Scottish academic philosophers, Scottish periodical reviewers, and reviewers who became academics.

At the close of the eighteenth century, Dugald Stewart was the most influential philosopher active in Scotland, a teacher whose "gentle and persuasive eloquence" has been described by Henry Cockburn, James Mackintosh, and others among his students. Son of Matthew Stewart, Professor of Mathematics at Edinburgh, the younger Stewart had studied at both Edinburgh and Glasgow Universities. At the first, he had heard praised Thomas Reid's *Inquiry into the Human Mind*, on

the *Principles of Common Sense* (1764); at the second, he had attended Reid's lectures and become Reid's friend—a friendship and influence that would shape his own subsequent thought. In 1772 Stewart had returned to Edinburgh to assist and then succeed his father as Professor of Mathematics, resigning that position in 1785 to succeed Adam Ferguson as Professor of Moral Philosophy. Although his popularity as a teacher was pre-eminent at the University, and his *Elements of the Philosophy of the Human Mind* (1792-1827) found an audience unusually large for a book of its kind, Stewart's liberal political principles made him a target of angry criticism. Conservatives found Stewart guilty of several sins: his friendship with French *philosophes* had led him to welcome the first movements of the French Revolution; his Edinburgh home served as a social centre for liberal thinkers; and his course in political economy drew many of those Scottish and English Whigs who would inaugurate the second *Edinburgh Review* and, years later, push through Parliament the First Reform Bill. Stewart was able to retain his University position because, while his politics were liberal, his writings on the mind and on morals were a cautious refining of the more conservative elements within eighteenth-century Scottish thought. As had Reid, James Oswald and James Beattie before him, Stewart warned against the delusions of modern scepticism.

In 1802 Stewart published "An Account of the Life and Writings of Thomas Reid" in the *Transactions* of the Royal Society of Edinburgh. In that "Account" Stewart praised Reid's *Inquiry* as a product of the genuine spirit of inductive study, the first systematic attempt to study human faculties according to the plan of investigation that Bacon had outlined in the *Novum Organum* (1620) and that Newton had followed with success in physics. Comparing Reid's writings with those of Reid's principal antagonist, David Hume, Stewart argued that Hume's primary weakness lay in his incomplete understanding of the processes and limitations of inductive reasoning—a weakness that undermined Hume's announced intention, on the title-page of his *Treatise of Human Nature* (1739-40), "to introduce the experimental method of reasoning into moral subjects." "In these respects," Stewart claimed,

Dr. Reid possessed important advantages; familiarized, from his early years, to those experimental inquiries, which, in the course of the last two centuries, have exalted Natural Philosophy to the dignity of a science; and determined strongly, by the peculiar bent of his genius, to connect every step in the progress of discovery with the history of the human mind. The influence of the general views opened in the *Novum Organum* may be traced in almost every page of his writings; and, indeed, the circumstances by which these are so strongly and charac-

teristically distinguished, is, that they exhibit the first systematical attempt to exemplify, in the study of human nature, the same plan of investigation which conducted Newton to the properties of light, and to the law of gravitation.<sup>2</sup>

What, then, were the proper aims and essential limitations of a truly scientific study of the mind? Stewart believed that such a study must be wary of unverified hypotheses; that it must acknowledge our radical ignorance of the essences of matter and mind; that it should rise inductively from the facts of experience or observation to general rules that then can be applied deductively in the explanation of more complicated phenomena, terminating always in the recognition of some original principle of human nature of which no further explanation can be given. "The circumstance which peculiarly characterizes the inductive science of mind," Stewart argued,

is, that it professes to abstain from all speculations concerning its nature and essence; confining the attention entirely to *phenomena*, for which we have the evidence of consciousness, and to the laws by which these phenomena are regulated. In this respect, it differs equally, in its scope, from the pneumatological discussions of the schools; and from the no less visionary theories, so loudly vaunted by the physiological metaphysicians of more modern times.

The facts that this inductive science attempts to discover and describe are supported by evidence proper to this science, the evidence of common consciousness, and would remain facts in the unlikely event that the hypothesis of either the Medieval schoolmen or the modern Materialist someday should be established as true.

It is not, therefore, on account of its inconsistency with any favorite opinions of my own, that I would oppose the disquisitions either of scholastic pneumatology, or of physiological metaphysics; but because I consider them as an idle waste of time and genius on questions where our conclusions can neither be verified or overturned by an appeal to experiment or observation.<sup>3</sup>

When Stewart's "Account" was republished in 1803, it was reviewed by Francis Jeffrey, one of Stewart's former students, in the influential *Edinburgh Review*. Jeffrey was a lawyer, then a Member of Parliament, and finally Lord Jeffrey, a law lord on the bench of the Scottish Court of Session. Throughout most of his legal and political career he was also the editor and guiding spirit of the *Edinburgh Review*, the quarterly that he, Sydney Smith, Francis Horner and others had begun in 1802. Reviewing the "Account," Jeffrey noticed Stewart's hopeful prediction that, should subsequent thinkers follow Reid in a

truly inductive science of the mind, a science of human nature could be developed that would include grammar, rhetoric, logic, politics, natural theology and ethics. While expressing his "unfeigned deference and respect for every thing that Mr. Stewart may deliver upon a subject which he has studied so profoundly," Jeffrey judged Stewart's hope to be a fond delusion that was common among metaphysicians:

From the time indeed that Mr. Hume published his treatise of human nature, down to the latest speculations of Condorcet and Mr. Stewart, we have observed this to be a favourite topic with all metaphysical writers; and that those who have differed in almost every thing else, have agreed in magnifying the importance of such inquiries, and in predicting the approach of some striking improvement in the manner of conducting them.

But Jeffrey believed that the majority of eighteenth-century moral philosophers had been misled by a false methodological analogy, and that their enthusiasm for their favorite studies had led them to publish extravagant opinions concerning the utility and progress of the science of mind.

In reality, it does not appear to us that any great advancement of our knowledge of the operations of mind is to be expected from any improvement in the plan of investigation, or that the condition of mankind is likely to derive any great benefit from the cultivation of this interesting but abstracted study."<sup>4</sup>

Jeffrey's criticism of this "abstracted study" was based upon his own wide reading and upon specific conversations at the Edinburgh Academy of Physics, where Jeffrey, Thomas Brown, and Henry Brougham had been discussing "the investigation of nature, the laws by which her phenomena are regulated, and the history of opinions concerning these laws."<sup>5</sup> Jeffrey believed that inductive reasoning may be applied to two different classes of phenomena. The first class consists of those phenomena that can be made the subject of "proper experiment, where the substances are actually in our power, and the judgment and artifice of the inquirer can be effectually employed to arrange and combine them in such a way as to disclose their most hidden properties and relations." The second class consists of those phenomena "the order and succession of which we are generally unable to controul, as to which we can do little more than collect and record the laws by which they appear to be governed." This second class of phenomena is the subject of *observation*, not *experiment*, "and the knowledge we may obtain, by carefully watching their variations,



is of a kind that does not directly increase the power which we might otherwise have had over them." It was to the phenomena of true experiment that Bacon had directed his attention:

The greater part of the *novum organum* ...is taken up with rules and examples for contriving and conducting experiments; and the chief advantage which he seems to have expected from the progress of these inquiries, appears to have centered in the enlargement of man's dominion over the material universe which he inhabits. To the mere observer, therefore, his laws of philosophising, except where they are prohibitory laws, have but little application; and to such an inquirer, the rewards of his philosophy scarcely appear to have been promised.<sup>6</sup>

Stewart, Reid, and Hume, for all the differences between them, had been misled by the same analogy: in comparing the study of the mind with modern physics, they had confused the phenomena of mere observation with the material of true experiment. "We feel, and perceive, and remember," Jeffrey noted,

without any purpose or contrivance of ours, and have evidently no power over the mechanism by which those functions are performed. We may observe and distinguish those operations of mind, indeed, with more or less attention or exactness; but we cannot subject them to experiment, or alter their nature by any process of investigation.

A metaphysician cannot expect to discover a new mental power through analysis; neither can he hope to demonstrate through synthesis a mental combination that is not part of the ordinary mental life of ordinary readers.

The science of metaphysics, therefore, depends upon observation, and not upon experiment; and all reasonings upon mind proceed accordingly upon a reference to that general observation which all men are supposed to have made, and not to any particular experiments which are known only to the inventor. The province of philosophy in this department, therefore, is the province of observation only; and in this department the greater part of that code of laws which Bacon has provided for the regulation of experimental induction is plainly without authority. In metaphysics, certainly, knowledge is not power; and instead of producing new phenomena to elucidate the old, by well-contrived and well-conducted experiments, the most diligent inquirer can do no more than register and arrange the appearances, which he can neither account for nor controul.

Jeffrey recognized that the metaphysician could give a more accurate description and classification of those phenomena of common consciousness that he could not submit to experimental control; and he suggested that the whole question might be clarified if "the labours of

the metaphysician, instead of being assimilated to those of the chemist or experimental philosopher," were "compared to those of the grammarian who arranges into technical order the words of a language which is spoken familiarly by all his readers."<sup>7</sup>

The *Edinburgh Review* shaped opinion: as Sir Walter Scott noticed, "no genteel family *can* pretend to be without it."<sup>8</sup> Among those genteel readers, Dugald Stewart would have recognized that Jeffrey's appraisal of the role of metaphysics in contemporary intellectual life, Jeffrey's conscious use of the term *metaphysics* when writing of what Scottish moral philosophers preferred to call the *science* or *philosophy of mind*, was a revival of an old criticism of much of Scotland's philosophical activity throughout the eighteenth century. Since the 1720s Scottish thinkers had been engaged in a proposed communal "science of man." In that large ambition they had recognized that a study of the sources, limits, and processes of human knowledge was basic to their philosophic program; and they believed that the subject known as "pneumatology," "the philosophy of mind," or "psychology"<sup>9</sup> might achieve a status similar to that achieved already in some branches of natural philosophy. In that hope, Francis Hutcheson, George Turnbull, David Hume, James Beattie, George Campbell and Hugh Blair explored mental processes in their ethical, aesthetic, and rhetorical studies; Adam Smith discussed "the principles which lead and direct philosophical enquiries"<sup>10</sup> as illustrated by the histories of astronomy and ancient physics; Lord Kames examined "the principles of human knowledge"<sup>11</sup> as part of his study of morality and natural religion. And, despite his reservations concerning the assumptions and methods of recent studies of the mind, Thomas Reid believed that modern philosophers might yet "produce a system of the powers and operations of the human mind no less certain than those of optics or astronomy. This is more devoutly to be wished, that a distinct knowledge of the powers of the mind would undoubtedly give great light to many other branches of science."<sup>12</sup>

If a better knowledge of the powers of the mind might clarify the methods and limits proper to different fields of study, what method should be used in studying the mind itself? It was necessary, first, to save the study of the mind from the scorn heaped upon *metaphysics*. Among medieval schoolmen, speculation on man's cognitive life—sometimes called Pneumatology—was placed with Ontology and Natural Theology in the category of metaphysics.<sup>13</sup> In the course of the seventeenth century, however, both Descartes and Locke had criti-

cized the logic, arcane terms, and obeisance to authority that they had found in Scholastic studies of the mind. Differing in many things, they shared a common wish to start anew, to radically re-examine the authority of consciousness, unencumbered by the past. Partly through their influence, partly through the growing influence of natural philosophy, and partly because of a general reaction against the theological and political dogmatism of the early seventeenth century, the words *metaphysics* and *metaphysical* became terms of condemnation in the eighteenth century. Scottish philosophers condemned the excesses of preCartesian pneumatology, and anything found futile in contemporary writings, as “airy metaphysical notions,” “metaphysical janglings.”<sup>14</sup> Unhappily for serious philosophers, that prejudice against metaphysics was shared by educated non-philosophers, who sometimes used the label of *metaphysics* to dismiss early eighteenth-century moral philosophy.<sup>15</sup> Some wiser management was needed for a science of the mind, a method free from dogmatism and obscurity, a method free from unreflecting deference to any former authorities.

There were two influential methodologies available to ambitious men in the early eighteenth century, methodologies easy to contrast in the abstract, but sometimes confused or purposefully combined in practice. The first methodology was Continental—an *a priori*/deductive method developed by Descartes and his disciples—a method that promised the demonstrative knowledge achievable in mathematics, a method in which mathematics (and, specifically, geometry) was the prototype of knowledge. The second methodology was British—an *a posteriori* inductive method developed by Bacon, by Locke, and (in some aspects of his work) by Newton—a method that promised, not mathematical certitude, but a probable, provisional knowledge that was judged to be proper to fields outside mathematics. The first of these methods, the mathematical model, exercised an intermittent influence in Scotland. To the majority of Scottish thinkers, however, the attempt to apply mathematical reasoning in areas of moral philosophy appeared to be a misadventure. Hume questioned the “magnificent pretensions” of geometry.<sup>16</sup> Reid, a better mathematician than was Hume, envied the axiomatic certitude enjoyed by mathematicians, but warned against attempts “to apply measure and calculation to things which do not admit of it.”<sup>17</sup> By the century’s end, Dugald Stewart could consider the issue as now happily resolved: the mathematical enthusiasm, powerful at times, had been “an innovation which it was of importance to resist, on account of the tendency it might have,

by confounding the evidence of the different branches of science, to retard the progress of knowledge."<sup>18</sup>

Stewart and most of his Scottish predecessors agreed that knowledge concerning human nature could be won more surely through the method of inductive study. They were conscious of their debts to other British thinkers: to Bacon, for the investigative program outlined in the *Novum Organum* (1620) and *Advancement of Learning* (1605); to Newton, for examples of inductive success in the third book of the *Principia* (1687) and in the *Opticks* (1704); to Locke, for his appeals to experience and accurate reflection in the *Essay concerning Human Understanding* (1690); to the Earl of Shaftesbury, Bernard Mandeville, Samuel Clarke, George Berkeley, and Joseph Butler—whose works, Hume acknowledged early in the century, had “begun to put the science of man on a new footing.”<sup>19</sup> Admitting those debts, a philosophic Scotsman yet might feel, with Hume, “an ambition to arise in me of contributing to the instruction of mankind, and of acquiring a name by my inventions and discoveries”—a plausible ambition since, as Adam Smith observed, “the English philosophy . . . seems now to be entirely neglected by the English themselves.”<sup>20</sup> What the English now neglected, the Scots would pursue. Their study of the human mind would follow the guidelines successfully established in some branches of natural philosophy. Like Newton, they would be wary of unverified hypotheses. Like Newton, they would rise through induction to general laws that then could be used deductively to explain more complicated phenomena.<sup>21</sup>

But could the thing be done? Were the experiments of natural and moral philosophy sufficiently analogous to justify these aspirations in the latter field? At times, as in Reid's *Inquiry into the Human Mind*, the method employed was similar to that employed by Newton in the *Opticks*. More often, while the term *experiment* was used, the method was not the controlled experiment of physical science, but introspection and chance observation.<sup>22</sup> The value of such random mental experiments was questioned by the Scottish writers themselves. Hume recognized a basic methodological problem—a psychological version of what, in modern times, the physicist Heisenberg has called an “uncertainly principle”—that the act of observing affects what is being observed.<sup>23</sup> Alexander Gerard acknowledged that “the phenomena of the mind have not so great stedness of existence as the qualities of bodies. It is impossible to make experiments so purposely on the understanding or the passions, to pursue them so deliberately, or to repeat them so easily, as on material things.”<sup>24</sup> Announcing his inten-

tion to perform “an anatomy of the mind” analogous to physical dissection, Reid admitted that anatomy through introspection is more difficult than that which is performed in a laboratory:

An anatomist who hath happy opportunities may have access to examine with his own eyes, and with equal accuracy, bodies of all different ages, sexes, and conditions; so that what is defective, obscure or preternatural in one may be discerned clearly, and in its most perfect state, in another. But the anatomist of the mind cannot have the same advantage. It is his own mind only that he can examine with any degree of accuracy and distinctness. This is the only subject he can look into. He may, from outward signs, collect the operations of other minds; but these signs are for the most part ambiguous, and must be interpreted by what he perceives in himself.<sup>25</sup>

Despite that warning, Reid employed a wide range of such ambiguous evidence in his *Essays on the Intellectual Powers of Man* (1785), referring not only to the phenomena of his own consciousness, but also to “the structure of language,” “the course of human actions and conduct,” and “the history of philosophy, considered as a map of the intellectual operations of men of genius.”<sup>26</sup>

The problem of evidence was real. The positive response to that problem was a call for more careful observation, more accurate reflection, and a more “chaste induction.” Moreover, Hume, Reid, and Stewart were sustained and encouraged by their awareness of the inherent limitations of even the most successful natural philosophy.<sup>27</sup> While the physical scientist might enjoy ample opportunities for controlled experiment and observation, he then must use the information provided by his senses. And that information is always relative: we do not know the essence of matter, but its properties or qualities. A clear-headed, Newtonian natural philosopher does not pretend to study nature as it *is*, but as it *appears to be*. As Bacon had argued and Newton illustrated, genuine natural philosophy is an *interpretation of nature*. The “facts” involved are phenomena, the qualities or properties of matter as they are perceived by our senses. We collect such facts, observe their apparent connections, and develop more general facts or general rules (sometimes called “laws of nature”) concerning the apparent connections. “What is all we know of mechanics, astronomy, and optics,” Reid asked,

but connections established by nature, and discovered by experience or observation, and consequences deduced from them? All the knowledge we have in agriculture, gardening, chymistry, and medicine is built upon the same foundation. And if ever our philosophy concerning the human mind is carried so far as to deserve the name of science, which

ought never to be despaired of, it must be by observing facts, reducing them to general rules, and drawing just conclusions from them."<sup>28</sup>

Hume, Reid, and Stewart knew that the facts involved in a study of the mind are of a different kind than those of natural philosophy. The facts of the former are the mental operations we are conscious of through reflection; the facts of the latter are the qualities of matter that we perceive through our senses (or the sensations occasioned by our contact with some property of matter). But our knowledge of both matter and mind is relative: we know matter only through its sensible qualities and mind only through its operations. Thus moral as well as natural philosophy could hope for a sober, self-conscious progress, claiming neither demonstrative certitude nor knowledge of the essential nature of matter or of mind.

It followed that any attempt to get *behind* the observable connections or laws of our mental lives—any attempt, for example, to determine if the thinking principle is essentially material or not—should be rejected not as false, but as unphilosophical. The Scots were particularly critical of English materialists (or of English writers whom they thought to be materialists) such as David Hartley, Joseph Priestley, and Erasmus Darwin, some of whose writings Dugald Stewart judged to be “metaphysical romances.”<sup>29</sup> While believing that the physiological aspects of mental phenomena are a valid subject of study, Reid and Stewart argued that explanations of thought as the vibrations of matter were unverifiable conjectures. And yet, while they believed that a full understanding of the efficient causes of our mental operations probably always will elude us, Reid, Stewart, Beattie, Kames, Turnbull, and Gerard did believe in a final cause. The physical and psychological faculties that allow man to function in his environment seemed to them to be clear evidence of divine design.<sup>30</sup> Reid hoped that his *Inquiry* into sense perception would shed “new light upon one of the noblest parts of the divine workmanship,” just as Newton’s *Principia* had helped us to understand “some part of the art of the divine Author of this system, which, before this discovery, eye had not seen, nor ear heard, nor had it entered into the mind of man to conceive.”<sup>31</sup>

On that issue, Hume disagreed with the majority of his contemporaries. In his *Treatise* and later *Philosophical Essays concerning Human Understanding* (1748) he refused to account for any natural human beliefs by referring to the plan of a benevolent deity. Rather, his dogged introspection led him to several unsettling conclusions, conclusions that provided both a check and a stimulus to succeeding

Scottish studies of the mind. Hume's analysis of our idea of personal identity raised problems for readers who believed in the survival of their souls after death. His analysis of our idea of necessary connection undermined the Argument from Design that was basic to natural theology; his analysis of our belief in nature's uniformity raised questions about the predictions of natural philosophy. And his general reduction of natural beliefs to *feeling*, to the sensitive rather than the cognitive level of our nature, seemed to raise basic problems of subjectivism. If our sensitive organization were different, would we not have different feelings and different beliefs?<sup>32</sup> Those challenges provoked a range of responses among Scots who had read Hume or heard of his opinions second-hand through literary gossip. To some, Hume's opinions seemed to be another example of the delusions of modern metaphysics. John Maclaurin, a young advocate who advised James Boswell that reading metaphysics was dangerous to morals, ridiculed Hume in a farce called *The Philosopher's Opera*.<sup>33</sup> Boswell himself, caught in the "skeptical cobweb" of Hume's writings, came to believe that the doctrines found in much of modern moral philosophy were not worth the comprehending. Depressed, "in a sort of amaze," or "refreshed and very happy" through his readings of contending writers, he considered composing "a kind of novel" to be called "Memoirs of a Practical Metaphysician," an account of the life of a man who attempted to live by metaphysical principles: "What inconsistency and extravagance should we find!"<sup>34</sup>

Henry Home, Lord Kames, concurred with those parts of Hume's argument that he found useful in his attempt "to show that our senses, external and internal, are the true sources from whence the knowledge of the Deity is derived to us." Thus, in his *Essays on the Principles of Morality and Natural Religion* (1751), Kames was willing to agree with Hume that *belief* is essentially feeling, and that our beliefs in personal identity, in the existence of objects in the external world, in causal relationships, and in the uniformity of nature are not the products of discursive reasoning, but feelings. For Kames, however, those feelings—produced through external and internal senses—are part of a "grand apparatus of instinctive faculties" provided by the Deity to guide us through life and to the knowledge of Himself. Kames was aware that *feeling* might appear to be an unstable basis for belief in an intelligent Creator. But such is human nature. Although reason can assist us in enlarging our views of the scope and subtlety of providence, it is through instinct—the operation of our senses in perception and



the feeling produced through those senses—that we first develop our belief in causal relationship.<sup>35</sup>

In Kames's system the authority of feeling derives from the authority of our external and internal senses. Kames believed that we are so constituted by nature that we must believe the testimony of those senses, and that such testimony is confirmed by the experiment of daily living. He recognized that Bishop Berkeley and Hume had questioned the authority of our external senses (or questioned the prevalent philosophical interpretation of the evidence provided through our senses), basing their arguments on the assertion that the mind knows only its own perceptions and activity, and, therefore, has no direct knowledge of anything that may exist outside the mind. Kames suggested that this "ideal system"—a system that teaches that we can know only our own ideas—had led modern philosophy into a "labyrinth of metaphysical errors," levelling both mind and matter "down to a mere chaos of ideas."<sup>36</sup> Thomas Reid agreed. As a member of the Aberdeen Philosophical Society, Reid joined in twice-monthly meetings with George Campbell, Alexander Gerard, James Beattie and others to discuss subjects specified in the Society's "Rules"—"every principle of science which may be deduced by a just and lawful induction from the phenomena either of the human mind or of the material world; all observations and experiments that may furnish materials for such induction; the examination of false schemes of philosophy and false methods of philosophizing."<sup>37</sup> Hume's method and scheme were much in their minds, and several papers read by members of the Society were developed and published as formal responses to different aspects of Hume's thought. Among those publications were Campbell's *Dissertation on Miracles* (1763), Beattie's *Essay on the Nature and Immutability of Truth* (1770), and—most influential—Reid's *Inquiry*.

In his *Inquiry* Reid accused Hume of accepting, without experimental proof, tenets of what Lord Kames earlier had called "the ideal system." As Reid explained that system, it involved the assertions (1) that the mind can know nothing beyond its own impressions and ideas, (2) that our ideas of objects outside our minds are images or representations produced through sensations or impressions, (3) that reasoning is a process of comparison, a process in which we discover the relations—the agreements or disagreements—of our simple ideas. Reid believed that those assertions could not be verified through introspection or experiments involving sense perception. Although the primary qualities of matter—e.g. extension, motion, solidity—do



make impressions on the organs of sense, and thus cause sensations in the nerves and brain, these impressions and sensations do not *resemble* the qualities of matter. And if impressions and sensations do not resemble the qualities of matter, it is illogical to claim that the same impressions and sensations somehow can produce *ideas* that resemble—are images or representations of—phenomena in the external world. Therefore, if our notions or thoughts concerning the external world cannot be images prompted by sensation, the model of our mental life found in the ideal system—a model that confines human knowledge to the subjective world of its own impressions and ideas—should be rejected as one of those unverified hypotheses that Bacon and Newton had criticized as fatal to experimental science.<sup>38</sup>

Reid denied that he had any ambition of constructing a mental model of his own. He did conclude, however, that close introspection reveals mental processes, intuitive judgments, that Hume had overlooked in his reduction of our natural beliefs to mental customs or feeling. Perception involves an immediate judgment that some external object is the cause of our sensations; clear memory suggests an immediate judgment that what we remember did exist in the past; and our consciousness suggests the conception of and intuitive belief in the existence of a mind.<sup>39</sup> In his *Essays on the Intellectual Powers of Man* Reid provided a list of such “first principles, principles of common sense, common notions, self-evident truths”—including our belief in a continuing personal identity, our belief in the uniformity of nature, and our belief that whatever begins to exist must have a prior cause.<sup>40</sup> Like Hume, Reid acknowledged that these natural beliefs cannot be validated through discursive reasoning. Rather, these beliefs are the first principles of reasoning. Unlike Hume, Reid concluded that these natural beliefs are not reducible to feelings. They are real judgments—“determinations concerning what is true and what is false”—and the “inspirations of the Almighty.”<sup>41</sup>

Reid's methodological attack upon Hume's “ideal system” and Reid's conviction that our mental lives reveal the existence of intuitive judgments that are not themselves the product of mental custom or sensation were the primary elements of Dugald Stewart's work in the philosophy or science of mind. Stewart suggested that the phrase “fundamental laws of belief” was preferable to Reid's phrase, “principles of common sense,” not only because of the ambiguity of both *common* and *sense*, but also because our beliefs in personal identity, in nature's uniformity, and in the existence of matter should not be considered principles from which consequences are inferred, but

necessary conditions of our thinking, essential elements of reason itself.<sup>42</sup> On this and other issues he developed Reid's thinking, "always imitating, as far as I was able, in my reasonings, the example of those who are allowed to have cultivated the study of Natural Philosophy with the greatest success."<sup>43</sup> With that sense of scientific identity and mission, Stewart had carried the Scottish study of mind into the nineteenth century. And it was that sense of identity and mission that Francis Jeffrey had challenged in the pages of the *Edinburgh Review*.

Stewart's formal response to Jeffrey's anonymous review of the "Account" appeared as part of Stewart's next major work, the *Philosophical Essays* of 1810. Thanking "my unknown but friendly critic" for the flattering remarks scattered throughout the review, Stewart attributed Jeffrey's negative appraisal of the philosophy of mind to a misconception of Bacon's true doctrines and intentions. Bacon's true aim in the *Novum Organum* was not to instruct us concerning material phenomena, but to deduce from the principles of the human mind such rules as may guide us in our general search for truth. That is, Bacon saw his own work as part of the philosophy of the human mind. Moreover, Stewart argued, Jeffrey had overstated the distinction between experiment and observation:

The difference between experiment and observation, consists merely in the comparative rapidity with which they accomplish their discoveries; or rather in the comparative command we possess over them, as instruments for the investigation of truth. The discoveries of both, when they are actually effected, are so precisely of the same kind, that it may safely be affirmed, that there is not a single proposition true of the one, which will not be found to hold equally with respect to the other.

In truth, Stewart affirmed, there are experimental processes suited to the study of mental phenomena, and even those studies that are rightly designated as observation have led to practical benefits.<sup>44</sup>

Jeffrey reviewed the *Philosophical Essays*, giving special attention to the section in which Stewart had "done us the honor of embodying several of our transitory pages in this enduring volume." Conscious of that honor, he respectfully declined to stand corrected. Contrasting the achievements of modern physics with the sterile controversies that embittered the philosophy of mind—"the striking contrast between the wonders which have been wrought by the cultivation of modern physics and the absolute nothingness of the effects that have hitherto been produced by the labours of the philosophers of mind"—Jeffrey developed his argument that there is a significant difference between

experiment and observation, a difference that severely limits the potential progress of any empirical philosophy of mind. The proper subject of that philosophy is the phenomena of common consciousness—phenomena that cannot be isolated and analyzed as can the phenomena of the material world—phenomena of which, by the very definition, the majority of men already are in some degree aware. Such experiments as Stewart had mentioned as proper to the study of mental phenomena were, on the whole, experiments made upon matter rather than on mind. Such practical improvements as Stewart had claimed to be the results of observation were improvements that could be made without the cumbrous assistance of a formal philosophy of mind.<sup>45</sup>

The debate between Stewart and Jeffrey is interesting on several levels. It suggests some of the crosscurrents that were active in Scottish intellectual life: although Jeffrey and the younger Scottish Whigs honored Stewart for his liberal political views, Jeffrey's own position on the mind and on morals (a position only partially revealed in his published reviews) was much closer to that of the politically conservative Hume than to that shared by Reid and Stewart.<sup>46</sup> In addition, the debate expressed the doubts of educated men outside the universities concerning the value of the philosophy of mind. Jeffrey was no stranger to philosophic life: he had earned his speculative wings as a star of the First Class of Philosophy at Glasgow University and as an active member of the Speculative Society, the most famous of Edinburgh's literary clubs. But he was also a lawyer, an editor and a pragmatic political reformer, concerned with the utilitarian analysis of British institutions. As a man of public affairs, he saw what he believed to be an eccentric attitude shared by most philosophers of mind, "that their zeal for the promotion of their favourite studies has led them to form expectations somewhat sanguine and extravagant, both as to their substantial utility and as to the possibility of their ultimate improvement."<sup>47</sup> Similar doubts concerning *metaphysics* would lead to the development of positivism, pragmatism and linguistic analysis in the latter part of the nineteenth century.

Finally, the Stewart-Jeffrey debate is significant because of what was *not* said. In his "Account" and in the section of the *Essays* that was devoted to answering Jeffrey's criticism, Stewart never stated clearly a basic reason for his pursuing the philosophy or science of mind. He pursued that study in order to combat a materialist or mechanist theory of cognitive activity. Such combat was important to Stewart both personally and professionally—*personally*, because Stewart was

not a materialist; *professionally*, because such combat showed that a philosophy uninhibited by formal Kirk-control need not be atheistic. The belief that uninhibited philosophical inquiry could support at least a genteel, rational theism was essential to that Peace of the Moderates that William Robertson and other enlightened eighteenth-century Scots had achieved. That atmosphere of intellectual tolerance had been poisoned by political passions at the outbreak of the French Revolution, and Stewart did not wish to embitter intellectual life further by explicitly raising theological issues when such issues might be avoided. So too, in his critical attacks on the philosophy of mind, Jeffrey did not reveal the depth of his own theoretical skepticism on epistemological and moral issues. Already an object of suspicion to Scottish conservatives on political grounds, Jeffrey did not wish to endanger himself or his *Review* by revealing his thoughts on how dangerous a rigorous analysis of mind might be to Christian doctrine and Natural Religion.

By the time that Jeffrey's review of Stewart's *Philosophical Essays* appeared in 1810, Stewart had delegated his teaching duties to Thomas Brown—poet, physician, and an early contributor to the *Edinburgh Review*. In his classroom lectures, Brown defended the science of mind against charges such as Jeffrey had published (charges that Brown may have encountered earlier in discussions with Jeffrey at the Academy of Physics). Describing to his students the proper procedures of “mental physiology”—that is, the study of the mind “considered as susceptible of various states or affections, and constituting, as it is thus variously affected, the whole phenomena of thought and feeling”—he argued that two types of inquiry can be pursued concerning both mind and matter: (1) the study of phenomena as *successive* and, therefore, susceptible of arrangement as causes and effects in accordance with their order of succession (2) the study of phenomena as *complex*, and, therefore, susceptible of analysis into simpler elements. Brown admitted that the succession of mental phenomena, the sequence of mental affections, may be as familiar to the unreflecting laborer as to the philosopher of mind. But the analysis of complex mental phenomena requires long reflection and leads to real discoveries:

From the very instant of its first existence, the mind is constantly exhibiting phenomena more and more complex,—sensations, thought, emotions, all mingling together, and almost every feeling modifying, in some greater or less degree, the feelings that succeed it;—and as, in chemistry, it often happens that the qualities of the separate ingredients of a compound body are not recognizable by us, in the apparently

different qualities of the compound itself,—so, in this spontaneous *chemistry of the mind*, the compound sentiment that results from the association of former feelings has, in many cases, on first consideration, so little resemblance to these constituents of it, as formerly existing in their elementary state, that it requires the most attentive reflection to

separate and evolve distinctly to others, the assemblages which even a few years may have produced.

Our knowledge of mind, like our knowledge of matter, is only relative knowledge. Yet, “we have, in this relative knowledge, subjects worthy of the contemplation of beings permitted, in these shadowings of a higher power, to trace some faint image of the very majesty which formed them.” And, in the progressive discoveries to be made through the analysis of complex mental states, we can move closer to an understanding of the mystery of human personality.<sup>48</sup>

However, if Brown reaffirmed the scientific status and mission of studies of the mind, he denied that Reid (and, by implication, Stewart) had made a significant contribution to such studies. To the ailing Stewart’s dismay, Brown informed his Edinburgh students that the leading Scottish champion of common sense had been guilty of uncommon errors. Reid’s destruction of the “ideal system” was the destruction of a strawman of Reid’s own confused devising: Reid had misunderstood the modern use of the term *idea*, interpreting in a literal sense a term that Locke, Descartes and others had used only metaphorically. Moreover, Reid’s explanation of our natural belief in the existence of a material world provided no additional validation of that already irresistible belief. Comparing Reid’s position on this question with Hume’s, Brown concluded that their positions were essentially the same:

The creed of each, on this point, is composed of two propositions, and of the same two propositions; the first of which is, that the existence of a system of things such as we understand when we speak of an external world cannot be proved by argument; and the second, that the belief of it is of a force which is paramount to that of argument and absolutely irresistible. The difference, and the only difference is, that, in asserting the same two propositions, the skeptic pronounces the first in a loud tone of voice, and the second in a whisper—while his supposed antagonist passes rapidly over the first, and dwells on the second with a tone of confidence. The negation in the one case, and the affirmation in the other case, are, however, precisely the same in both.

Reviewing Reid’s writings, Brown suggested that Reid’s achievements had been overrated in Scotland—partly because of his influence as an

educator in Aberdeen and Glasgow, partly because of the general horror at what were understood to be Hume's opinions, and partly because of the eloquence of the exposition of Reid's thinking that had been provided by Brown's predecessor, Dugald Stewart.<sup>49</sup>

Brown's criticism of Reid reached an audience wider than Edinburgh lecture-halls through the publication of Brown's *Lectures on the Philosophy of the Human Mind* (1820). Writing ten years after the publication of the *Lectures*, Sir William Hamilton cited Brown's attack upon the doctrines shared by Reid and Stewart as a contributing cause of the speculative apathy that he sensed around him in Scotland:

What was the impression on the public mind when all that was deemed best established—all that was claimed as original and most important in the philosophy of Reid and Stewart, was proclaimed by their disciple and successor to be naught but a series of misconceptions, only less wonderful in their commission than in the general acquiescence in their truth!<sup>50</sup>

As Hamilton knew, the public mind had been troubled by many subjects besides the war between Brown, Reid, and Stewart. When agitation for political reform revived after Waterloo, the spirit of political faction raged strong in Scotland, affecting academic elections such as that for the chair of Moral Philosophy at Edinburgh, where, after Thomas Brown's death, Hamilton himself was rejected in favor of John Wilson, the academically untried but politically conservative editor of *Blackwood's* magazine. Moreover, the atheism that was associated with republican politics in France had frightened the Scottish establishment, provoking a more intense demand for religious orthodoxy. The ministers of Edinburgh attempted to deny John Leslie the University chair of Mathematics because of allegations that he sympathized with Hume's teaching on causation; the Edinburgh Reviewers were attacked as the irreligious "progeny of the skeptical philosophers of the last age";<sup>51</sup> and the Evangelical party within the Church of Scotland was attempting to exclude "mental science" from the classrooms of Moral Philosophy, hoping thereby to combat scepticism or agnosticism in favor of revealed Christianity. Even for those whose intellectual interests had not been corrupted by political faction or narrowed by religious zeal, there was now an abundance of distractions. Commenting on the taste for superficial knowledge that was diverting men from serious mathematical and philosophical studies, Francis Jeffrey deplored the ascendancy of "Encyclopedical trifling"

over those studies whose scientific status he had questioned in the *Edinburgh Review*:

...the misfortune is, that there is no popular nor royal road to the profounder and more abstract truths of philosophy; and that these are apt, accordingly, to fall into discredit or neglect at a period when it is labour enough for most men to keep themselves up to the level of that great tide of popular information which has been rising, with such unexampled rapidity, for the last forty years."<sup>52</sup>

In that discouraging environment, Sir William Hamilton brought a new vitality to Scottish studies of the mind. In the late 1820s and 1830s, Hamilton contributed a series of essays to the *Edinburgh Review*, essays that displayed a forceful prose style and a close knowledge of Aristotelian and contemporary Continental thought that was new to Scottish philosophy.<sup>53</sup> Partly because of the reputation gained through those essays, Hamilton was elected to the chair of Logic and Metaphysics at Edinburgh in 1836. In his lectures, essays, and annotations to his editions of Reid's and Stewart's writings, Hamilton defended Reid against Thomas Brown's criticism, arguing that Brown had misunderstood Reid, Reid's answer to Hume, and the central philosophical issue of the age. That issue, he believed, was the challenge to human certainty raised by modern scepticism, against which Reid's theory of perception provided the only plausible defence. To clarify that defence, Hamilton argued that Brown's misunderstanding of Reid was caused, in part, by Reid's failure to distinguish clearly between mediate/representative knowledge and immediate/intuitive/presentative knowledge. Hamilton believed that Reid had been in error in claiming immediate knowledge for Memory and Imagination as well as for Perception: objects from the past (the objects of Memory) and objects in the future (the objects of Imagination) can be known only mediately, through representation, while an examination of our Consciousness in Perception leads us to believe that our knowledge of both mind and matter in the present is immediate/intuitive/presentative.

Acknowledging Reid's weaknesses on this and other questions, Hamilton honored Reid as the modern founder of the system of "Natural Realism," a system that admits the truth of the facts of consciousness in perception—that is, the validity (not just irresistibility) of our beliefs in the existence of what we perceive. Hamilton believed that a system such as Reid's was the only effective defence against a scepticism that, questioning the truth of any fact of consciousness, would invalidate consciousness as our court of last appeal:



Our knowledge rests ultimately on certain facts of consciousness, which as primitive, and consequently incomprehensible, are given less in the form of *cognitions* than of *beliefs*. But if consciousness in its last analysis—in other words, if our primary experience be a faith, the reality of our knowledge turns on the veracity of our constitutive beliefs.

By attacking successfully Hume's argument that we have only representative knowledge through perception, an argument that denies man immediate knowledge of either mind or matter, Reid had re-established the logical consistency of our belief in the existence of both mind and matter: "Philosophy was thus again reconciled with Nature; consciousness was not a bundle of antilogies; certainty and knowledge were not evicted from man."<sup>54</sup>

Although his contribution to formal Logic impressed many of his contemporaries, it was not as an independent system-maker that Hamilton stimulated early nineteenth-century Scottish thought. Rather, he was able to convince Scottish readers and students that the philosophic game was worth the candle. Believing that "we *exist* only as we energize" and that "*pleasure* is the reflex of unimpeded energy," he believed also that speculative truth is not so important as speculation itself. He could, then, affirm "the pre-eminent utility of metaphysical speculations" to an early Victorian audience who questioned the worth of such pursuits:

It is as the *best gymnastic of the mind*—as a mean, principally, and almost exclusively conducive to the highest education of our noblest powers, that we would vindicate to these speculations the necessity which has too frequently been denied them. By no other intellectual application . . . is the soul thus reflected on itself, and its faculties concentrated in such independent, vigorous, . . . and continued energy;—by none, therefore, are its best capacities so variously and intensely evolved.<sup>55</sup>

An encyclopedic critic of philosophy, able to deal confidently with those Continental thinkers whom earlier philosophic Scots had ignored, Hamilton promoted the native Scottish philosophical tradition, best represented by Reid and Stewart, as a flawed but essentially sound philosophic program. Contrasting that native tradition with the materialistic psychology taught by Condillac, which until recently had dominated French philosophy, Hamilton summarized the important achievements of the Scottish study of mind:

Without vindicating to man more than a relative knowledge of existence, and restricting the science of mind to an observation of the fact [*sic*] of consciousness, it, however, analyzed that fact into a greater



number of more important elements than had been recognized in the school of Condillac. It showed that phenomena were revealed in thought which could not be resolved into any modification of sense—external or internal. It proved that intelligence supposed principles, which as the *conditions* of its activity, cannot be the *results* of its operation; that the mind contained knowledge which, as primitive, universal, necessary, are not to be explained as generalizations from the contingent and individual, about which alone all experience is conversant. The phenomena of mind were thus distinguished from the phenomena of matter; and if the impossibility of materialism were not demonstrated, there was, at least, demonstrated the impossibility of its proof.<sup>56</sup>

Hamilton noted that France's recent emergence from Materialism had been effected, in part, through the French discovery of the writings of Reid and Stewart,<sup>57</sup> and this new version of the old Gallic-Scottish alliance held real promise for the progress of psychology. There was, he believed, reason for both pride and hope.

The pride was justifiable; the hope was not to be fulfilled. After the ecclesiastical disruption of 1843, Evangelicals captured the chairs of Moral Philosophy and of Logic and Metaphysics at Edinburgh, rejecting Hamilton's protégé, James Frederick Ferrier, and rejecting Hamilton's avowed belief that the search for truth is more important than its possession. Subsequently, in the 1850s-60s, Evangelicals won influential university positions at St. Andrews, Aberdeen, and Glasgow.<sup>58</sup> Among the leading Scottish writers on the mind who were active after Hamilton's death, none attempted to develop the Reid-Stewart-Hamilton tradition—a tradition that attempted to provide a *via media* between an extreme Empiricism that would trace all mental life to sensation and an extreme Idealism that saw the universe as a creation of the Absolute or individual mind. Alexander Bain rejected intuitionist psychology for a study of the mind in exclusively associationist terms. Other thinkers—such as Ferrier, James Hutchison Stirling, Alexander Campbell Fraser, John Caird and Edward Caird—turned to a fresh reading of Berkeleyan Idealism or to the forms of German Idealism made popular by post-Kantian philosophers (what Hamilton had rejected as “the philosophy of the unconditioned”). Scottish study of the mind did not stop with the death of Hamilton in 1856 or with the Evangelical capture of important university positions. But the influences that shaped it were not those that most of the Scots discussed in this essay had valued.

## NOTES

1. Sir Isaac Newton, *Opticks*, Bk. III, Pt. I, Quest. 31. For a study of the several "Newtonianisms" current in the eighteenth century, see Robert E. Schofield, "An Evolutionary Taxonomy of Eighteenth-Century Newtonianisms," *Studies in Eighteenth-Century Culture*, 7 (Madison: Univ. of Wisconsin Press, 1978), 175-92. On the introduction of Newtonian ideas into Scottish universities, see Christine M. Shepherd, "Newtonianism in Scottish Universities in the Seventeenth Century," *The Origins and Nature of the Scottish Enlightenment*, eds. R.H. Campbell and Andrew S. Skinner (Edinburgh: John Donald, 1982), 65-83.
2. Dugald Stewart, "Account of the Life and Writings of Thomas Reid," *The Works of Dugald Stewart* (Cambridge: Hilliard and Brown, 1829), VII, 221.
3. Stewart, "Account," *Works*, VII, 243-44.
4. *Edinburgh Review* 3 (January 1804), Art. 1, 273.
5. David Welsh, *Account of the Life and Writings of Thomas Brown* (Edinburgh: Tait, 1825), 77.
6. *Edinburgh Review* 3 (January 1804), Art. 1, 273-74.
7. *Edinburgh Review* 3 (January 1804), Art. 1, 275.
8. Sir Walter Scott to George Ellis, 2 November 1808, *The Letters of Sir Walter Scott*, ed. H.J.C. Grierson, Centenary ed. (London: Constable, 1932), II, 121.
9. "Pneumatology"—the traditional Scholastic term—was used throughout the eighteenth century, although "science" or "philosophy of mind" was preferred by those writers who wished to dissociate themselves from the Scholastic tradition. "Psychology" came to be a prominent term in the early nineteenth century. "Epistemology" was not coined until the mid-nineteenth century, by James Frederick Ferrier of St. Andrews.
10. Adam Smith, "The Principles which Lead and Direct Philosophical Enquiries: Illustrated by the History of Astronomy" and "The Principles which Lead and Direct Philosophical Enquiries: Illustrated by the History of Ancient Physics," *The Early Writings of Adam Smith*, ed. J. Ralph Lindgren (New York: Augustus M. Kelley, 1967), 29-122.
11. Henry Home, Lord Kames, *Essays on the Principles of Morality and Natural Religion* (1751; reprint ed. New York: Garland, 1976), "Advertisement" and 221-306 (Part II, Essays I-V).
12. Thomas Reid, *Essays on the Intellectual Powers of Man* (1814-15; reprint ed. Cambridge, Mass. and London: M.I.T. Press, 1969), xxxvii (Preface).
13. Pneumatology (*Pneumatologia* or *Pneumatica*) was also at times the general category that included Natural Theology, "Angelographia" and "Daemonologia," and Psychology.
14. Kames, *Essays*, 240 (Part II, Essay III); George Turnbull, *The Principles of Moral Philosophy* (1740; reprint ed., Hildesheim and New York: George Olms Verlag, 1976), I, (Introduction). See also Smith, *Early Writings*, 190; Reid, *Essays*, 136 (Essay II, Ch. VIII); Stewart, "Philosophical Essays," *Works*, IV, 15-16, 33-34. Scholastic philosophy was slighted in Scotland until the emergence of Sir William Hamilton in the 1830s.
15. As Hume complained, men now condemned as metaphysics any argument "which is in any way abstruse" and which "requires some attention to be comprehended": David Hume, *A Treatise of Human Nature*, ed. L.A. Selby-Bigge (Oxford: Clarendon Press, 1896), xviii (Introduction). In his *Elements of Criticism* Kames declared himself to be "extremely sensible to the disgust men generally have to abstract speculation." He would press on, although candor obliged him to warn his readers "that such of them as have an invincible aversion to abstract speculation may stop short here": Henry Home, Lord Kames, *Elements of Criticism*, 6th ed. (1785; reprint ed. New York: Garland, 1972), I, 26 (Ch. I). Francis Hutcheson had recognized early in the century that the fault lay with philosophers themselves: "I doubt we have made philosophy, as well as religion, by our foolish management of it, so austere and ungainly a form, that a gentleman cannot easily bring himself to like it; and those who are strangers to it can scarcely bear to hear our description of it": Francis Hutcheson, *Inquiry into the Original of Our Ideas of Beauty and Virtue*, 2nd ed. (1726; reprint ed., New York: Garland, 1971), xvi (Preface).
16. Hume, *Treatise*, 52 (Bk. I, Pt. II, Sect. IV). However, Hume praised "algebra and arithmetic as the only sciences in which we can carry on a train of reasoning to any degree of intricacy, and yet preserve a perfect exactness and certainty."

17. Reid, *Essay*, 704 (Essay VI, Ch. VIII). Reid was born into a family of strong mathematical interests. His mother was a member of the illustrious Gregorys, a family that included David Gregory, Savilian professor of astronomy at Oxford and a close friend of Sir Isaac Newton. While at Marischal College, Aberdeen, Reid had studied Newton's *Principia* with John Stewart, the future author of a commentary on Newton's treatises concerning the quadrature of curves.
18. Stewart, "Account," *Works*, VII, 214.
19. Hume, *Treatise*, xxi (Introduction).
20. Hume, *Treatise*, 271 (Bk. I, Pt. IV, Sect. VII); Smith, "A Letter to the Authors of the *Edinburgh Review*," *Early Writings*, 23
21. George Turnbull was representative. "This enquiry is carried on in the same way with natural philosophy," he wrote in his *Principles*. "According as the one, so the other may proceed in the double manner of analysis and synthesis. Hypotheses are not admitted in either, any further than as questions into the truth or reality of which it is worthwhile to pursue. As natural philosophy proceeds from causes to effects, or from effects to causes, and so is compounded of experiments and reasoning from experience, so moral philosophy in like manner": *Principles*, I, "Summary" of 19-23.
22. For example, Kames asked his reader to watch himself watching Garrick play King Lear, as a test of Hume's description of *belief*; then to test recent theories concerning causal inference by attention to "what passes in his mind when he sees one billiard ball struck against another, or a tree, which the wind is blowing down, or a stone thrown into the air out of one's hand": *Essays*, 224, 279 (Part II, Essays I and IV).
23. See Hume, *Treatise*, xxiii (Introduction).
24. Alexander Gerard, *An Essay on Genius* (1774; reprint ed., New York: Garland, 1970), 2.
25. Thomas Reid, "An Inquiry into the Human Mind, on the Principles of Common Sense," *The Works of Thomas Reid* (Charlestown, Mass: Samuel Etheridge, 1813), I, 173 (Ch. I, Sect. II).
26. Reid, *Essays*, 54-56 (Essay I, Ch. V).
27. The opinions on scientific method paraphrased here are found in Hume, *Treatise*, xxii (Introduction) and 39-53 (Bk. I, Pt. II, Sect. IV); Reid, *Essays*, 133-52 (Essay II, Ch. VIII) and "Inquiry," *Works*, I, 315-18 (Ch. VI, Sect. XII); Stewart, "Account," *Works*, VII, 250-53 and "Philosophical Essays," *Works*, IV, 1-7.
28. Reid, "Inquiry," *Works*, I, 233 (Ch. V, Sect. III).
29. Stewart, "Philosophical Essays," *Works*, IV, 3.
30. See James Beattie, *Elements of Moral Science* (1790; reprint ed., Delmar, New York: Scholars' Facsimiles and Reprints, 1976), 155 (Part I, Ch. I, Sect. 7), 379-80 (Part II, Ch. I); Kames, *Elements*, I, 250-51 (Ch. V); Adam Ferguson, *Institutes of Moral Philosophy*, 2nd ed. (1773; reprint ed., New York and London: Garland, 1978), 118 (Part III, Ch. I, Sect. II); Smith, "Of the External Senses," *Early Writings*, 209; Turnbull, *Principles*, I, "Summary" of 202 and 406; Reid, "Inquiry," *Works*, I, 170 (Dedication) and *Essays*, 696 (Essay VI, Ch. VIII); Gerard, *Essay*, 289. For a discussion of how teleological thinking influenced Scottish ethics and aesthetics during this period, see Philip Flynn, "Scotland and Sin: Moral Philosophy and Scottish Culture in the Eighteenth and Early Nineteenth Centuries," *Dalhousie Review*, 64 (Spring 1984), 50-68, and "Scottish Aesthetics and the Search for a Standard of Taste," *Dalhousie Review*, 60 (Spring, 1980), 5-17.
31. Reid, "Inquiry," *Works*, I, 170 (Dedication) and *Essays*, 696 (Essay VI, Ch. VIII).
32. The subjectivistic problem was acute in questions of moral psychology. In his *Treatise* and later *Enquiry concerning the Principles of Morals* (1751), Hume argued that human moral distinctions have their basis in feelings of pleasure or pain, "the chief spring or actuating principle of the human mind." But Hume did not find in men's natural feelings any evidence of divine design. His moral analysis was naturalistic: different creatures with different constitutions would develop different standards of virtue and vice, as natural and valid for them as human standards are for us.
33. In the *Opera* Satan returns to Edinburgh to inquire how his cause is faring. He is informed that Hume is his leading spokesman and listens to Hume's arguments on the ideas of causal relationship and personal identity. But Satan, like the rest of Hume's audience, is bewildered: "Faith, I don't know well what to think of him. Are you sure he is true blue on our side? I confess, I have some suspicion that he is a shrewd fellow, endeavouring to convert men to Christianity by writing nonsense against it." Quoted in Ernest Campbell Mossner, *The Life of David Hume* (Austin: Univ. of Texas Press, 1954), 367.

34. James Boswell, *Boswell on the Grand Tour: Germany and Switzerland, 1764*, ed. Frederick A. Pottle (New York, Toronto, and London: McGraw-Hill, 1953), 28; Boswell: *The Ominous Years, 1774-1776*, ed. Charles Ryskamp & Frederick A. Pottle (New York, Toronto, and London: McGraw-Hill, 1963), 207, 216-17.
35. Kames, *Essays*, 242 (Pt. II, Essay III), 221-230 (Pt. II, Essay I), 307 (Pt. II, Essay VI), 387 (Part II, Conclusion). In his *Elements of Criticism* Kames defined external and internal senses: "That act of the mind which makes known to me an external object is termed *perception*. That act of the mind which makes known to me an internal object is termed *consciousness*. The power or faculty from which consciousness proceeds is termed an *internal sense*. The power or faculty from which the perception proceeds is called an *external sense*. This distinction refers to the objects of all our knowledge; for the senses, whether external or internal, are all of them powers or faculties of the mind" (*Elements*, II, 505-6). Although Kames agreed with Hume that belief is essentially feeling, he rejected Hume's definition of belief as a *lively* idea, contrasting history with drama to show that liveliness of conception sometimes, but not always, accompanies belief.
36. Kames, *Elements*, II, 513, note (Appendix). Reid is cited often as the originator of the attack upon the "ideal system," but the attack and the phrase appear earlier in Kames's *Elements*.
37. "Minutes of the Philosophical Society of Aberdeen, 1758-1771," in the Aberdeen Univ. Library, MS. 539, quoted by Lloyd Bitzer, ed. of George Campbell, *The Philosophy of Rhetoric* (Carbondale: Southern Illinois U.P., 1963), xi-xii.
38. Reid, "Inquiry," *Works*, I, Ch. II, Sects. I and VI; Ch. V, Sects. I, VII-VIII; Ch. VI, Sects. VI and XII; Ch. VII.
39. Reid, "Inquiry," *Works*, I, Ch. II, Sects. III-IV, VII; Ch. V, Sect. III; Ch. VI, Sect. XXI.
40. Reid, *Essays*, Essay VI, Ch. IV-VI.
41. Reid, "Inquiry," *Works*, I, Conclusion; *Essays*, Essay VI, Ch. I. Reid explained that common *sense* means common *judgment*: "Not to go back to ancient philosophy upon this point, modern philosophers consider sense as a power that has nothing to do with judgment. Sense they consider as the power by which we receive certain ideas or impressions from objects; and judgment as the power by which we compare those ideas, and perceive their necessary agreements and disagreements. . . . On the contrary, in common language, sense always implies judgment. A man of sense is a man of judgment. Good sense is good judgment. . . . All that is intended in this chapter is to explain the meaning of common sense, that it may not be treated, as it has been by some, as a new principle, or as a word without any meaning. I have endeavoured to show that sense, in its most common, and therefore its most proper meaning, signifies *judgment*, though philosophers often use it in another meaning. From this it is natural to think that common sense should mean common judgment; and so it really does" (*Essays*, 556-560—"Of Common Sense").
42. Dugald Stewart, *Elements of the Philosophy of the Human Mind* (New York: Eastburn, Kirk, 1814), II, 42-47 (Ch. I, Sect. I).
43. Stewart, "Philosophical Essays," *Works*, IV, 2.
44. Stewart, "Philosophical Essays," *Works*, IV, 19-43.
45. *Edinburgh Review*, 17 (November 1810), Art. 9, 173-86.
46. Hume appeared to early nineteenth-century Whigs to be a conservative, primarily because of his sympathetic treatment of the Royal party in the English Civil War in his *History of England*.
47. *Edinburgh Review* 3 (January 1804), Art. 1, 273.
48. Thomas Brown, *Lectures on the Philosophy of the Human Mind* (Hallowell: Glazier, Masters, 1834), I, 44 (Lecture V); I, 95-106 (Lecture X), 106-11 (Lecture XI); I, 103 (Lecture X); I, 94 (Lecture IX).
49. Brown, *Lectures*, I, 111-16 (Lecture XI); I, 246-56 (Lecture XXV); I, 265 (Lecture XXVI); I, 267-77 (Lecture XXVII); I, 277-80 (Lecture XXVIII). For Scottish discussions of the evolution of the controversial term *idea*, see also Smith, *Early Writings*, 126; Beattie, *Elements*, 10-11 and "Essay on Poetry and Music," *Essays* (1776; reprint ed., New York: Garland, 1971), 432; Stewart, "Dissertation Exhibiting a General View of the Progress of Metaphysical, Ethical, and Political Philosophy, since the Revival of Letters in Europe," *Works*, VI, 360 (Pt. II, Sect. VII); Sir William Hamilton, "Philosophy of Perception," *Discussions on Philosophy and Literature, Education and University Reform* (New York: Harper & Brothers, 1868), 75 (note).

50. Hamilton, "Philosophy of Perception," *Discussions*, 49. This essay was published originally in the *Edinburgh Review* of October, 1830.
51. John Gibson Lockhart, writing as "Peter Morris," *Peter's Letters to His Kinsfolk*, 2nd ed. (Edinburgh: Blackwood, 1819), II, 128.
52. *Edinburgh Review* 17 (November 1810), Art. 9, 169.
53. In the 1820s Sir William Hamilton and his circle were the first Scottish philosophers to begin a systematic study of Kantian and post-Kantian German philosophy. In the January 1803 issue of the *Edinburgh Review* Thomas Brown had reviewed Charles Villers's *Philosophie de Kant* (1801): admitting that his knowledge of Kant's thought came solely from Villers's exposition, Brown felt no qualms in dismissing "the Transcendental theory" as an incoherent mix of Berkeley, Hume, Leibnitz and Reid. In his *Philosophical Essays* (1810) Dugald Stewart had acknowledged that, although he had attempted to read a Latin translation of Kant's works, "I have always been forced to abandon the undertaking in despair; partly from the scholastic barbarism of the style, and partly from my utter inability to unriddle the author's meaning" (*Works*, IV, iii, note).
54. Hamilton, "Philosophy of Perception," *Discussions*, 58-59, 90-92. See also Hamilton, "The Presentative Faculty," *Lectures on Metaphysics and Logic*, eds. H. L. Mansel and John Veitch (Edinburgh and London: Blackwood, 1861), II, 18-85.
55. Hamilton, "Philosophy of Perception," *Discussions*, 58-59, 90-92. See also Hamilton, "The Presentative Faculty," *Lectures*, II, 18-85.
56. Hamilton, "Philosophy of the Unconditioned," *Discussions*, 11. This essay was published originally in the *Edinburgh Review* of October, 1829.
57. Royer-Collard and Jouffroy had popularized the teachings of Reid and Stewart as an alternative to the materialism/sensationalism of Condillac and his followers.
58. For a lively and openly partisan study of this struggle, see George Elder Davie, *The Democratic Intellect: Scotland and Her Universities in the Nineteenth Century* (Edinburgh: Edinburgh U.P., 1961). Further details, in connection with the mysterious James Frederick Ferrier, are now available in Arthur Thomson, *Ferrier of St. Andrews: An Academic Tragedy* (Edinburgh: Scottish Academic Press, 1985).