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Revisiting the origin of critical thinking

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ABSTRACT

There are two popular views regarding the origin of critical thinking: (1) The concept of critical thinking began with Socrates and his Socratic method of questioning. (2) The term 'critical thinking' was first introduced by John Dewey in 1910 in his book *How We Think*. This paper argues that both claims are incorrect. Firstly, critical reflection was a distinguishing characteristic of the Presocratic philosophers, setting them apart from earlier traditions. Therefore, they should be recognized as even earlier pioneers of critical thinking. Secondly, John Dewey not only used the term 'critical thinking' before 1910, but there were also other authors who used it before him. The meaning of 'critical thinking' at the turn of the twentieth century was shaped by various traditions of linguistic usage, including literary criticism, science and medicine, and Kantian philosophy.

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Introduction

When enquiring into the historical origin of critical thinking, there are several questions to consider. One question pertains to our evolutionary history: When did the cognitive capacity for critical thinking first emerge? Did it come about through progressive increase in brain size in our hominin ancestors? Answering this question is challenging, as there is still much we do not know about the adaptive function of human intelligence and its neural and evolutionary basis. A more tractable question focuses on the origin of the concept of critical thinking: How far back can we trace the idea of critical thinking in recorded history? This involves identifying the earliest thinkers or texts that exemplified excellence in critical thinking and demonstrated an awareness of its nature and importance. A third question relates to the linguistic history of the term 'critical thinking' in English: When did the term 'critical thinking' first appear in the English language? How did it gain currency and how did its meaning evolve over the years?

This paper focuses on the second and third questions about critical thinking. One interesting fact about the voluminous literature on critical thinking is that even though there is no uncontested definition of critical thinking, there seems to be a consensus about the answers to these two questions. According to what we might call *the standard view*, the answers are as follows: The concept of critical thinking began with Socrates and the Socratic method of questioning. As for the term 'critical thinking', it was first introduced by John Dewey in the 1910 first edition

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of *How We Think*, in connection with his theory of reflective thinking. The primary aim of this paper is to show that these answers are in fact mistaken.

The standard view has been endorsed by many authorities and academics in the field of education and critical thinking, and plenty of textbooks and popular websites. For example, according to a widely cited report on critical thinking by Richard Paul and his colleagues at *The Foundation for Critical Thinking*, the 'intellectual roots' of critical thinking are 'traceable, ultimately, to the teaching practice and vision of Socrates' (Paul, Elder, and Bartell, 1997, p. 8). Alex Fisher wrote in his critical thinking textbook that 'Socrates began this [critical thinking] approach to learning' (Fisher, 2001, p. 2). A recent anthology on critical thinking and reasoning also traces the origin of critical thinking to the Socratic method (Fasko and Fair, 2020, p. 1). It is easy to find plenty of research papers that share the same view.¹

As for the origin of the term 'critical thinking', *Encyclopaedia Britannica* says it 'was coined by American philosopher and educator John Dewey in the book *How We Think* (Dewey, 1910)' (Gosner, 2023). *The Stanford Encyclopedia of Philosophy* is more cautious, stating that use of the term 'to describe an educational goal goes back to [Dewey]', while acknowledging that Dewey often used the label 'reflective thinking' instead (Hitchcock, 2022). Interestingly, Robert Ennis, whose definition of critical thinking is widely discussed and accepted, suggested that 'critical thinking' originated with the progressive educators who decided to give a different name to Dewey's reflective thinking (Ennis, 2015, p. 31). It is not clear why Ennis did not acknowledge the fact that Dewey used the term 'critical thinking' in his 1910 book. Perhaps what Ennis meant was that it was the progressive educators who popularized the term when they pushed for a more dynamic and discovery-based modern education curriculum. After all, Dewey preferred to use the terms 'reflective thought' and 'reflective thinking', which appeared about 20 times in the first edition of *How We Think*. In contrast, 'critical thinking' appeared only twice and did not have an entry in the index (although there was one for 'uncritical thinking' and another one for 'inference, critical'). The term 'critical thought' was not mentioned in the book. In the revised and expanded 1933 edition (Dewey, 1933), all instances of 'critical thinking' and 'uncritical thinking' were removed, and the subtitle 'A Restatement of the Relation of Reflective Thinking to the Educative Process' was added.

Dewey's preference for 'reflective thinking' is of course consistent with him being the first to introduce the term 'critical thinking' in the context of education and methodology of thinking. I have not been able to find any scholar who has challenged this assumption in print.² Ennis himself noted that 'critical thinking under that name was inspired by [Dewey]'. Richard Paul's report contained a survey of the history of critical thinking, which mentioned plenty of figures before Dewey who 'extended our conception of critical thought', starting from Socrates to the Middle Ages and Renaissance, and to the French Enlightenment and beyond. In the twentieth century, the report singled out American clergyman and sociologist William Graham Sumner's 1906 publication *Folkways* as an important text that recognized the need for critical thinking in education. Although Sumner's book appeared before Dewey's *How We Think*, it only mentioned 'critical analysis' and 'critical faculty' but did not use the term 'critical thinking'.

In the remainder of this paper, I will argue that the standard view is incorrect. Firstly, the Presocratic philosophers demonstrated a strong emphasis on rational argumentation and critical discussion, making them even earlier pioneers of critical thinking. Secondly, I will show that there were other writers and philosophers who used the terms 'critical thinking' and 'reflective thinking' before Dewey (1910). In fact, Dewey himself mentioned reflective and critical thinking in an earlier publication. The first recorded usage of 'critical thinking' was in the nineteenth century, and the meaning of the term has evolved in complex and interesting ways over the years, drawing influence from various sources such as literary criticism, science and medicine, and Kantian philosophy. Tracing this development will enhance our understanding of the history and etymology of critical thinking and illuminate the sources that influence Dewey's theory of reflective thought.

Critical thinking in Presocratic philosophy

In this section I will argue that the concept of critical thinking can be traced back to Presocratic philosophy. As a working definition I shall adopt Ennis's account of critical thinking as 'reasonable, reflective thinking that is focused on deciding what to believe or do' (Ennis, 1991, p. 6). Although Ennis's definition is not the only one in the literature, it is widely accepted and captures the core ideas of many other definitions of critical thinking. My claim is that Presocratic philosophy clearly demonstrates admirable use of reason and reflective thought in argumentation and analysis, as well as awareness of their importance. So, if we were to trace critical thinking back to Socrates, as is often the case, we have good reasons to trace it back even earlier to the Presocratics.

The Presocratic philosophers who lived in the 6th and 5th centuries BCE marked the beginning of the Greek philosophical and scientific tradition. They include figures such as Thales, Xenophanes, Heraclitus, Parmenides, Zeno, and others. The Presocratics were diverse individual thinkers and did not form a unified school of thought. Some, such as Democritus and Protagoras, were contemporaries of Socrates.

One major difficulty in trying to understand their philosophy is that only fragments of their writings remain, together with testimonies from other ancient writers. There are, however, some general themes about Presocratic philosophy that scholars have highlighted. Many of the Presocratic philosophers were interested in understanding the ultimate nature and principles of the natural world. For example, the Milesians, comprising Thales, Anaximander and Anaximenes, all proposed theories of the first principles that govern natural phenomena. Thales famously thought that water is the principle of all things.

The Presocratic philosophers were not the first philosophers or the first group of thinkers trying to explain the natural world. Many ancient Greek thinkers attributed the origin of philosophy to earlier non-Greek cultures (Cantor, 2022). But in earlier Egyptian and Mesopotamian traditions, supernatural and scientific explanations were closely intertwined and not often distinguished from each other. While the Presocratic philosophers did not reject all supernatural phenomena, they adopted a critical stance towards existing religious or mythological explanations and did not accept them without question. For example, Heraclitus encouraged people not to listen to him but to the *logos*. Knowledge comes from our senses and reason rather than divine revelations. Xenophanes criticized the inclination to anthropomorphize deities and to show favoritism towards one's own religion. Thus Karl Popper suggested that the Presocratic philosophers began 'the tradition of critical discussion' (Popper, 1958, p. 18). Jonathan Barnes also described them as 'fathers of rational thought' and 'the first men self-consciously to subordinate assertion to argument and dogma to logic' (Barnes, 1982, p. 3).

The use of reasoned arguments figured prominently in the discussion and analysis of the Presocratic philosophers. Parmenides made extensive use of complex deductive arguments, employing one of the earliest formulations of the principles of non-contradiction and excluded middle (Austin, 1986, p. 153). Zeno sought to defend Parmenides against his critics, utilizing *reductio* and regress arguments about space, time, and motion. His ingenious paradoxes exerted tremendous influence on the subsequent development of science, mathematics, and philosophy.

These examples support McKirahan's claim that 'rational criticism' was a common and original feature of Presocratic philosophy:

Each of the thinkers we have considered reflected on current ideas and the views of his predecessors. They identified objections and produced new theories immune to those objections. They rejected theories because they failed to fit observed facts or because they did not satisfy rational criteria. (McKirahan, 2003, p. 11)

Presocratic reasoning included not just reflections on other people's ideas. It often encompassed an explicit awareness of issues about methodology and the norms and scope of

knowledge. This is particularly prominent with thinkers such as Xenophanes and Heraclitus.³ Heraclitus considered sound thinking the greatest virtue, but the mere accumulation of information is insufficient for understanding. Knowledge requires careful examination of reason and the reliability of our senses. Xenophanes, like Heraclitus, was skeptical of divine revelations as a source of knowledge. He seemed to have endorsed the view that although we can never achieve complete certainty, we can improve the plausibility of our opinions.

Recall Ennis's popular definition of critical thinking as 'reasonable, reflective thinking'. Judged by this definition, if we are willing to trace the history of critical thinking to Socrates, it is evident that we should regard the Presocratic philosophers as even earlier pioneers of critical thinking. This is not to downplay the enormous richness and sophistication of the Greek philosophy that came afterwards. For example, while Presocratic philosophers did engage with ethical and political themes, their discussion might not have achieved the same level of sophistication or depth that characterized the works of Plato and Aristotle.

A brief history of the term 'critical thinking'

Let us now consider the second part of the standard view, the claim that the term 'critical thinking' was first introduced by Dewey in *How We Think* in 1910. To determine whether this is correct, we can consult various etymological dictionaries and online text archives.⁴ One immediate discovery, which as far as I know has never been acknowledged, is that Dewey used the term 'critical thinking' even earlier than 1910. *Studies in Logical Theory* was published in 1903, containing essays on logic and the theory of judgment by Dewey and his colleagues. In a chapter on 'Thought and its subject-matter', Dewey wrote that historically all scientific inquiries passed through four stages of development, and in the initial stage facts 'were taken for granted' with 'no reflective or critical thinking' (Dewey, 1903, p. 11).⁵

I will now show that even though Dewey used the term 'critical thinking' before 1910, the term actually appeared in the English language nearly a hundred years earlier. However, the meaning of a term can change over time. What an author meant by 'critical thinking' is an interpretative issue which can be difficult to resolve. As is well known, the English word 'critical' originates from the Greek word κρίνειν (*krinein*), meaning 'to judge', 'discern', 'decide', or 'separate'. The word came to carry different connotations. I will argue that there were at least three major traditions of linguistic usages that contributed to the meaning of 'critical thinking' leading up to Dewey.

According to the Oxford English Dictionary, the term 'critical thinking' first appeared in 1815, in the British literary journal *The Critical Review*. The journal was founded in 1756, comprising mainly of lengthy book reviews, and contributors included Samuel Johnson and David Hume. Volume I of the May 1815 issue contained an anonymous review of an English translation of Lucretius's *Nature of Things*, with the reviewer praising the translator's commentary:

It contains a very fine general character of Lucretius, as a poet, written with great power of language, candid discrimination, and original strength of critical thinking.⁶

The term 'critical thinking' therefore did not originate with Dewey, and it appeared much earlier. However, it is likely that the term meant something rather different. The book review focused mainly on the literary merits of the translation, so judging from the context, 'critical thinking' might have referred to careful analysis pertaining to the interpretation and assessment of a literary work, more closely related to what we might call 'literary criticism' today.

We can certainly point to similar usages of 'critical thinking' in the nineteenth century. One example from 1845 described an author's exegetical remarks on the Bible as displaying 'sound and critical thinking'.⁷ Another from 1877 criticized the careless language of a commentary on a play, claiming that it 'engenders loose habits of critical thinking' and undermining the learning of grammar.⁸ Of course, linguistic precision and analysis is part of our modern conception of

critical thinking. But critical thinking as it is understood now is meant to be a domain-general thinking skill. It would be hasty to conclude that these three occurrences of 'critical thinking' in the nineteenth century refer to this type of general reasoning, rather than something narrower.

We can gain a clearer picture of how the meaning of 'critical thinking' has evolved by tracking the usages of semantically related terms containing the word 'critical', such as 'critical reasoning', 'critical enquiry', 'critical philosophy', and the like. For example, we can find authors using the terms 'critical reasoning' and 'critical observation' also in a literary context, discussing matters of textual analysis and interpretation, with some usages going back to the 17th and eighteenth century.

Some of these terms have also been employed in scientific discourse, especially medicine. In texts from the seventeenth century, we find references to physicians with a 'critical eye', displaying 'critical judgment' and engaging in 'critical enquiry'. 'Critical day' was often used to mark significant turning points in the course of a disease. In the 18th and nineteenth century, we find medical and scientific reports presenting 'critical remarks', 'critical observations', 'critical accounts', and 'critical research'. A book review in 1831 in a medical journal commended a text for displaying 'critical reflection'.⁹ From around the mid-nineteenth century, there were references to the 'critical and reflective powers' of the intellect, and increasing usages of 'critical thought' and 'critical reasoning' in their modern senses. One interesting example came from the English scientist Michael Faraday (1791–1867), famous for his work on electromagnetism and electrolysis. In a letter dated June 14, 1861, Faraday expressed his skepticism about occult phenomena, writing that scientific discoveries require 'rigid investigation, founded on the strictest critical reasoning and the most exact and open experiment' (Faraday, 1861). An article from *The Journal of the American Medical Association* in 1892 stated that medical students 'require more study, and training, and capacity for deductive reasoning' to improve diagnostic skills, and '[n]o field of thought requires more accurate perception and critical reasoning than that of medicine'.¹⁰

Apart from literary and scientific discourse, we also need to consider the extensive influence of Kant. The first book in English on Kant was published in 1796. As Kant's ideas began to spread, we find more references to Kant's 'critical philosophy', 'critical thought', and 'critical ways of thinking'. Sometimes Kant's philosophy was simply referred to as 'critical thinking'.¹¹

Kant's influence played a role in explaining why the terms 'critical thinking' and 'reflective thinking' often appeared together in the early literature. Reflection is a key concept in Kant's critical philosophy. Kant repeatedly emphasized that all judgments require reflection, and at the same time often presented prejudices as judgments without reflection.¹² In the third *Critique*, a distinction is made between determining and reflective judgments, and the latter is supposed to be the basis of systematic theories of the natural world. Many authors have adapted and simplified these ideas and concluded that philosophy consists in critical and reflective thinking.¹³

Samuel Coleridge (1772–1834) was one of the most influential figures in the English Romantic movement, and an important channel in the transmission of Kantian ideas to America. His famous 1817 autobiography *Biographia Literaria* was a multifaceted work that drew heavily on Kant. In *Aids to Reflection* (1825), Coleridge developed his own version of the Kantian distinction between reason and understanding. For Coleridge, reason is the intuitive faculty by which we acquire ideas, including the idea of the spiritual realm, whereas understanding is the faculty of reflection which carries out logical and empirical analysis. Reason relies on our understanding but goes beyond it, allowing us to comprehend the truth of Christianity. In this way philosophy and religion can be reconciled. In 1829, James Marsh at the University of Vermont published the American edition of *Aids to Reflection*, prefaced with Marsh's own 'Preliminary Essay'. Through Marsh, Coleridge's ideas have had a huge impact on American theology and philosophy, and on writers and philosophers including Ralph Waldo Emerson and John Dewey. Dewey was a student at Vermont when he read Marsh's edition of Coleridge. Dewey later professed that he shared Coleridge's religious outlook and described the book as his 'spiritual emancipation' and 'first Bible' (Lamont, 1959, p. 15–16).

Reflective thinking was central to Coleridge's theory of education. He viewed education as an organic process of self-development aiming at spiritual perfection. To achieve this, the mind must become fully aware of itself, nurturing one's moral and intellectual faculties through the cultivation of 'habits of reflection'. Marsh's curriculum reform in Vermont was inspired by Coleridge. Dewey, in turn, absorbed ideas about education from Coleridge and Marsh. In short, there is a Kantian dimension to Dewey's theory of reflective thinking in education.¹⁴

Dewey's contemporaries on critical and reflective thinking

By the turn of the twentieth century, the meaning of 'critical thinking' has evolved to closely resemble its modern meaning, denoting a desirable general thinking skill. Although 'reflective thinking' was more commonly used at that time,¹⁵ we can find many authors from various backgrounds using the term 'critical thinking' in written works before Dewey. In the following section, we will review some of the more notable instances.

John Stuckenberg (1835–1903) was an American theologian. In his 1888 publication, *Introduction to the Study of Philosophy*, he emphasized the importance of critical reflection, stating that science and philosophy 'can be tested only by critical thinking' (p. 124). He also stated that the study of philosophy is valuable because 'it teaches the pupil to think for himself, to be critical, exact, thorough and discriminating' (p. 369).

American preacher William M. Thayer (1820–1898) published many popular biographies of famous people, extolling virtues and the ethics of success. One of his books was said to have sold 192,000 copies reaching a million readers.¹⁶ Writing on the art of thinking, he said that thinking is improved by 'critically examining' ideas, and '[s]trong convictions, with courage to express and defend them, promote the habit of critical thinking' (Thayer, 1892, p. 374–5).

John Robertson (1856–1933) was a prolific Scottish journalist and Member of Parliament. A relentless advocate of rationalism and scientific methodology, he published more than a hundred books and was a notable exponent of the view that the Biblical Jesus was a mythical rather than historical character. In 1899, in the first volume of *A Short History of Free Thought*, he used the term 'critical thinking' twice, first lamenting 'the enormous hindrance offered to critical thinking' in primitive culture, and the second time accusing Socrates of failing to 'carry his critical thinking' to scientific matters.¹⁷

We can also find many references to critical thinking in the context of education. An article on the psychology of child education stated that the principles of psychology must be discovered 'through reflective or critical thinking' (Bryant, 1894, p. 7). There were also course catalogues describing courses that aimed to promote 'reflective and critical ability'¹⁸, or 'to secure for the student some freedom and independence in critical thinking'.¹⁹ Use of the term 'critical thinking' could also be found in other academic disciplines. A 1902 sociology article discussed four types of personality, with the 'Critical-intellectual' 'marked by breadth and balance, clear perceptions, sound judgment, careful reasoning, and critical thinking' (Ross, 1902, p. 92).

Also worth noting is Hugo Münsterberg (1863–1916), a pioneer in applied psychology at Harvard. His writings often emphasized the importance of critical reasoning in science. Münsterberg contributed over a dozen articles to the popular magazine *Atlantic Monthly*, mostly on topics related to psychology and education. Of special relevance is his 1901 article 'Productive Scholarship in America'. In this article, Münsterberg argued that American universities should enhance research by promoting independent thinking and teaching students to 'take a critical attitude toward all collected knowledge'. In particular, 'the graduate school ought to train in critical thinking' (Münsterberg, 1901, p. 618–9).

In addition to Münsterberg, another influential academic to consider is George Trumbull Ladd (1842–1921). Ladd was an American philosopher, psychologist, and an ordained minister. He taught at Yale for more than 20 years and played a crucial role in the development of

experimental psychology in the United States. His 1887 book, *Elements of Physiological Psychology*, was the first English textbook on experimental psychology and remained the standard reference for many years.

Ladd read the *Critique of Pure Reason* when he was only 18 years old.²⁰ He was greatly influenced by Kant and frequently used the terms ‘reflecting thinking’ and ‘critical thinking’ in his writings. A central theme of his 1890 text *Introduction to Philosophy* is that ‘reflective thinking’ is the foundation of philosophy and science. Ladd argued that even skeptics of philosophical knowledge must rely on ‘reflective analysis’ in their methodology, and our conclusions about ‘Ultimate Reality’ can only be ‘the result of a well-disciplined and thorough critical thinking’ (Ladd, 1890, p. 143). Ladd also thought that reflective thinking should be an essential component of a ‘truly liberal education’ (Ladd, 1899, p. 131).

Ladd delivered the Presidential Address for the American Philosophical Association in 1904, on the topic of ‘Mission of Philosophy’. He argued that Kant’s critical philosophy left behind two opposing realms: one of knowledge and one of faith, and it is the task of philosophy to reconcile them. Ladd emphasized multiple times in his speech that philosophy consists in ‘critical and reflective thinking’. However, he also stated that philosophy is fundamentally ‘a matter of scientific and systematic thought over the problems of nature and of human life’ (Ladd, 1905, p. 135).

Dewey has published book reviews on both Münsterberg and Ladd, and it is likely that he knew both of them personally. All three were among the 31 founding members of the American Psychological Association (APA) in 1892. Ladd served as the second president of the APA, while Münsterberg held the presidency in 1898. They were all present at the December 1898 APA meeting in New York, where Dewey was elected president to succeed Münsterberg the following year.²¹ In 1900, a group of philosophers decided to split from the APA to form the American Philosophical Association. Ladd became the new association’s president in 1904, followed by Dewey in 1905, and Münsterberg in 1908.

I have not found any evidence in Dewey’s publications or correspondence to suggest that Dewey’s ideas about reflective and critical thinking were influenced by either Münsterberg or Ladd. However, the sources identified in this section of the paper show clearly that Dewey did not coin the term ‘critical thinking’. He was also not the first person to mention ‘critical thinking’ or ‘reflective thinking’ in the context of education. All of the sources were published before *How We Think* and all but one were published before 1903, when Dewey first used ‘critical thinking’ in print. In most of these cases, ‘critical thinking’ was used not as an esoteric technical term that needed further explanation. It seems to be assumed that the reader would understand it as referring to a general thinking skill. For example, Münsterberg’s article was published in a popular literary and cultural magazine. This suggests that the meaning of ‘critical thinking’ as a desirable general thinking skill was already well-established by then.

Conclusion

According to a popular view in the literature on education and philosophy, the concept of critical thinking is believed to have originated with Socrates, while Dewey is credited with introducing the term ‘critical thinking’ in 1910. I have argued that both of these claims are incorrect. First, there are good reasons to think that the idea of critical thinking can be traced back to the Presocratic philosophers. Second, historical evidence shows that many authors used the term ‘critical thinking’ before Dewey. Additionally, I discussed three linguistic traditions that have shaped the meaning of ‘critical thinking’. The influence of Kant and Coleridge helps us understand why reflective thinking and critical thinking were closely linked in the early twentieth century. Dewey undoubtedly provided one of the earliest and most sophisticated theoretical accounts of critical and reflective thinking. His philosophy of education and efforts in curriculum reform greatly contributed to raising awareness about the importance of critical thinking. It is

understandable why he is often regarded as ‘the father of critical thinking’. However, it would be a distortion of history to claim that the term ‘critical thinking’ originated with him.

Notes

1. Here are a few randomly chosen examples: Burbach, Matkin, and Fritz (2004), Wang (2017), Von Colln-Appling and Giuliano (2017), Ryen (2020). There are some, such as Tan (2017), who argue that there is a Confucian conception of critical thinking. Although Confucius was born earlier than Socrates, arguably the modern concept of critical thinking is very much based on the Anglo-European tradition. In any case, I propose that we can trace critical thinking back to the Pre-Socratic philosophical tradition, which began before Confucius.
2. Here are some papers endorsing the claim that Dewey introduced the term ‘critical thinking’: Dixon et al. (2005), Buckley et al. (2015), Yilong and Jia (2023). The only exception I could find was a philosophy blog post by Paul Raymont (Raymont, 2016), mentioning Thayer and Ladd, whom I will discuss later in this paper.
3. According to Sassi (2018), there was little explicit methodological reflections concerning epistemology among the first Ionians (Thales, Anaximander, and Anaximenes) (p.111), but she agreed that ‘the Presocratics’ inquiry adopts a critical attitude from the beginning’ (p.63).
4. The databases I have consulted include Google Books, The Internet Archive, The HathiTrust Collection, The British Newspaper Archive at the British Library website, and Early English Books online.
5. Dewey (1900) presented similar ideas, discussing reflection and the role of an ‘inquiring and critical attitude’, but he did not use the term ‘critical thinking’ there.
6. Busby’s Lucretius (1815, p. 505).
7. Notices in the life of the Rev. Dr Smith of Washington, Pennsylvania, United States, America (1845, p. 461).
8. Marlow’s (1877).
9. E. G. (1831, p. 493).
10. Two Mistakes (1892, p. 236).
11. See for example G.A. and J. S. (1879, p. 448) and Fischer (1883, p. 232).
12. See Merritt (2018) for insightful discussion of the constitutive and normative role of reflection in Kant’s philosophy.
13. See for example Hume (1891, p. 9). George Trumbull Ladd is another example, to be discussed below.
14. See Aherne (2018) for more detailed discussion of Coleridge’s influence on Dewey.
15. Based on statistics from the Google Books Ngram Viewer (assessed Sept 20, 2023). 1942 was the year when the term ‘critical thinking’ began to overtake ‘reflective thinking’ in frequency.
16. As reported by Ethics of Success (1893).
17. See Robertson (1899), p. 15 and p. 111.
18. Bryn Mawr College (1894, p. 84).
19. Oberlin Theological Seminary (1898, p. 29).
20. Fleming (1922), p.72.
21. Farrand (1899) contains a report of the conference.

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No potential conflict of interest was reported by the author(s).

Notes on contributor

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