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James Mill on Joseph Priestley  
—A reflection on science and religion—

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1. Introduction

In his *Essay in Biography*, J. M. Keynes famously said that the world would have better opportunities if economics was led by Malthus' approach and not Ricardo's. James Mill (1773-1836) expressed a similar sentiment in 1815, stating that if Joseph Priestley (1733-1804) had tendered a well-informed critique to Thomas Reid' philosophy, "so important a branch of science would not have been left in the disgraceful condition in which it has so long been treated." (Mill 1815, 17) Why did Mill value Priestley higher than Reid?

This paper aims to conclusively elucidate James Mill's scientific methods and principles as well as his approach to political economy. As Torrance (2006, 149) acknowledged, Mill clearly argued his views on methodology in his *Essay on Government*. However, the *Essay* itself is regarded as an inquiry into political science that focuses on forms of government. This paper, therefore, would like retrace Mill's epistemology with the aim of gaining a better understanding of Mill's methodology through a reconsideration of Mill's opinions of science and his philosophical perspective on knowledge.

This paper is divided as follows: The next section describes James Mill's earlier critiques of Priestley's thought. The subsequent section outlines Priestley's views on science given his theological perspective. The penultimate segment elucidates Mill's views on science centered on three essays he wrote in his later life. The final section presents this author's conclusions.

2. James Mill's critics on Priestley

In 1802, as is well known, Mill criticized Thomas Belsham's *Elements of the Philosophy of the Human Mind*, which was published in 1801. Belsham became a pastor of a Unitarian church that Priestley served in Hackney and after Priestley's exile to America, he confessed to being Priestley's "bulldog" or faithful follower. Belsham's theological and philosophical essays were also evidently subject to the influence of Priestley's thought. Priestley re-edited and published David Hartley's *Observations on Man* and praised Hartley's ideas. In this respect, Mill's critique was directed as much toward Hartley and Priestley as toward Belsham. Conversely, Mill expressed his

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admiration for the Scottish moral sense school of thought that included scholars such as Thomas Reid, Dugalt Stewart, and others<sup>1</sup>.

He said that there were two ways of 'investigating the laws of any part of nature.' To quote Mill, 'The first of these is called the method of hypothesis or theory; the second that of induction or experience.' Mill stated that the former was what 'Lord Bacon calls anticipations' and this method was based on 'forming conjectures beforehand of what we think are the rules which nature follows in producing the events which we observe, and then endeavoring to make these events correspond to our theory.' The latter, on the other hand, involves 'carefully observing the events which nature produces, to learn from these events themselves what is the established order in which nature actually brings them about.' Mill regarded Hartley, Priestley, and Belsham as the representatives of the former method; and Locke, Reid, and Stewart as advocates of the latter means. He went on to criticize Priestley and Belsham by name because 'Dr. Priestley and Mr. Belsham, not contented with adopting in their own practice the first mode of philosophizing, have stated themselves be the peculiar enemies of those who have adopted the second.' Thus, he finally concluded that the method 'of induction or experience' was the infallible rule (Mill 1802, 3–4). However, although Mill attacked Priestley by name in his writings, he did not specifically elucidate or refer to Priestley's essays.

In an apparently contradictory move, Mill criticized Priestley in his book review of Dugald Stewart's "Elements of the Philosophy of Mind" in *The British Review* after he had converted from being a follower of the Scottish school of common sense to becoming an associationist. In this essay, Mill refuted Reid's common sense as dogma without substantiation:

The *ipse dixit* of Dr. Reid is the standard of reason and philosophy. He solves every thing by the infallible method of declaring that it is just as he pleases, and because he so pleases; and ..., he finishes, by calling every body fool and rogue that dissents from him.(Mill 1815, 16)

Although he referred to Priestley as a critic of Reid's philosophy, Mill did not properly assess Priestley in this treatise. According to Mill, Priestley's criticism of Reid was not enough, because Priestley's thought was not scientific. Mill said that

[Priestley] was neither sufficiently acquainted with the science, nor sufficiently capable of patient, close, and subtle thinking, to go to the bottom of the principles which he attacked; nor could he avoid such displays of ignorance and self-delusion, as afforded a color to Dr. Reid and his followers for treating the book with contempt, and holding themselves exempt from the obligation of

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<sup>1</sup> Belsham, in his book, said that Adam Smith's *Theory of Moral Sentiments* was based on instinctive principles in common with Reid. As we know now, Smith regarded a spring of moral sentiments as sympathy, and not as common sense. It is surprising that Mill did not refer to Belsham's points of view about Smith's *Theory of Moral Sentiments*, even after transferring his allegiance from common sense to associationism. Did Mill think that there was little to distinguish Smith from Reid and Stewart?

answering its objections. (Mill 1815, 15)

However, Mill continued,

This was a misfortune to the science. Had the philosophy of Reid been controverted at an early period, with such a degree of knowledge and skill as would have commanded the respect and attention of the public, he would have been compelled to reconsider the foundation of his belief; and, either by obviating ill-founded opinions, or by abandoning untenable ground, would have left the science in a better state, and more likely to invite a succession of cultivators. (Mill 1815, 15)

The questions that arise at this juncture are: What was science both for Priestley and for Mill? What was the difference between Priestley's conception of science and Mill's definition of the subject? Finally, was Mill's evaluation of Priestley adequate? Let us turn to first question.

### 3. Priestley and Science

Priestley believed that the main goals of science were to discover divine providence, which Priestley saw as the regularities that a universal deity had implanted in the world. In order to discover this predestination, Priestley divided science into two distinct categories: natural philosophy and moral philosophy. The former's purpose was to study the natural world and the latter's goal was to study the objective of human existence. Priestley writes

By natural philosophy, we mean the knowledge of the external world; but by moral philosophy, we mean the knowledge of the structure of our own minds, and its various affections and operations, of which it must be acknowledged that very little is yet known but into which we begin to get some light, especially from the observations of Mr. Hobbes, Mr. Locke, and, above all, Dr. Hartley. This knowledge of human nature is the proper ground-work of everything that is called political knowledge, or a knowledge of the interests and conduct of men as connected in society. (Priestley 1788, 19–20)

As Priestley himself explicitly asserted, he saw natural philosophy as the study of the natural world mechanism and moral philosophy as a discipline designed to understand the manner in which human beings constituted societies. Although Priestley did not expressly use these terms, in modern terminology we refer to the former as natural science and to the latter as social science. He elaborated, conversely, that there existed a methodological similarity between natural and moral philosophy and noted that the ultimate purpose of both these systems was to exhibit and elucidate God's work. He said, '[b]oth methods are equally attempts to trace out the perfections and providence of God, by means of different footsteps which he has left us of them' (Priestley 1803, 423).

According to Priestley, assumptions in natural and moral philosophy should be

derived from reasoning based on experimentation. Priestley said that '[s]peculation, without experiment, has always been the bane of true philosophy' (Priestley 1779, vii). However, because 'experiments' in moral philosophy are more difficult than in natural philosophy, there is no alternative to deriving 'experiments' from history. In fact, Priestley regarded history as 'anticipated experience' (Priestley 1803, 29). For him, the aim of the study of history is to think about the present and the future by using the past to establish causal connections among varied points of history. Since 'experiments' in actual life are limited only to parts of existence as a whole, considerable knowledge must be guided by experience that is simulated by the use of historical realities. Therefore, in moral philosophy, history is given the same position as 'experimentation' in natural philosophy.

For Priestley, the aims of both natural and moral philosophy are to find the divine providence and to create human systems based on this universal design. He believed that many discoveries in science were able to cause an accumulation of knowledge that would improve industrial technology. Priestley regarded science as theory and art in practice, saying that '[t]he great improvement in the arts in modern times has certainly arisen from late improvements in science' (Priestley 1803, 311). For him, a body of knowledge could be regarded as science and all advancements in knowledge played a very important role because this growth was directly associated to the expansion of science<sup>2</sup>. Priestley thought, therefore, that a division of labor in amassing knowledge would increase the sum of accrued awareness and, ultimately, our world would become 'glorious and paradisiacal,' however optimistic this proved to be.

[A]ll knowledge will be subdivided and extended; and knowledge, as Lord Bacon observes, being power, the human powers will, in fact, be enlarged; nature, including both its materials and its laws, will be more at our command; men will make their situation in this world abundantly more easy and comfortable; they will probably prolong their existence in it, and will grow daily more happy, each in himself, and more able (and, I believe, more disposed) to communicate happiness to others. Thus, whatever was the beginning of this world, the end will be glorious and paradisiacal, beyond what our imaginations can now conceive. (Priestley 1768, 9)

Priestley employed the same method for both natural and moral philosophy and from this context, we can gauge his serious commitment to philosophical necessity, a concept devised by Hobbs and subsequently clarified by Hartley. Hartley thought that all phenomena could be explained by mechanical laws because human beings could not act freely or without regard to the laws of nature as constructed and implanted by God. He regarded the notion of association as one of the laws that was *necessarily* generated. The concept of sense and feeling also was acquired not *a priori* but *a posteriori*. Newton was able to explain physical principles using the law of gravity. Similarly, Hartley's

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<sup>2</sup> And thus, he required the government of England to grant the right of liberty of inquiry. In the late 19<sup>th</sup> century, Thomas H. Huxley appreciated Priestley's attitude (see Huxley 1874).

associationism enabled him to explicate the origin and combination of moral principles. Priestley thought that the theory of causation allowed him to justify the idea of philosophical necessity as being drawn from laws of nature. If we have no motivation (= cause), we cannot act at all (= effect). Because God created all nature including human beings and formed the laws to govern all natural phenomena, humanity could not act without relation to the laws of nature. If this is taken as true, as a creator, God is a material being and it follows, therefore, that Christ was also not a spiritual, but a material reality. Regarding all phenomena as material components and reinforced by his conviction of philosophical necessity, Priestley could deny the trinity presupposing theory of dualism and subscribe to unitarianism. In other words, he rejected the trinity and became a unitarian who emphasized the personality of Christ through a rational interpretation of the Bible<sup>3</sup>. His method of science was definitely linked to his religious belief.

#### 4. Mill and Science

In 1802, when Mill criticized Belsham, he said:

He [Belsham] does not seem to have considered the difference between science and art and their connection with one another; science is the foundation of art, and art is built on science.

Thus, he argued, Belsham's idea of art was improperly built on an incorrect notion of science as a 'method of hypothesis or theory.' In other words, a proper art must be built on a proper science. However, Mill's ideas about science changed after 1818 when he converted from being a follower of the school of common sense to becoming an associationist. After this transformation, he obviously preferred the 'method of hypothesis or theory' to that of 'induction or experience.' The most notable change is seen in his 1836 essay, *Whether Political Economy is Useful*.

In this treatise, Mill defined science as a 'comprehensive and commanding view' (Mill 1836a, 1037) or 'the general, commanding, and complete view of the subject.' (Mill 1836a, 1038) Mill also said, in the same essay, that

Science means a combination of propositions, both true and important, and so completely embracing the whole subject to which the propositions relate, as that nothing material in it shall be found, which some of the propositions do not include. (Mill 1836a, 1028)

Although Mill described the relationship between theory and science as 'Theory is literally view; and the science is *scientia*, knowledge' (Mill 1836a, 1037), they were practically the same. He wrote in *Theory and Practice*, immediately before publishing

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<sup>3</sup> Their attitudes sound very much like that of Thomas Paine, though he was a deist who rejected revealed religion and confirmed only natural religion. In fact, Priestley estimated that '[Paine] was writing like a rational Christian (Priestley 1794. 158).'

*Whether Political Economy is Useful*, that ‘every theory,..., the most general and comprehensive it is, the more valuable it is.’ (Mill 1836b, 231) Mill’s views of science would be more clearly understood in terms of his conception of theory. Mill wrote that

We have seen that in the formation of all theories the object is to ascertain a case of constant sequence; when that is correctly ascertained and correctly expressed in words, the expression may be said to be a correct theory. (Mill 1836b, 230)

Therefore, Mill regarded science or theory as what, after ‘ascertain[ing] a case of constant sequence,’ forms ‘a combination of propositions, both true and important.’

Mill applied the association of ideas to cognize this ‘constant sequence’ as shown in his *Education*. He referred to Hartley and Condillac and said:

They both began upon the ground that all simple ideas are copies of impressions; that all complex ideas are only simple ideas united by the principle of association. (Mill 1824, 224)

In addition, Mill went on to assert that

the character of the human mind consists in the sequences of its ideas; that the object of education, therefore, is, to provide for the constant production of certain sequences, rather than others; that we cannot be sure of adopting the best means to that end, unless we have the greatest knowledge of the sequences themselves. (Mill 1824, 225)

He regarded the idea of association as a right theory and introduced it into the core of his system. In *Theory and Practice*, Mill wrote that a right theory led to a right practice and vice versa<sup>4</sup>. Mill’s view did not change in his later years.

However, if we observed the similarity between Hartley and Priestley, we would find a profound difference between (Hartley and) Priestley and Mill. That fundamental dissimilarity would stem from the question, ‘what is the first cause for the constant sequences?’ Priestley sought to define science as the discovery of the laws of nature which God created and implanted on earth and, therefore, he could advocate its philosophical necessity. On the other hand, Mill sought to identify science from the perspective of experience, not religion. While Priestley harmonized science with religion, Mill did not so. In fact, he separated science and religion.

## 5. Conclusion

Mill regarded Priestley as an untidy philosopher, whereas Priestley tried to harmonize a disorderly with the order of theology. This distinction was natural because Mill was

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<sup>4</sup> ‘As far as the sequence is correctly ascertained, that is, as far as the theory goes, the practice founded on it is correct.’ (Mill 1836b, 231)

primarily a psychologist and Priestley was chiefly a theologian. However, both of them endeavored to explain the system of the world with the same tool of associationism. Mill's critiques of Priestley may have gone too far, since Mill did not properly understand Priestley's theology.

The problem of why Mill evaluated Belsham in higher regard than Priestley remains unresolved. Belsham and Priestley had common theological ideas. In his *Elements*, Belsham did not devote much space to his theological opinions. What, among Belsham's ideas, did Mill value more than Priestley's? It would be necessary to examine this issue in more depth in further research initiatives.

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