The medium of signs: nominalism, language and the philosophy of mind in the early thought of Dugald Stewart

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Received 9 September 2005; received in revised form 27 February 2006

Abstract

In 1792 Dugald Stewart published *Elements of the philosophy of the human mind*. In its section on abstraction he declared himself to be a nominalist. Although a few scholars have made brief reference to this position, no sustained attention has been given to the central role that it played within Stewart’s early philosophy of mind. It is therefore the purpose of this essay to unpack Stewart’s nominalism and the intellectual context that fostered it. In the first three sections I aver that his nominalism emanated from his belief that objects of the mind—qualities, ideas and words—were signs that bore no necessary relation to the external objects that they were meant to represent. More specifically, it was these signs that were arranged into systems of thought by the ‘operations of the mind’. The next three sections suggest that his treatment of words as signs most probably originated in his views on language and medicine and that his nominalistic philosophy of mind could also be extended to systems that sought to classify the natural world. I conclude by suggesting several avenues of enquiry that could be pursued by future scholars interested in excavating Stewart’s thought.

Keywords: Ideas; Signs; Abstraction; Natural history; Classification; Medicine

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doi:10.1016/j.shpsc.2006.06.013
1. Introduction

Dugald Stewart (1753–1828) was the gifted son of Matthew Stewart (1717–1785), the University Edinburgh’s professor of mathematics. As a boy he spent his summer holidays in the Scottish countryside and his school days in the family’s city residence. While in Edinburgh he grew up rubbing shoulders with university professors and socialising with their children. His teaching career started at the age of nineteen when his father became ill in 1772. Following Edinburgh’s long established practice of fathers giving professorships to their sons, he took over Matthew’s mathematics course. His real interest, however, was moral philosophy. When Adam Ferguson went to America in 1778, Stewart jumped at the opportunity and took over Ferguson’s course on the subject. Even after Ferguson returned, Stewart continued to teach moral philosophy and the town council officially gave him the chair in 1785.1 By the late 1790s, his lectures were divided into two parts: ‘Of the intellectual powers of man’ and ‘Of the active and of the moral powers of man’. Student manuscripts also show that, from the 1790s forward, he expanded a third section on the legal implications of the former two sections.

After a decade and a half of lecturing on moral philosophy he published Elements of the philosophy of the human mind (1792). It was his first book and it was an expansion of the first part of his moral philosophy lectures. A year later he published another book that summarised all of his lectures, that is, it addressed both the intellectual and moral powers of the human mind. It was called Outlines of moral philosophy and it served as a textbook for his students. After these two works Stewart went on to publish several essays and books that had a strong impact on the nineteenth century. Indeed, the subsequent editions of the Elements (1814), along with his Philosophical essays (1810) and Dissertation (1815–1821),2 went on to shape a number of philosophical schools in both Britain and America. He was also the editor of Adam Smith’s collected work (1811–1812), the teacher of many eminent Victorians (including two prime ministers)3 and biographer of the Scottish Enlightenment.4 However, although this popularity made his name commonplace for nineteenth-century intellectuals, it also guided his Victorian biographers, editors and commentators. For this reason, later works about him, including John Veitch’s widely cited nineteenth-century Memoir of Dugald Stewart (1858),5 framed his philosophy in relation to how it was accepted, modified or rejected by his Victorian opponents or disciples. Additionally, Stewart’s last two decades were extremely fertile. He revised the 1792 edition of the Elements by inserting and removing information and added two new volumes. The standard nineteenth-century editions of Stewart’s Elements, therefore, bear changes and

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1 MacIntyre (2003) is a helpful introduction to Stewart’s life. It is chronologically arranged and dips into several manuscript sources. However, as MacIntyre clearly states, it is not an intellectual biography.


3 Henry John Temple, third Viscount Palmerston (1784–1865) and John Russell, first Earl Russell (1792–1878). He also taught a number of prominent Victorian politicians, including the reformer and Lord Chancellor Henry Peter Brougham, first Baron Brougham and Vaux (1778–1868). For Stewart’s intellectual influence at Oxford University, see Corsi (1987).


5 M. Stewart (1838).
modifications that take the reader further from the intellectual context in which the book was originally written.

The foregoing historiographical and editorial issues are an acute problem for scholars wishing to excavate the conceptual foundations of Stewart’s early philosophy of mind. Although later commentators like James McCosh and William James were interested in Stewart’s thought for theological or psychological reasons, they approached his ‘operations of the mind’ via their own intellectual goals and interests. In particular, Victorian works on Stewart do not address the central role that he assigned to the mind’s use of ideas and words as signs necessary for acts of abstraction. This is a notable problem, since he was so committed to the symbolic nature of thought that he branded himself a ‘Nominalist’ in his Elements and in his lectures. Although Stewart did not retract this declaration in his later works, he also did not develop it further in print. It simply remained as part of the intellectual fabric of his philosophy of mind. It is therefore the purpose of this essay to unpack the notion of signs and the related nominalistic foundations of his early thought, that is, as it is represented in the 1792 edition of the Elements, the 1793 edition of Moral philosophy and manuscript student notes taken in students’ lectures during the 1780s and 1790s (see Fig. 1).

In what follows I begin by unpacking the terms and mental processes that framed Stewart’s nominalistic notion of the mind. Key to my reconstruction will be his post-Lockean interpretation of ‘qualities’, ‘ideas’ and ‘signs’. In particular, I will show that his nominalism emanated from his belief that words were mental signs. I will then widen the discussion by first explaining how Stewart located his nominalism within a longer history of ideas and then by treating his notion of signs in relation to his views on the primacy of language and the symbolic approach to the human body promoted by his fellow colleagues in University of Edinburgh. I will end by averring that Stewart’s nominalistic philosophy of mind allowed him to see the natural world through a contingent lens in which the traditional classification categories associated with natural history and experimental science operated as heuristic tools.

2. Qualities, ideas and signs

Stewart’s philosophy of mind was shaped by an intellectual context that treated ‘ideas’ as the foundational building blocks of human thought. During the seventeenth and eighteenth centuries there had been many disagreements over the definition of an ‘idea’ and whether it was an a priori or a posteriori entity. The contexts and contents of these debates have been traced by many authors and do not need to be addressed here. It will suffice to say that Locke’s position on the issue, which he called the ‘way of ideas’, became very popular within the British intellectual scene. Within this ‘heyday of ideas’ tradition was the

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6 McCosh (1875) and James (1902).
7 Although he did remain interested in signs for the rest of his career. On this point, see his 1814–1815 correspondence with Pierre Prévost (housed in the Public and University Library in Geneva). I have listed these letters in the manuscript bibliography at the end of this article. The nineteenth-century content and context of these letters is outlined in Schulthess (2003). I am grateful to Prof. Schultess for sending me a copy of his paper and a transcript of the Stewart–Prévost correspondence.
9 A clear explication of Locke’s notion of ideas and their relation to his philosophical system can be found in Lowe (1995).
Fig. 1. Table of contents of Archibald Bell’s stenographed notes from Stewart’s 1793–1794 moral philosophy course (Lectures on moral philosophy by Dugald Stewart, Esq. delivered at the University of Edinburgh in the years 1793–4. Archibald Bell transcription. Bound MS. De.4.97, fol. 187a).
view that ideas and words were signs. Stewart’s position on this matter was strongly influenced by Thomas Reid (1710–1796), his teacher and mentor. Reid had much to say about the ‘Ideal School’, that is, those who treated ideas as the fundamental building blocks of the mind. Notably, Reid included both Locke and Descartes within this school and he was critical of the certainty afforded by the perception of ideas that had been produced by empirical qualities and sensory experiences. However, even though he was critical of the Ideal Theory, he could not find another ‘unit’ of thought to replace the conceptual role of an ‘idea’, so it ended up becoming a necessary construct in his philosophy of mind. Stewart accepted Reid’s criticism, but he too struggled to find a replacement for an ‘idea’. In the end, he attempted to avoid the problem by arguing that ideas, and the words formed from them, were signs. Though contingent, such a position at least offered language as possible tool for examining the operations of the mind. The following paragraphs outline Stewart’s thoughts on qualities, ideas, signs and the subsequent nominalist label that he gave to his position on the matter.

Stewart’s notion of an idea was closely linked to sensation and perception. He defined sensation as ‘merely that change in the state of mind which is produced by an impression upon an organ of sense’. The internal ‘impression’ that the sensation made upon the mind had no resemblance to the external object that produced it. Perception was ‘the knowledge we obtain, by means of our sensations, of the qualities of matter’. He divided such qualities into two categories: primary and secondary. A primary quality was produced when a sense organ was in direct contact with an external object. He held that touch, taste and certain types of direct ocular stimulation (impressions of images on the retina) were the only senses that met this criterion because they were experienced via extension or figure. Smell, sound and most forms of sight had to pass through aerial or aquatic media and were therefore secondary qualities because they were experienced indirectly. Like many followers of Locke, he held that ideas were collections of qualities. They could be simple or complex, depending on how many qualities were associated with them. Although Stewart was critical of previous and contemporary notions of an ‘idea’, he used the term to refer to associations of qualities that functioned as mental objects. Sometimes he employed the term ‘thought’ to denote a larger grouping of ideas.

Ideas (and thoughts) formed the basis for words and language. A word was a select collection of ideas (individuals) and qualities (particulars), that is, ‘An appellative, or generic word, is a name applicable in a common number of individuals, which agree with each other in some particulars, and differ in others’. The process by which words were assigned to collections of ideas was accomplished via abstraction, which Stewart defined to be ‘The Faculty by which the mind separates the combinations which are presented to it, in order to simplify the objects of its consideration’. Once a word was created it

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10 Locke held that words ‘came to be made use of by men as signs of their ideas’. See Locke (1975), III. ii. 1. See also Hacking (1975), especially pp. 15–53. The term ‘heyday of ideas’ is used by Hacking to describe the theories of language that drew from the Lockean ‘idea’ tradition. He further develops several of his thoughts on the public role of language in Hacking (2002), Chs. 6 & 8.

11 See the final chapter of Reid (2000) or, in the first edition, Reid (1764).

12 Reid (2000) infers this shortcoming in many places, but it is explicitly stated on p. 217.

13 Stewart (1793), p. 21.

14 Ibid., p. 22.

15 Ibid., p. 40.

16 Ibid., p. 39. See also Stewart (1792), p. 155.
was combined with other words, communally and individually, and this eventually created a language. The associations of qualities and ideas into words was a contingent process, but the grammar of language was less so because of its contact with the customs of culture. The mental processes that oversaw abstraction and the association of ideas (or thoughts) were the ‘operations of the mind’. Stewart took these for granted and held that they could not be analyzed or explained: ‘With respect, however, to the manner in which this process is carried on, and even with respect to the nature of the changes that take place in the nerves and the brain, in the case of perception, we are hitherto ignorant; nor does there seem to be any probability that we shall ever obtain satisfactory information’.17

Throughout *Elements*, *Moral philosophy* and his 1790s lectures, Stewart avers that abstraction cannot be achieved unless the mind treated qualities, ideas (thoughts) and words as signs. As he put it, ‘without the use of signs, all of our thoughts must be related to individuals. When we reason, therefore, concerning classes or genera, the objects of our attention or merely signs’.18 This position was based on his belief that mental qualities and ideas bore no necessary relationship to the external objects from which they were derived. Though he mentions the symbolic role of qualities and ideas, his most developed treatment of the ‘medium of signs’ occurs in relation to ‘language’, a term that he felt comprehended ‘every species of signs’.19 In particular, he held that words were signs abstracted from qualities and ideas. In this sense they functioned in the same manner as numbers or algebraic symbols.20 As signs, the post-abstraction word only represented the qualities and ideas that the operations of the mind had deemed to be representative. The same was true for mathematic signs and this led Stewart to emphasise the value of judgement (both mental and moral); otherwise, ‘Without this cautious exercise of judgement, in the interpretation of the algebraic language, no dexterity in the use of calculus will be sufficient to preserve us from error’.21

3. Nominalism and moral philosophy

Stewart’s belief in the contingency of abstraction and in the symbolic role of mental qualities, ideas and words led him to search history for intellectual progenitors. As early as the 1789–1790 lecture session he included a review of three relevant schools of thought: nominalism, realism (universalism) and conceptualism; however, he admitted that he was still undecided as to how Plato and Aristotle fit into the tripartite typology.22 By the time that *Elements* was published in 1792, he had worked further through the tenets of each school by consulting an impressive number of books on the history of theology, language

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17 Stewart (1793), p. 27.
18 The ‘medium of signs’ and the preceding quotation concerning signs occurs in Stewart (1792), pp. 189–190.
19 Ibid., pp. 195–196.
20 I will treat mathematical symbols later in this essay. For Stewart’s comments on the ‘idea of number’, see ibid., p. 154.
21 For Stewart’s comments concerning mathematic symbols see ibid., pp. 173–176. The quotation is taken from p. 196. Throughout his work, however, Stewart frequently infers that the *rules* of grammar, logic and geometry are not contingent.
22 Stewart MS (1789–1790). The folios of these notes are not numbered, but the discussion of nominalists, universalists and conceptualists occurs in the ‘Of abstraction’ section.
and philosophy. Realists, in his telling, followed the scholastic belief that ideas of objects, or universals, ‘do not exist before things, nor after things, but in things . . . these ideas or forms are from eternity united inseparably with that matter of which things consist’. He associated this position with that of the ‘Schoolmen’, that is, medieval Aristotelianism as developed by the followers of Thomas Aquinas (ca. 1225–1274) and (to an extent) John Duns Scotus (ca. 1266–1308). The ‘system of the Realists’ declined after the Reformation, but a few adherents remained. In particular, he mentions the work of Richard Price (1723–1791) and his work on universals; however Stewart dismisses Price on account of his ambiguous definition of an ‘idea’.

Stewart’s ‘Nominalists’ held that there were no existences in nature corresponding to general terms; and the objects of one’s attention in general speculations were not universal ideas, but words. In his lectures and in Elements he states that two medieval representatives of this school were Peter Abelard (1079–1142) and Roscellinus (1050–1122). More importantly, he avers that the most distinguished modern adherents of the doctrine were Thomas Hobbes (1588–1679), George Berkeley (1685–1753) and David Hume (1711–1776). In contrast to realists and nominalists, ‘Conceptualists’, according to Stewart, accepted universal ideas, but believed that they did not correspond to words and that ‘the mind has the power of reasoning concerning genera, or classes of individuals, without the mediation of language’. This camp included Locke and Reid. More specifically, he suggested that they both oscillated between nominalism and realism. Although I do not have the space to discuss the tenability of this assertion in regard to these two authors, it must be stated that Reid was nonplussed with the oscillatory conceptualist label given to him by his own student. Even so, Reid was only one of many authors that influenced Stewart and the abstraction sections of the book cite ample evidence from a wide number of authors in favour of his nominalist, realist and conceptualist definitions. Whether he was accurately interpreting his sources is an issue that must be reserved for other studies on Stewart’s early thought. The important point to note here is that, based on his own definitions, he concluded that he was a nominalist: ‘it is with the doctrine of the Nominalists that my own opinion on this subject coincides’. Furthermore, it was the mediation of

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23 Stewart appeals to many classical, medieval and early modern texts written by the authors under consideration in the book’s various sections that address nominalism. There were, however, several secondary works that he also consulted, namely: Burnet (1773), Brucker (1766–1767), Harris (1751), Mosheim, (1765), Morhof (1732) and Harris (1744). Stewart also references the humanist Juan Louis Vives (Ludovicus Vives) in his discussion of the nominalist and realist camps that formed during the Reformation. No citation, however, is given.

24 This quotation on realism and the following on nominalism are taken from Stewart (1792), pp. 168–169.

25 Price (1758). I have not been able to determine which edition that Stewart used.

26 Stewart (1792), p. 188.

27 The nominalistic tendencies of these three are treated in Hacking (1975), Chs. 2–4.

28 Stewart (1792), p. 191.

29 Stewart used the word ‘realism’ to represent what today is called Scholastic universalism. For more on how nominalism (or ‘particularism’) was inherently assumed in Locke’s theory of abstract general ideas, see Lowe (1995), pp. 158–165.

30 Based on Reid’s manuscript criticisms of Elements, Robinson has argued that Stewart conflated the definitions of several key terms (especially ‘conception’ and ‘imagination’) and that these comments pushed him to emphasise the role played by words (and language) in his philosophy of mind. See Robinson (1989). I must thank Prof Robinson for sending me an offprint of his article.

31 Stewart (1792), p. 169.
language (as signs) that he felt separated him from the conceptualism that he attributed to Locke and Reid.

Stewart continued to promote the symbolic role of qualities, ideas and words and to side with the nominalists throughout the rest of his career. He retained the nominalist sections in his 1790s lectures and the later editions of *Elements* because he believed that the contingent association and formation of qualities and ideas could be ‘trained’ to follow patterns of moral behaviour. Most people, in Stewart’s view, were unaware of the symbolic value of qualities, ideas and words (or thoughts) used in the operations of the mind. For instance, when discussing primary qualities, he stated that ‘The truth seems to be, that these sensations were intended by nature to perform merely the office of signs, without attracting any notice to themselves; and, as they seldom are accompanied either with pleasure or pain, we acquire an habitual inattention to them in early infancy which is not surmounted in our maturer years’.32 Thus, it was the goal of his moral philosophy lectures (and the publications based on them), to make people aware of the symbolic patterns that shaped their own mind. The first part of his lectures, ‘Of the intellectual powers of man’, set up the problem by addressing the nominalistic foundations of thought. The remaining parts addressed how the situation could be overcome by training one’s abstractions and associations via the habitual implementation of duties to God, others and oneself. Stewart’s presentation of nominalism was, therefore, both an explication of his perception of the philosophy of mind and an argument for the need of moral philosophy. It is not my present goal to explicate the latter (although future studies that address how he used the divine attributes and natural theology to fashion his conception of duty are sorely needed). Instead, my current aim is to identify the pre-1793 factors that led Stewart to his nominalistic conclusion. Such a study is intended to be more of prelegomena for those seeking to investigate Stewart’s later thought (including the later revised editions of the *Elements*).

4. The primacy of language

Stewart’s commitment to the symbolic nature of qualities, ideas and words was a central assumption that undergirded his nominalistic philosophy of mind. His understanding of signs and their relation to abstraction and the association of ideas was therefore linked to the philosophy of language. In Enlightenment Edinburgh, this subject was treated in a wide variety of books and university courses on philosophy, divinity and rhetoric. Although it is well known that Stewart attended the philosophy lectures of Thomas Reid, Adam Smith and Adam Ferguson, less has been written about his interest (or disinterest) in linguistic topics covered by these professors or by other scholars who wrote or lectured on rhetoric. On this point, it should be noted that during the University of Edinburgh’s 1770–1771 session, Stewart attended Professor Hugh Blair’s rhetoric course.33 Over the next two decades, his interest in the history and philosophy of language continued to grow and this explains why the *Elements* mentions the work of several authors who wrote about rhetoric. More specifically, it was George Campbell’s *Philosophy of rhetoric* (1776) that influenced his thoughts on the contingent nature of words and, consequently, the names

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32 Stewart (1793), p. 22.
33 Album Academie MS(1762–1786), fol. 110b.
used to classify the natural world. In this section I will first address this influence by parsing out Campbell’s notion of signs and then I will explain how they contributed to the foundational role played by language in Stewart’s philosophy of mind.

Campbell (1719–1796) held the Chair of Divinity at Marischal College (Aberdeen) and was an opponent of Hume’s sceptical view of testimony. Indeed, Hume once referred to Campbell as his ‘friendly’ adversary. Philosophy of rhetoric was a work of logico-rhetoric, a distinctly eighteenth-century genre that drew from Aristotle’s Rhetoric (particularly enthymemes) and used Baconian tables and scientific data to construct inductive arguments. Campbell argued explicitly that words should be seen as signs and for this reason Stewart called him ‘the ingenious defender of the system of the Nominalists’. Stewart qualified Campbell’s position by stating that signs were mediated by a given linguistic context and they could lose their meaning in instances of metaphorical exuberance or with the description of abstruse concepts. Since Stewart held that the ‘process of the mind’ could ‘be carried out by words alone’ and that no two objects were the same, he also agreed with Campbell’s conception of a sign, thereby making the usage of individual names as signs dependent upon ‘our habits of thinking and speaking’.

Stewart’s use of words as signs was closely linked to his interest in the history of language. He held that the communal aspect of the symbolic agreement and exchange of words had existed from the earliest attempts at language formation. On this topic, his early moral philosophy lectures and the Elements all cite Adam Smith’s Considerations concerning the first formation of languages (1761). As early as 1789 he gave his students the following summary:

On the origin of Language we must supply the place of fact by conjecture—one of the Earliest & best accounts of this has been given by Mr Smith in a dissertation which is commonly annexed to his Theory of Moral Sentiments—Mr Smith says that names or substantives wanted most probably in the first invented work—Thus two Savages living together would come to make use of & utter particular sounds by which to Express their wants to Denominate certain objects which were the most familiar to them—Thus they would Name the Cave in which they lived, the fountain from which they Drank & by the names of tree, Fountain, &c when they wandered farther from home & observed other trees & fountains they would call them also by

34 Campbell (1776). Stewart (1792) treats this work in pp. 196–199; see also Stewart’s comments about an orator on page 180. Stewart cites Campbell’s treatment of signs despite the fact that Reid had developed his own approach to signs in Inquiry (1764). For a overview of Reid’s position on this subject, see Woltersdorff (2001), pp. 169–182.
35 Campbell (1762).
39 Stewart (1792), p. 196.
40 Ibid., p. 197. He made this qualification to safeguard himself against Hume’s comments that knowledge was mitigated by habit (or custom). See Hume (1739), Book I, Part III, Section XVIII.
41 Stewart (1792), p. 176.
42 Ibid., p. 154.
43 Ibid., p. 197.
the same appellation & thus what was at first only the Name of an Individual became the name of a whole species.\textsuperscript{44}

Here Smith avers that the formation of simple words occurred first and that their classification into species came second. Hence, the first communally recognisable acts of abstraction were linguistic. Stewart agreed with this assessment and used the hypothetical origin of languages story to explain the nominalistic foundations of human thought—including scientific and mathematical knowledge. I will treat mathematics in the next paragraph and then science in the last section of this essay.

Stewart’s interpretation of mathematics was heavily influenced by his commitment to the primacy of language and the symbolic status of words. Since he began his career as a mathematician, this point has often been missed by authors writing about his philosophy of mind. It was, however, noted several decades ago in Olson’s brief treatment of Reid and Stewart’s interpretation of Campbell’s theory of signs. He concluded: ‘Theirs [Reid and Stewart] was basically a nominalist doctrine which argued that all general or universal terms, which provide the basis for most advanced human communication, are formulated by the human understanding to signify or represent classes or particular objects, qualities, events, or actions which are perceived to be similar in some way.’\textsuperscript{45} As I mentioned briefly above, Stewart held that the attribution of mathematical symbols was itself a matter of abstraction and therefore subject to the nominalistic selection of qualities and ideas; and there are several places in the \textit{Elements} where his conception of signs leads him to emphasise the contingent nature of both algebraic symbols and geometrical formulas. One example occurs after he analogically compares the letters of an algebraic formula to the names assigned to natural objects. There he suggests that both algebraic letters and the names of objects function only as tools which can be used by the mind to further its understanding of a given set of data.\textsuperscript{46} Thus, for Stewart mathematics, like other branches of knowledge, was a construct.\textsuperscript{47}

5. Medicine, signs and classification

Another nominalistic influence upon Stewart’s symbolically based nominalism was medicine. More specifically, Edinburgh’s Medical School and the various clubs and societies attached to it. In this section I wish only to establish that Stewart had a notable inter-

\textsuperscript{44} Stewart MS (1789–1790). As there are no folio page numbers in this manuscript, see section entitled ‘The origin and progress of language’.

\textsuperscript{45} Olson, (1975), p. 74. The first half of this book is a helpful introduction to the interaction between philosophy and mathematics as it occurred within the Common Sense School of philosophy during the late eighteenth and early nineteenth centuries. However, Olson treats Ried and Stewart as a philosophical unit, which he sometimes calls the ‘Reid–Stewart interpretation’ and this obscures the individual thought of each thinker. On the dangers of conflating the thought of Reid and Stewart, see Robinson (1989), pp. 415–418.

\textsuperscript{46} Stewart (1792), pp. 170–171. Stewart’s approach here also resembles Condillac’s stance on numbers and language that is mentioned in his early treatises, but which gained a fuller expression in his posthumous \textit{La langue des calculateurs, ouvrage posthume et élémentaire} (1798). Furthermore, it was this symbolic approach to mathematics that inspired Augustus de Morgan in the nineteenth century. See Pycior, (1983), p. 221.

\textsuperscript{47} As a mathematician, Stewart was familiar with the difficulties and disputes surrounded the development of algebraic calculus from the time of Isaac Newton all the way up to the end of the eighteenth century. An introduction to this context is given in Fraser (2003), see especially pp. 324–325. There was also a negative reaction towards the mathematisation of the body during the late eighteenth-century. See Reill (2005).
est in medicine and to suggest that it is likely that this interest worked in conversation with the notion of signs that presented in the *Elements*. During the mid and late eighteenth-century, the Medical School was the centre of Edinburgh’s laboratory research culture. The two most popular experimentally based courses were anatomy and chemistry. In the early 1770s, the former was taught by Alexander Monro *secundus* (1733–1817) and the latter by Joseph Black (1728–1799). Both were young at the time and their influence would continue to be felt up until the end of the century. Although there have been many works that address the experimental and social context of the Medical School’s professoriate, surprisingly little attention has been devoted to the philosophical assumptions that under-girded the culture of classification that dominated Edinburgh’s medical curriculum. Notable exceptions to this trend are the works of Chris Lawrence, Michael Barfoot, Arthur Donovan and John Christie.

In the work of the four foregoing authors, they aver the philosophical ‘systems’ of Edinburgh’s professors were pragmatic (and perhaps utilitarian) in that they were most often orientated towards the central focus of the medical enterprise: the diagnosis of disease. Key to this concern was the practice of viewing symptoms as signs that denoted larger, often hidden, aspects of the human body; a point that was underscored by the definition of ‘sign’ in the 1771 edition of the *Encyclopaedia Britannica*: ‘Among physicians, the term sign denotes some appearance of the human body, which serves to indicate or point out the condition of the patient, with regard to health or diseases’. The most immediate use of this sort of sign was nosological systematics, that is, the classification of disease. For instance, after consulting the nosological works of Linnaeus, François de Sauvages (1706–1767), Rudolph Augustin Vogel (1724–1774), Johann Baptist Michael Sagar (ca. 1732–1813) and David Macbride (1726–1778), William Cullen (1710–1790), Edinburgh’s eminent professor of chemistry, arranged his own *materia medica* and nosological systems. By the late eighteenth century, such a process of (re)arranging was practice by all of the Medical School professors, thereby transferred the practical and pedagogical use of signs into all of the subjects (including natural history) that were taught in the curriculum. Key to this approach to arrangement was a process of abstraction that treated ideas or names of objects as signs that could be used to form species and genera of a classification system. Such a use of signs and abstraction provided a method by which a large amount of data could be arranged into pedagogically expedient systems that could be taught to students. Although none of the faculty professed to be nominalist, they all recognised that their systems were heuristic (or even contingent) and such a position was uncannily similar to Stewart’s account of abstraction and the symbolic nature of ideas and words.

Such resemblance might be easily dismissed, since past accounts of Stewart’s early life and thought have not given much attention to the fact the his family’s personal physician

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48 The most recent being the highly informative work of Risse (2005).
49 See especially: Lawrence (1984, 1988); Barfoot (1993); Christie (1993); Donovan (1975).
50 Smellie (1771), p. 600. The notion of a ‘sign’ in medicine had been employed from ancient times all the way up to the Enlightenment. For the sixteenth and seventeenth centuries, see Maclean (2002).
51 Linnaeus laid out his nomenclature in *Systema naturae* (1735), but its application to nosology was developed further by Schröder (1759).
52 Sauvages (1763); Vogel (1772); Sagar (1773); Macbride (1772).
53 Cullen (1773, 1769); the former being translated in Cullen (1800).
54 Barfoot (1993).
was Cullen\textsuperscript{55} or that he interacted with medical professors at an early age.\textsuperscript{56} In fact, to my knowledge, no significant connection has been made between him and the Medical School. A look at the University of Edinburgh’s 1770–1771 matriculation records, however, tells a different story. There his name is listed on the role for Alexander Monro, secundus\textsuperscript{a} course on ‘Anat. & Chirg’ (Anatomy and Surgery) (see Fig. 2).\textsuperscript{57} The signature is unmistakeably his, as it is the same as the one that he used to sign the role for the course that he attended with Adam Ferguson during the same year. Such an early interest in medicine also explains why he owned his own copy of lecture notes taken in Joseph Black’s chemistry course (which he most probably attended), why he frequented meetings of the Medical Society\textsuperscript{58} and why \textit{Elements} includes a notable number of detailed examples taken directly from anatomy and chemistry.\textsuperscript{59} In addition to attending medically related papers at the Philosophical Society (later the Royal Society of Edinburgh), he performed his own experiments with an air pump\textsuperscript{60} and collected medical pamphlets throughout his entire career.\textsuperscript{61} Additionally, he continued to discuss medical topics in his later publications. For example, when addressing Locke’s epistemology in his \textit{Dissertation} (written during the 1810s), he stated that ‘I have said, that the study of Medicine forms one of the best preparations for the study of the Mind’.\textsuperscript{62} Lest his readers misinterpret his thoughts as being materialistic (a position that he vehemently opposed), he was always sure to qualify such assertions, especially after the Reign of Terror, with statements calling for a balance to be struck between the study of mind and matter.

Stewart’s links to medicine become more important when one considers that natural history in Edinburgh was the domain of the Medical School well into the nineteenth century. Such a placement meant that the classification of the natural world was taught side by side with the classification of disease, matter (chemistry) and the body (anatomy). Stewart states in several places of the \textit{Elements} that he felt that the abstraction of ideas into words in the mind was analogous to abstraction of characters into species in systematic natural history. Indeed, he held that the same process was also used to abstract species into

\textsuperscript{55} The physicians William Cullen and James Gregory, both of whom are quoted in the \textit{Elements}, influenced Stewart’s desire to differentiate a ‘hypothesis’ from a ‘theory’. This is briefly treated by Rashid (1985), pp. 252–253. Additionally, Risse’s recent work on Cullen’s manuscript consultative letters and notes shows that he believed in the therapeutic power of storytelling. Stewart was often ill as a child and Cullen recommended \textit{Don Quixote} to his young patient as a form of therapy. See Risse (2005), pp. 154–156, and MacIntyre (2003), p. 19. Since Cullen was known to explain the theoretical rational of his treatments to his patients, his early relationship with Stewart deserves more attention.

\textsuperscript{56} Most of the mid eighteenth-century professors lived in close proximity to each other because the city council provided housing that was near the lecture halls. Stewart’s childhood accommodation is addressed in the first three chapters of MacIntyre (2003).

\textsuperscript{57} \textit{Album Academie MS} (1762–1786), fol. 105a; Stewart’s signature is also listed under the 1770–1771 lists for Adam Ferguson’s moral philosophy course (fol. 107a) and Hugh Blair’s rhetorick course (fol. 110b).

\textsuperscript{58} Gray (1952), p. 28.

\textsuperscript{59} For instance, Stewart (1792), p. 202, mentioned Morveau et al., (1787). Stewart was also one of the first to promote Boscovich’s chemistry in Scotland. See Olson (1969).

\textsuperscript{60} Stewart (1858), p. lvi.

\textsuperscript{61} Stewart’s (undated) manuscript \textit{List of all pamphlets formerly sent} gives the titles for his forty-three (extant) volumes of bound tracts/pamphlets ranging from the 1770s to the 1810s. There are numerous tracts on chemistry and others on anatomy and animal magnetism.

\textsuperscript{62} Stewart (1854), p. 208. His thoughts on medicine were noted by others in then nineteenth century. For instance, see the comments on Stewart in Anon. (1849–1850).
genera and so his view of the natural world on the whole reflected his nominalistic philosophy of mind. The following section treats this aspect of thought in more detail.

6. The natural world, the mind and signs

Stewart’s stance on words as signs and his knowledge of medicine, mathematics and natural philosophy led him to conclude that all operations of human thought, no matter how complex, were merely acts of classification based upon abstraction. Such a uniformity led him to conclude that ‘In all the sciences, this process of the mind is perfectly analogous to an algebraical operation; or, in other words (when the meaning of our expressions is once fixed by definitions,) it may be carried on entirely by the use of signs, without attending, during the time of the process, to the things signified’.63 The impact of this position, especially in relation to how he employed it in his post-1790s publications, deserves the attention of future studies. In what remains of this section, I will explore how his nominalistic philosophy of mind shaped his perception of natural history; a subject that was directly relevant to the medical and philosophical examples that he employed throughout the Elements. At the time, the natural history course in Edinburgh was taught by the medical faculty and it covered the areas of mineralogy, botany, zoology, meteorology, hydrology and geology. As such a topic, it was the soil from which many nineteenth-century scientific disciplines sprouted. As Wood has shown in his work on Thomas Reid and other leading figures of the Scottish Enlightenment, examples taken from natural history played a central role in the philosophical milieu of the late eighteenth century.64

During the Enlightenment the main goal of natural history was to classify the natural world. The intellectual community of Edinburgh was especially fascinated with nomenclatural systems—so much so that there were many debates over the philosophical and practical foundations of nomenclature. Such a context produced many individual systems of arrangement that drew their species and genera from well known international works like Linnaeus’ Systema naturae or from research carried out by local scholar. Most recently, this situation has been addressed in regard to chemical mineralogy,65 zoology66 and the drugs included in the various editions of the Edinburgh Pharmacopoeia.67 Considering this milieu, it seems more than coincidental that Stewart’s philosophy of mind led him to conclude that all classification systems merely reflected the changing associations and abstractions of the human mind. As he stated: ‘genera and species are mere arbitrary creations which the human mind forms’.68 Following his symbolic view of words, nomenclatural categories (species, genera, class and order) were merely signs and, as such, they were contingent like all other forms of thought.69 Such premises were closely related to Stewart’s stance on the relationship between abstraction and the formation of words. As he stated,
‘without the use of signs, all our knowledge must necessarily have been limited to individuals, and that we should have been perfectly incapable both of classification and general reasoning’.  

Such a position also helped assuage his belief that there was no such thing as a set mental category into which natural objects could be placed, they were all fundamentally unique and exhibited specific differences.

In the end, Stewart’s approach to the natural world led him to assert that ‘The various objects, for example, animate and inanimate, which are, at this moment, before me, I may class and number in a variety of different ways, according to the view of them that I chuse to take’. Such an approach to classification bears a strong resemblance to the methods employed by the Medical School’s natural history course and in other subjects that employed nomenclatural arrangements. Indeed, John Walker (1731–1803), a former student of Cullen and the Medical School’s professor of natural history often rearranged the categories that he used to classify plants, minerals and animals. In a letter to Lord Kames he once stated, ‘I was taught from the Professor’s Chair when I was fourteen, that there was an organisation in the fossil kingdom; but I have long learned that there is not. It is now universally admitted, that there is no seminal principle in fossils, no containing vessels nor contained fluids, no organization, no species, but possible combinations, innumerable as the sands of the sea’. Walker’s position on this topic mirrored that of many Medical School professors, especially those who had studied with Cullen. In many respects, Stewart’s nominalism gave a philosophical voice to such practices. There is no doubt that his stance on words as signs drew strongly from Reid and Campbell, but it is likely that the medical milieu (including natural history) also played a complementary role.

7. Conclusion

In this essay I have shown that Stewart held that ideas and words were mental signs. As such, they bore no necessary relation to the external objects that they were meant to represent. Since the operations of the mind were based upon the medium of signs, he claimed that he was a nominalist and he associated this position with similar views advocated by Abelard, Roscellinus, Hobbes, Berkeley, Hume and Campbell. I went on to aver that his nominalism, especially his use of words as signs, echoed similar practices advocated in the classification techniques used by Edinburgh’s Medical School. Although more work needs to be done on whether his medical colleagues had specifically worked out the philosophical foundations of their nomenclatural systems, it is clear that both they and he treated words as signs. The final section of this essay explored this point further by comparing Stewart’s general comments about classification and natural history (inanimate and animate objects) to the views held by John Walker, the professor of natural history and student of Cullen. Stewart and Walker were colleagues and both of them viewed systems of thought (either medical or philosophical) via a heuristic lens; though Walker, who was a generation older than Stewart, was less cavalier about stating his exact position on the matter.

70 Ibid., p. 203.
71 Ibid., p. 154. Setting Stewart’s nominalist gaze aside, acts of classification in natural history were directly relevant to studies of language and moral philosophy. For instance, Adam Smith’s 1758 essay entitled ‘Of the external senses’ incorporated information on animal classification that was taken directly from the most recent edition of Linnaeus’s Systema naturae. See Brown (1992).
72 Tytler (1807–1809), Appendix II, p. 33.
One aspect of Stewart’s thought that I have had to set aside throughout the essay is the possibility that his nominalism was complemented or influenced by several French authors. The first edition of the *Elements*, including the sections that address signs, contains citations from the work of many leading French philosophers and historians—two of the most notable being Jean-Antoine-Nicolas Caritat, Marquis de Condorcet (1743–1794) and Etienne Bonnot de Condillac (1715–1780). This interest in French authors has been largely overlooked since the later editions of the *Elements* contain scathing comments about intellectuals that Stewart associated with the materialistic philosophies of human nature that he believed had led to the Reign of Terror. This being the case, it is worth noting that Stewart’s 1792 retelling of Smith’s account for the origin of language explicitly states, ‘The same account of the progress of the mind in the formation of *genera*, is given by the Abbé Condillac’. Condillac held that ‘signs’ were mental attractors, so to speak, that connected ideas together in the mind. Although Stewart mentions Condillac several times throughout the book (including *De l’art de penser*), he does not note that signs played a central role in Condillac’s philosophy of mind. This omission is striking and its occurrence, along with citations to other French authors, deserves further research.

Overall, this essay’s focus upon Stewart’s early philosophy reveals a number of complexities that existed in Edinburgh’s late eighteenth-century intellectual scene - the most striking being his own self-avowed nominalism. On this point, it should perhaps be noted that Ian Hacking once stated that ‘Nominalism is about *classification*. It says that only our modes of thinking make us sort grass from straw, flesh from foliage. The world does not have to be sorted that way; it does not come wrapped up in “natural kinds”’. This assertion rings quite true for Stewart’s understanding of the human mind, although how his nominalism maps on to the classifications of nominalism provided by modern philosophers deserves attention in the future. Additionally, Stewart’s nominalism presents a wealth of possibilities for those interested in investigating the intellectual context that produced it, the impact that it had on Stewart’s later thought and the students who accepted or rejected it (both in practice or in principle). In particular, Stewart’s nominalism provides a useful tool for historians interested in the background assumptions behind the philosophies of mind, classification and language that led to the acceptance of Lavoisier’s new nomenclature or which perhaps introduced the relativised notion of a natural *species*

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73 Stewart (1792), p. 152.
74 On this point, Condillac stated, ‘Ideas are connected with signs and, as I shall prove, this is the only way that ideas are connected to each other’. See Condillac (1987), p. 425; the quotation is taken from the *Essai sur l’origine des connaissances humaines*, originally published in 1746. Condillac was often seen via Lockean spectacles in pre-Revolutionary Britain. Indeed, the subtitle of the English translation of Condillac’s *Essay on the origin of human knowledge* averred that the work was a ‘supplement’ to Locke’s *Essay: An essay on the origin of human knowledge. Being a supplement to Mr. Locke’s Essay on the human understanding* (T. Nugent, Trans.) (London, 1756).
75 Stewart felt particularly disillusioned with Condorcet (whom he had gone to hear speak during his visit to France in 1789). Stewart criticised Condorcet in the second edition and replaced some of the quotations taken from his work. Indeed, at one point Stewart replaced a Condorcet quotation with another from Hume. Stewart’s later influence upon French authors is addressed in Dockwrey (1976) and Manns (1994).
77 For the chemical revolution it is worth noting that John Thomson, a leading chemist of the early nineteenth century who wrote on the philosophy of new French nomenclature, lauded Stewart’s *Elements* as the foremost interpretation of Locke’s ‘Ideal Theory’. See Thomson (1832), p. 191. For Thomson’s chemistry, see his translation of *Fourcroy (1798–1800)* and more specifically, his comments about method in the preface entitled ‘Philosophy of chemistry’.
that eventually led to Charles Darwin’s theory of natural selection. Finally, Stewart’s early thought drew from a canon of philosophical and medico-scientific writings that have been hitherto treated separately by the respective historiographical traditions associated mainly with the sub-disciplines of the history of science, the history of medicine or the history of ideas (mainly philosophy). These traditions have undoubtedly given a clearer picture of past scientific, medical and philosophical beliefs, but, perhaps it is time to re-examine, or ‘reclassify’, the historiographical questions asked by intellectual historians who study these topics—especially those interested in Stewart and the later stages of the Scottish Enlightenment.

Acknowledgements

The foregoing essay has been long in the making. Over the past few years many scholars have discussed it with me, either via correspondence or in person. I would particularly like to thank David M. Knight (Durham), David N. Livingston (Belfast), Chris Lawrence (UCL), Charles W. J. Withers (Edinburgh), Simon P. James (Durham), John R. R. Christie (Leeds), Jonathan Lowe (Durham), David Pantalony (Bakken), Edith Sylla (North Carolina State, Raleigh), Andy Hamilton (Durham), Paul Wood (Victoria), Robin Hendry (Durham), Ursula Klein (Berlin), Wolfgang Lefèvre (Berlin) and Athanasia Chatzifo-tiou (OU/Durham). Resources and research funding were provided by the Max Planck Institute for the History of Science, the Dibner Institute (MIT) and Durham University Department of Philosophy. All manuscripts are cited by permission of Edinburgh University Library. Helpful comments were also provided by two anonymous Studies referees and by those who participated in seminars held by the philosophy departments at Durham University and the University of Bergen. Finally, I offer special thanks to Dan Robinson (Oxford/Georgetown), Emanuela Levi Mortera (Rome), Sheila Noble (Edinburgh), Daniel Schulthess (Geneva) and Polly Winsor (Toronto) for sending electronic copies of their work.

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78 Though much of the evidence Charles Darwin used to support his theory was drawn from natural history, little has been done to explore the nominalistic background of ‘non-essentialist methods’ developed during the Enlightenment. On this point, Winsor (2003) argues that the plethora of essentialist centred historiographies of evolution have provided a skewed picture of the pre-Darwinian taxonomic literature. See also Farber (1976).
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