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Reid and Wells on Single and Double Vision

Giovanni B. Grandi

‘An Open Revolt against the Authority of Reid’:
Thomas Brown and the Developments of
Common-Sense Philosophy

Cristina Paoletti

Reid as a pre-Kantian critical philosopher
(from the continental point of view)

Bogusław Henryk Wójcik

Notes on contributors
Introduction:  
Thomas Reid in His Time and Ours

Between Campbell Fraser’s book on Thomas Reid in the ‘Famous Scots’ series in 1898 and Ronald Beanblossom’s *Use of Metaphor and Analogy in Thomas Reid’s Epistemology* of 1971, only four books on Reid are listed in the National Library of Scotland, the British Library, and the Library of Congress: one of these is about the problem of knowledge in Scottish philosophy in general, one is originally published in Italian and one is a *Thomistic Evaluation of James Wilson and Thomas Reid*. There are no books by mainstream British or American academics, except Donald Kainer Marshall’s *The Restoration of Logic in Thomas Reid*, a doctoral dissertation published in 1939.

This paucity of major publications on the philosophy of Reid in the first seventy years of the twentieth century, and the apparent loss of interest in his work, has puzzled several historians of ideas – Paul Wood, for instance, suggests that it is ‘unclear’ why Reid disappeared from contemporary debate. After all, Andrew Seth’s *Scottish Philosophy: A Comparison of the Scottish and German Answers to Hume* had, in 1885, reasserted the superiority of Reid’s arguments against Hume over those of Kant, and suggested that the Scottish tradition was much more relevant to ‘modern’ philosophy than the then dominant Neo-Kantians and Neo-Hegelians might have supposed. Equally, G. E. Moore’s interest in Reid and in ‘Common Sense’, culminating in his ‘Defence of Common Sense’ in 1925, might have made Reid an attractive figure to developing trends in British philosophy. But Reid, and ‘common sense’, disappeared from philosophical debate to such an extent that when *The Philosophical Quarterly* announced that its prize essay for 2001 would be on the topic of ‘Thomas Reid, Scottish Philosophy and the Common Sense Tradition’, it had to prospectively justify its choice by noting the rapidly increasing pace of publications on Reid in the period between the 1950s and 1980s, and then retrospectively congratulated itself on its decision because it received more responses for this topic than it had for almost

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1 *Mind*, New Series Vol 100, No. 1, 155.
all previous topics. ‘It is possible to say’, John Haldane, as editor, concluded, ‘that the inspirer of the “Scottish common sense school” is now among the most frequently discussed of eighteenth-century British philosophers’.³

It was this context that encouraged Professor Alexander Broadie, holder of the Chair of Logic and Rhetoric at Glasgow University, and Professor Cairns Craig of Aberdeen University’s Research Institute of Irish and Scottish Studies to organise an ambitious week-long conference in both of the universities at which Reid had taught in order to celebrate the three hundredth anniversary of his birth. The conference involved more than 50 papers in parallel sessions, as well as plenary lectures by James Harris (St Andrews), Laurent Jaffro (Paris), Rebecca Copenhaver (Lewis & Clark), Udo Thiel (Graz), and Paul Wood (Victoria). The number and variety of the contributions (details of which can be found at http://www.abdn.ac.uk/riiss/events/reid2010programme.shtml) confirmed the current vitality of Reid studies and fulfilled, we trust, Haldane’s expectation that with ‘the tricentenary of Reid’s birth falling in 2010, the prospect of celebratory conferences, symposia and further papers and books is in view’.⁴ The essays in this volume are the first of two issues of The Journal of Scottish Thought devoted to papers from the conference, with other papers appearing in a forthcoming book from Oxford University Press or as chapters in books by individual contributors.

The history of Reid studies as one of apparent neglect in the first half of the twentieth century and of rapidly increasing attention in the second half presents a pattern, however, which applies not only to Reid, but also to the philosopher against whom Reid initially defined himself – David Hume. The modern prominence of Hume conceals the fact that Hume’s reputation was in some ways maintained by Reid through the nineteenth century, since in many quarters Hume was only invoked as the false philosophy to which Reid’s ‘common sense’ was the antidote, and the fact that in the period between 1900 and 1960 there are scarcely more books on Hume than on Reid—even if 1932 was notable for the publication of both John Laird’s Hume’s Philosophy of Human Nature and B.M. Laing’s David Hume. It is significant, however, that when Laing came to write the article on Hume in the ‘Great Thinkers’ series published by the journal Philosophy in the late 1930s, he focused almost entirely on Hume’s epistemology and on the theory of causation, noting their relevance

⁴ Ibid., 434–5.
to contemporary issues raised by Logical Positivism. This focus on Hume’s contribution to the philosophy of science, and particularly to the influence of his theories on those of Ernst Mach (made even more relevant by Mach’s influence on Einstein) tended to obscure the more general neglect of Hume’s philosophy in the period. Both Hume and Reid had, in effect, been reduced to a narrowly conceived contemporary relevance—Reid to a ‘common sense’ which had some local application in developments in British thought, especially in relation to the role of language, and Hume to a conception of causality which gave him greater prominence simply because of the influential impact of the work of the physicists who claimed the similarity of his theories to their own.

It is highly appropriate, then, that the key turning point in their modern reputations took place in the same year—1941. It was then that A.D.Woozley’s abridgment of Reid’s *Essays on the Intellectual Powers of Man* was published which, according to John Laird in a review in 1942, made Reid available to modern readers by simply overcoming the fact that ‘Hamilton’s edition of Reid, which ousted all others about a century ago, is unpleasant to read because of its double columns and small print’. Laird notes that making Reid available in this fashion—‘His book is very kind to the reader’s eye’—is important precisely because of the ‘considerable affinity between Reid’s work and a good deal of contemporary or near-contemporary British philosophy’. In the same year Macmillan published Norman Kemp Smith’s

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7 Einstein acknowledged Mach’s ideas as one of the building blocks of the general theory of relativity, and in his *Autobiographical Notes*, trans and ed. P.A. Schilp (Chicago, 1979), 51, recounts that ‘The type of critical reasoning required for the discovery of this central point [that the axiom of the absolute character of time, or of simultaneity, was rooted unrecognized in the unconscious] was decisively furthered, in my case, especially by the reading of David Hume’s and Ernst Mach’s philosophical writings’.
8 A.D. Woozley, editor of the first modern edition of Reid’s work (see following paragraph) was, according to his wife, ‘the last surviving member of the original group of seven philosophers whose informal discussions from 1937–39 were the beginnings of Oxford ordinary language philosophy. There is an account of these original meetings in Isaiah Berlin’s *Personal Impressions*, the chapter on J.L. Austin. Austin and Berlin organized the group; besides Austin, Woozley and Berlin, the members were A.J. Ayer, Stuart Hampshire, Donald Macnabb and Donald MacKinnon. (http://leiterreports.typepad.com/blog/2008/04/in-memoriam-ad.html, accessed 20 Nov. 2010).
10 Ibid.
The Philosophy of David Hume, the book to which most modern discussions of Hume can be traced. Ironically, Kemp Smith’s account of Hume begins by overthrowing the ‘Reid-Beattie Interpretation of Hume’s Teaching’, a version which he sees as replicated in all later interpretations ‘down to recent times’, and particularly in T.H. Green’s supposedly devastating critique in the ‘Introduction’ to his edition of Hume’s Treatise (1888). According to this reading, Hume’s ‘scepticism’ is ‘self-destructive’ in its ‘demolition of common sense’, in opposition to which Kemp Smith proposes a reading of the Treatise that turns fundamentally on the proposition ‘that reason “is and ought only to be” the servant of the “passions”’. It was a re-reading which brought Hume much closer to Reid by its emphasis on the fact that, ‘In man as in the brute animals, custom is king—custom operating through feeling which takes the form of belief’, or, as Kemp Smith put it in his first essay on Hume, published as early as 1905,

The assumption of the existence of body is a ‘natural belief’ due to the ultimate instincts or propensities that constitute our human nature. It cannot be justified by reason, but this unaccountability it shares in common with our moral and aesthetic judgments and with all those theoretical beliefs which concern matters of fact.

By displacing the notion of Hume as primarily a sceptic and promoting him as a realist, and by rooting his moral theory in the work of Hutcheson, Kemp Smith effectively overthrew the radical opposition between Hume and Reid which had been fundamental to histories of Scottish philosophy such as James McCosh’s, in which Hume is presented as the ‘foe’ and Reid as the defender of native virtue.

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11 A. J. Ayer, in his Hume: A Very Short Introduction (Oxford, 2000; 1980), suggests that ‘the first commentator to treat Hume neither as an appendage to Locke and Berkeley nor as a forerunner to Kant, but as a philosopher of original views which at least deserved serious consideration, was Professor Norman Kemp Smith’ (26).
13 Ibid., 7, final quotation from James Beattie’s Essay on the Nature and Immutability of Truth in opposition to Sophistry and Scepticism (1770).
14 Ibid., v.
15 Ibid., 95.
18 Ibid., 178: ‘He is in every respect, a Scotchman of the genuine type’.
It was Kemp Smith’s transformation of David Hume that laid the ground for the emergence of the notion of the Scottish Enlightenment. This is a concept which has now become such an ineradicable part of the landscape of Scottish history that it is easy to lose sight of just how recent is its inception. Tracing it back to Dugald Stewart’s *Biographical Memoirs* of his precursors,\(^{19}\) or to W.R. Scott’s first invocation of the term in his *Francis Hutcheson: his life, teaching and position in the history of philosophy* (1900), may give it a sense of long historical significance but the notion that there was something that might be described as a ‘Scottish Enlightenment’ is an entirely modern one. It appears in none of the histories of Scottish philosophy written in the late nineteenth century,\(^ {20}\) and there is no trace of the concept in writings about eighteenth-century Scotland until the late 1960s. Indeed, its novelty is still being commented on in 1982 by such eminent scholars as R.H. Campbell and Andrew Skinner in the ‘Introduction’ to their collection of essays, *The Origin and Nature of the Scottish Enlightenment*. There could only be a *Scottish* Enlightenment once it was possible to see Hume as a thinker who was integral to a tradition that had evolved in Scotland, rather than as the voice of an Enlightenment whose origin was elsewhere and which had no roots in Scottish society.

The initial impetus for calling what happened in eighteenth-century Scotland an ‘Enlightenment’ came from Cambridge, and from the course on ‘Hume, Smith and the Scottish Enlightenment’ developed there by Duncan Forbes. Its international significance can be traced to Hugh Trevor-Roper’s address to the second Enlightenment congress at St Andrews in 1966.\(^ {21}\) This Cambridge account of the Scottish Enlightenment foregrounded Hume and tended to marginalise Reid, and in doing so also displaced an already developing account of Enlightenment in Scotland which had been emerging in North America, one in which Reid and the common-sense school were seen by Americans as the precursors of their own intellectual heritage in the social sciences. This was the premise of Gladys Bryson’s *Man and Society* (1946), one of the earliest studies of Scotland’s eighteenth-century intellectuals as a ‘school’, a premise

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\(^{20}\) As well as McCosh’s *The Scottish Philosophy* of 1875, there is Andrew Seth’s *Scottish Philosophy: A Comparison of the Scottish and German Answers to Hume* (Edinburgh, 1885), and Henry Laurie’s *Scottish Philosophy in its National Development* (Glasgow, 1902). All were preceded by John Clark Murray’s series of essays on Sir William Hamilton and Scottish philosophy in *The Canadian Journal* (1867).

which was later given historical context by Garry Wills’s account in of the importance of Reid’s common sense philosophy to those who wrote the American constitution. The shape of the Scottish Enlightenment—indeed, its geographic focus within Scotland and its disciplinary range—looks very different from the perspective of these two traditions: the first sees Hume and Smith as the commanding figures, still appealed to in contemporary issues; the second sees Reid as the crucial influence on subsequent thought and his philosophy as continuingly relevant, especially to North American traditions; the first focuses on Edinburgh, the second on Aberdeen (of which Jefferson’s tutor, William Small, was a graduate) and Glasgow. From the American perspective, Reid was still the leading figure of the Scottish school, but from the Cambridge perspective the ‘Scottish school’ was not central to its vision of ‘Enlightenment’.

The version of Reid which both traditions presented was, however, to be substantially altered by the on-line availability from the late 1990s of the Reid manuscripts held by the University of Aberdeen, and their publication in the new Edinburgh edition of his works. In the range of his engagement with classical thought in subjects such as rhetoric, explored by Alexander Broadie in his edition of Thomas Reid on Logic, Rhetoric and the Fine Arts: Papers on the Culture of the Mind (2005), and in the depth of his engagement with scientific theories in areas such as physiology and botany, as examined in Paul Wood’s Thomas Reid on the Animate Creation: Papers Relating to the Life Sciences (1995), Reid was revealed as a thinker much more thoroughly involved with European developments than would have been acknowledged in the Cambridge version, and of much broader intellectual interests than was acknowledged in the American version. The limited number and focus of his publications in his own lifetime belied the breadth and scope of his intellectual interests, and the ways in which those interests had shaped his philosophy.

This broadening of our understanding of Reid and his intellectual contexts was paralleled by a similar expansion in the notion of the Scottish Enlightenment, which rapidly extended from the writings of a small group of lumières—a view maintained in both Bryson’s and the Cambridge accounts—to a societal process that involved large segments of the Scottish population across a wide range of activities in the eighteenth century. Enlightenment came to encompass not only the philosophers and their friends, the aristocratic horticultural ‘improvers’, but also the printers, one of whom

instigated the *Encyclopaedia Britannica*; the botanists (like John Hope, whose experiments with rhubarb are noted by Reid in one of his letters); and the gardeners and plant hunters on whom they depended; and, of course, the ministers who provided the material for Sir John Sinclair's *Statistical Account of Scotland* (1791–99). In this broader conception of the Enlightenment, Reid, as university teacher, minister, philosopher, mathematician, amateur scientist and plant collector—not to mention doting parent and keen gardener—might be considered the most typical figure—might, indeed, be viewed once again as James McCosh had viewed him, as 'the fit representative of the Scottish philosophy'. If neglected at the beginning of the twentieth century, Reid certainly cannot be ignored at the beginning of the twenty-first, either in terms of his long historical influence or in terms of his contemporary relevance.

The following papers, which are the first of two issues of the *Journal of Scottish Thought* devoted to Reid, underline both the historical and ongoing philosophical interest in the work of Reid and his contemporaries. The organisers of the conference would like, once again, to thank everyone who participated in the three hundredth anniversary celebrations in Aberdeen and Glasgow, and the editor of the *Journal of Scottish Thought* thanks them for allowing him to publish their papers in this and the following issue of the journal.

Cairns Craig

*University of Aberdeen*

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23 To David Skene, 20 December 1765, in Paul Wood (ed.), *The Correspondence of Thomas Reid* (Edinburgh, 2002), 44.


Reid and Higher Order Theories of Consciousness

Udo Thiel

The notion of consciousness plays a central role in the philosophy of Reid, featuring in his account of the first two principles of contingent truths and in his account of the powers of the mind in general, for example in his discussion of related notions such as attentive reflection, memory and perception. Given this central role, it is somewhat surprising that the topic of consciousness does not feature more prominently in the literature. This relative neglect has been somewhat remedied, however, by recent attempts to link Reid’s conception of consciousness to present-day debates about first- and higher order theories of consciousness. In this paper I attempt to explain and evaluate Reid’s account of consciousness by relating it to some of his predecessors with whom he engages, such as Locke and Leibniz, and also to some of his contemporaries and early critics, such as Thomas Brown. I hope that this approach will enable us to evaluate the recent readings of Reid in terms of the present-day debates.

What is Consciousness?

Reid emphasises that consciousness ‘is an operation of the understanding of its own kind’ (EIP, 470) and needs to be distinguished clearly from other

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mental operations such as perception, reflection and remembering. It is, moreover, an operation that belongs to an ‘original power of the mind’ (EIP, 471). But what kind of mental operation is consciousness? Reid thinks that consciousness, being an original power, ‘cannot be logically defined’ (EIP, 470), but he certainly believes that we can identify its essential features.

First, Reid points out that, like other mental operations, consciousness has certain ‘objects’ to which it relates. These objects of consciousness ‘are our present pains, our pleasures, our hopes, fears, our desires, our doubts, our thoughts of every kind; in a word, all the passions, and all the actions and operations of our minds, while they are present’ (EIP, 470). That is to say, consciousness is a mental operation that relates to other mental actions or operations. In this sense it relates to one’s own mind, and is to be distinguished from perception which relates to external objects.³ Reid believes, however, that perception and consciousness have several features in common, such as the immediacy in relating to their respective objects.⁴ It is worth noting in this context that for Reid perception, but not consciousness, relates to what happens in one’s own body. This idea is linked, of course, to his mind-body dualism. ‘Certain states or conditions of our own bodies’ are the ‘immediate objects of perception’ (EIP, 211). Just as we perceive states of external bodies do we perceive ‘disorders in our own bodies’ (EIP, 211). Consciousness, by contrast, is restricted to mental operations. Obviously, in order to explain phenomena such as pain which are ‘in the mind’ (EIP, 212), Reid needs to link them to bodily disorders that are, for example, ‘in the tooth’ (EIP, 212). Although for Reid, pain is a sensation in the sentient being (EIP, 213) and counts as an ‘object’ of consciousness, he does not seem to invoke the notion of consciousness in his account of pain.

Second, consciousness relates to mental operations while they are present. This is how consciousness is distinguished from memory. ‘We may remember them [the mental operations] when they are past; but we are conscious of them only while they are present’ (EIP, 470). Reid emphasises that consciousness and memory are ‘different powers of the mind’ (EIP, 277) which ‘are chiefly distinguished by this, that the first is an immediate knowledge of the present, the second an immediate knowledge of the past’ (EIP, 277).

³ It is important to note that consciousness, according to Reid, does not take the mind, self, or subject that performs the operations as its object, but only the mental operations themselves.

⁴ Rebecca Copenhaver emphasises this aspect of Reid’s discussion (Copenhaver, ‘Reid on Consciousness’, 614–15).
Third, Reid points out that, unlike the objects of perception which may be at rest, mental operations or ‘the objects of consciousness are never at rest; the stream of thought flows like a river, without stopping a moment; the whole train of thought passes in succession under the eye of consciousness, which is always employed by the present’ (EIP, 420–1). This transient and momentary nature applies not only to the objects of consciousness but also to consciousness itself. ‘Our consciousness, our memory, and every operation of the mind’, Reid says, ‘are … flowing like the water of a river, or like time itself’ (EIP, 278). This means that ‘the consciousness I have this moment, can no more be the same consciousness I had last moment, than this moment can be the last moment … Consciousness, and every kind of thought, is transient and momentary, and has no continued existence’ (EIP, 278).

Fourth, consciousness is characterised by certainty about the existence of its objects, that is, the mental operations. As Reid says, ‘When a man is conscious of pain, he is certain of its existence; when he is conscious that he doubts, or believes, he is certain of the existence of those operations’ (EIP, 470).

This aspect of consciousness is connected to a fifth feature of consciousness, namely that it functions as a foundation of the science of the mind. Reid says that ‘a very considerable and important branch of human knowledge rests upon it [consciousness]. For from this source of consciousness is derived all that we know, and indeed all that we can know, of the structure, and of the powers of our own minds; from which we may conclude, that there is no branch of knowledge that stands upon a firmer foundation; for surely no kind of evidence can go beyond that of consciousness’ (EIP, 471).

Lastly, there is the feature of immediacy which was mentioned in passing above. Reid accounts for this feature by way of distinguishing between consciousness and reflection. As this distinction is directly relevant to the discussion of Reid in terms of first- and higher-order theories of consciousness, I shall look at this distinction in more detail.

Reid, Locke and Leibniz on Consciousness and Reflection

Reid argues that ‘the irresistible conviction’ we have ‘of the reality of those operations’ through consciousness ‘is not the effect of reasoning; it is immediate and intuitive’ (EIP, 470). This immediacy of consciousness is linked to the fact that consciousness is always present. Consciousness ‘is common to
all men at all times’ (*EIP*, 472), Reid says. Although, as we saw, consciousness forms the basis of the science of the mind, Reid notes that consciousness ‘is insufficient of itself to give us clear and distinct notions of the operations of which we are conscious, and of their mutual relations, and minute distinctions’ (*EIP*, 472). For this reflection is required. Reflection is ‘the only source of all our distinct and accurate notions of things’ (*EIP*, 269) and is characterised by a certain attention directed at mental operations—something that is lacking in consciousness. We are conscious of many things, Reid says, ‘to which we give little or no attention’ (*EIP*, 42). But reflection is that act of the mind by which we make ‘our own thoughts and passions, and the various operations of our minds’ the objects of attention, ‘either while they are present, or when they are recent and fresh in our memory’ (*EIP*, 42 see also 57–9). According to Reid, unlike consciousness, ‘attentive reflection upon those operations, making them the objects of thought, surveying them attentively, and examining them on all sides, is so far from being common to all men, that it is the lot of very few’ (*EIP*, 472). Consciousness, then, is the foundation of, and is presupposed by reflection; but only reflection, not consciousness can give us distinct notions of mental operations. Moreover, unlike consciousness, ‘reflection is not one power of the mind; it comprehends many; such as recollection, attention, distinguishing, comparing, judging’ (*EIP*, 269).

Reid makes a point of engaging with Locke in this context. Unfortunately, his account of Locke is way off the mark, and in fact his own understanding of consciousness and reflection is much closer to Locke’s than he would like to think, but there is one important substantive difference, as we shall see. Reid argues that Locke confuses consciousness with both memory and reflection (*EIP*, 268–9, 421). Both charges are mistaken, but here I focus on consciousness and reflection.

Reid is right of course when he says that Locke uses ‘reflection’ in more than one sense (*EIP*, 269). Locke’s official definition is in terms of inner sense: reflection is the only other experiential source of simple ideas, apart from

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6 In some passages, however, Reid suggests that reflection shares with consciousness its intuitive nature and the certainty about the reality of its objects. Thus, Reid says, that ‘reflection is a kind of intuition’ (*EIP*, 42), and that ‘we take it for granted, therefore, that by attentive reflection, a man may have a clear and certain knowledge of the operations of his own mind; a knowledge no less clear and certain, than that which he has of an external object when it is set before his eyes’ (*EIP*, 42).
sensation. It is ‘the other Fountain, from which Experience furnisheth the Understanding with Ideas’. Our own mental operations, ‘when the Soul comes to reflect on, and consider, do furnish the Understanding with another set of Ideas, which could not be had from things without: and such are, Perception, Thinking, Doubting, Believing, Reasoning, Knowing, Willing, and all the different actings of our own Minds’. In other places however, Locke uses ‘reflection’ in the more general sense of thinking over an issue or one’s thought (Essay, II.xxvii.9). Reid’s notion of reflection captures only part of Locke’s official


8 Locke does not, however, have a clearly defined set of several notions of reflection, as has been claimed in the literature. Daniel Mishori, for example, distinguishes between precisely ‘four meanings of Lockian reflection’. (‘Locke on the Inner Sense and Inner Observation’, in Locke Studies, 4 (2004), 145–81, at 161). Vili Lähteenmäki holds that there are two distinct and clearly defined conceptions of reflection in Locke (‘The Sphere of Experience in Locke. The Relations between Reflection, Consciousness and Ideas’, in Locke Studies, 8 (2008), 59–100): (1) reflection as a source of ideas which is completely passive: here, attention and what Locke calls ‘contemplation’ are not involved. And there are no mental operations on which we do not reflect in this sense, that is to say we acquire ideas of all of our mental operations (59 ff); (2) reflection as an operation about ideas which is voluntary and attentive; it is only this type of reflection that Locke characterises by the notion of ‘contemplation’ (59, 68–9). Only this type of reflection presupposes consciousness, namely consciousness of the ideas which we have acquired through the first type of reflection (60). In my view, it is problematic, however, to ascribe this distinction to Locke. Although there are passages in which Locke uses the terminology of reflection in a general and indeterminate sense that is not identical with the definition of reflection (in II.i.4) as a source of ideas (see, for example, II.xxviii.12; III.v.16), this does not justify the ascription of two clearly defined and distinct notions of reflection to Locke, as envisaged by Lähteenmäki. For example, the notion of contemplation is used by Locke to characterise reflection as a source of ideas. In II.i.7 Locke notes that if we contemplate on the operations of the mind (the operations themselves), we will acquire ideas of them. In order to acquire ideas of mental operations, the mind needs to ‘turn[s] its view inward upon itself, and observe[s] its own Actions’ (II.vi.1; see also II.i.24). Of course, ‘contemplation’ is broader than reflection understood as a source of ideas, so that not every act of contemplation can be explained in terms of reflection, but every act of reflection by which we acquire ideas of mental operations involves an activity that Locke characterises through notions such as contemplation and attention. Finally, Locke nowhere states that we acquire ideas of all of our mental operations and that there are no unreflected-on operations. Rather, he says that it is ‘pretty late, before most Children get Ideas of the Operations of their own Minds’ (II.i.8), and that ‘in time, the Mind comes to reflect on its own Operations, about the Ideas got by Sensation, and thereby stores it self with a new set of Ideas’ (II.i.24). We do not necessarily reflect on our mental operations, for Locke says: ‘Whoever reflects on what passes in his own Mind, cannot miss it: And if he does not reflect, all the Words in the World, cannot make him have any notion of it’ (II.ix.2; last emphasis mine).
account of reflection. It is much broader than the latter (*EIP*, 421). Reflection, for Reid, is not even restricted to operations of the mind. ‘For surely’, Reid says, ‘I may reflect upon what I have seen or heard, as well as upon what I have thought’ (*EIP*, 421) – we can reflect even on external things.

Locke’s account of reflection, too, involves attention and the turning to one’s own mental operations into objects. Reflection, in Locke, is a higher order operation turning mental operations into objects, and generating ideas of these operations. Moreover, although Reid accuses Locke of confusing consciousness with reflection, in fact he thinks that Locke is right in accounting for consciousness in terms of inner sense. He states that ‘Mr LOCKE very properly calls consciousness an internal sense’ (*EIP*, 420), and he endorses this independently of Locke as well (*EIP*, 421). But since reflection in Locke just is inner sense, Reid could have accepted an account of consciousness in terms of Lockeian reflection.

The point is, however, that Locke neither confounds consciousness with reflection, nor does he confound it with inner sense, as Reid seems to do. Like Reid, Locke accounts for consciousness in terms of immediacy; and for Locke too, consciousness does not relate to external things but to ‘what passes in a Man’s own mind’ (*Essay*, II.i.19) or to ‘things in the mind’, as Reid puts it (*EIP*, 24). In this regard, Locke’s notion has more in common with Reid’s than Reid would want to acknowledge. Importantly, however, in contrast to Reid, Locke does not hold that consciousness is ‘a kind of inner sense’. For Locke, consciousness is not a mental operation that relates to other mental operations as its ‘objects’. But what is consciousness, then, for Locke?12

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10 ‘The understanding turns inwards upon it self, reflects on its own Operations, and makes them the Object of its own Contemplation’ (*Essay*, II.i.8). ‘Unless he turn[s] his Thoughts that way, and considers them [Operations of his Mind] attentively’, he will have no clear and distinct ideas of his operations. He has to apply ‘himself with attention’ (*Essay*, II.i.7).

11 The following passage in Locke concerns reflection, not consciousness, as Copenhaver (‘Reid on Consciousness’, 614) assumes: ‘This Source of Ideas, every man has wholly in himself: And though it be not Sense, as having nothing to do with external Objects; yet it is very like it, and might properly enough be call’d internal Sense’ (*Essay*, II.i.4).

12 For a more detailed discussion of this question, see Udo Thiel, ‘Leibniz and the
Of course, if consciousness were the same as reflection or inner sense, consciousness, too, would be a higher order perception. And Locke has often been read in this way. Indeed, this reading of Locke was put forward very early, in Leibniz, for example. I shall suggest that Reid’s account of Lockean consciousness in terms of inner sense is essentially Leibnizian—for all Reid’s critique of Leibniz’s system. In *Nouveaux Essais*, II.i.19, Leibniz comments on a corresponding passage in Locke’s *Essay* where the latter states that for him thought is always (and necessarily) conscious thought. Now Leibniz takes Locke to be saying here that thought is always accompanied by an act of reflection, a higher order act of perception. It is clear from Leibniz’s critique of Locke that he reads Lockean ‘consciousness’ in terms of reflection. He first translates Locke’s ‘being conscious’ (of thoughts) as ‘s’apercevoir de’. But then he makes use of the terminology of reflection and says:

> it is impossible that we should always reflect explicitly on all our thoughts; for if we did, the mind would reflect on each reflection, *ad infinitum*, without ever being able to move on to a new thought. For example, in being aware of (‘en m’appercevant de’) some present feeling, I should have always to think that I think about that feeling, and further to think that I think of thinking about it, and so on *ad infinitum*. It must be that I stop reflecting on all these reflections, and that eventually some thought is allowed to occur without being thought about; otherwise I would dwell for ever on the same thing.

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14 Reid claims that ‘Mr LOCKE has … confounded reflection with consciousness, and seems not to have been aware that they are different powers’ (*EIP*, 421.).

15 The English translation is from G W. Leibniz, *New Essays on Human Understanding*, trans. and ed. P. Remnant and J. Bennett (Cambridge, 1981), 118. The French original reads: ‘il n’est pas possible que nous reflechissions tousjours expressement sur toutes nos pensées; autrement l’Esprit feroit reflexion sur chaque reflexion à l’infini sans...
As a critique of Locke, this (old) argument from infinite regress makes sense only if it is assumed that consciousness is an act of reflection, a higher order mental act. Even if we assumed a distinction between consciousness and reflection in Locke, however, this would not by itself be sufficient to defend Locke against Leibniz’s critique. It would then still be possible that Locke conceives of consciousness in terms of a higher order perception, only of a kind that is different from reflection.  

More recent discussions of Locke, however, have rejected the standard, Leibnizian reading of Locke as a proponent of a higher order perception account of consciousness. If this is correct, Leibniz’s critique in terms of the infinite regress issue misses the mark. Indeed, it is evident from a number of other passages in the Essay that (i) Locke implies a distinction between consciousness and reflection, and (ii) this is not a distinction between two types of higher order perceptions. For Locke, ‘being conscious’ denotes an immediate awareness that is an integral part of all acts of thinking as such. He says that ‘thinking consists in being conscious that one thinks’ (Essay, II.i.19; my emphasis). For Locke, unlike reflection, ‘consciousness … is inseparable from thinking, and … essential to it’. In order for reflection to be able to relate to operations, the latter must always already be characterised as mental operations, that is to say, they must have that inherent reflexivity that Locke

16 This is an interpretation suggested by Mark Kulstad, for example. Kulstad thinks that Locke is confused about the relation between consciousness and reflection and argues that, if there is a distinction between the two in Locke, it would be a distinction between two kinds of higher order perceptions; Mark Kulstad, Leibniz on Apperception, Consciousness, and Reflection (Munich, 1991), 86 f, 115.
18 Essay, II.xxvii.9; my emphasis. See also II.i.10: ‘Our being sensible of it is not necessary to any thing, but to our thoughts; and to them it is; and to them it will always be necessary, till we can think without being conscious of it’.
calls ‘consciousness’. Consciousness is not something that needs to be added to thinking externally; rather it is an aspect of thinking itself.

Reid and Consciousness as a Higher Order Operation

As indicated, I argue that in spite of his rejection of Leibniz’s philosophy as a whole, Reid (1) interprets Lockean consciousness, like Leibniz, in terms of inner sense or a higher order mental operation, and (2) endorses this account of consciousness. Reid’s only problem is with the term ‘reflection’, a term that, according to Reid, stands for a different mental operation. For, although Reid points out the immediacy of consciousness, he implies that the operations to which consciousness relates are objects distinct from the operation of consciousness that relates to them. We saw that consciousness is described by Reid as a distinct operation of the mind, ‘of its own kind’, and mental operations (including consciousness), Reid says are to be thought of as distinct from the objects to which they relate: ‘In most operations of the mind, there must be an object distinct from the operation itself’ (EIP, 44). Clearly, ‘most’ does not mean ‘all’, but Reid does not say that consciousness is an exception.

Philosophers relating Reid’s account of consciousness to present-day debates, however, typically interpret it in terms of first order theories of consciousness. Keith Hossack, for example, holds that Reid endorses an ‘identity theory’ of consciousness ‘according to which an experience, and the consciousness of the experience, involve only a single mental event’, and Keith Lehrer argues that Reid’s notion of consciousness can be reconstructed in terms of the notion of mental self-signification. The most detailed discussion of this issue, however, is in the work of Rebecca Copenhaver. I shall therefore focus on her account. Copenhaver argues that, although ‘Reid’s view resembles higher-order views of consciousness in some respects’, his view is ‘interestingly distinct from standard higher-order perception theories’, and she holds that ‘Reid does not in fact hold an inner-sense theory of consciousness’

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19 This does not mean of course that we must be conscious of all aspects and elements or details of these complex processes. Compare Essay, II.viii.10, on implicit judgements. I am indebted to Martin Lenz for this point.

20 On this point I seem to be in agreement with Daniel Mishori’s reading of Reid (Mishori, ‘The Dilemmas of the Dual Channel’, 150–1, 155).

21 Hossack, ‘Reid and Brentano on Consciousness’, 36.

but sees ‘consciousness as a first-order representational process’.\textsuperscript{23} Although Reid’s claims—such as that consciousness is ‘an operation that takes one’s own internal states as its intentional objects’—make it ‘tempting to regard these claims as making Reid ipso facto a higher order theorist’,\textsuperscript{24} Copenhaver argues that such temptations must be resisted. She concedes that there are difficulties with interpreting Reid in terms of the present-day theories, saying that the conceptual distinctions central to latter ‘would have been unrecognizable to moderns such as Locke or Reid’.\textsuperscript{25} Moreover she states that there is a ‘sense in which Reid is neither a higher-order nor a first-order theorist’, as ‘both these theories are reductive theories of consciousness aimed at providing a constitutive account of state consciousness’.\textsuperscript{26} Indeed, there is clearly a sense in which it may even be a futile task to try and match up Reid with either present-day account. However we read his discussion of consciousness, obviously, Reid did not develop a systematic theory of consciousness in terms of the technical present-day terminological and conceptual apparatus. There are bound to be crucial differences with respect to both present-day views.

One reason for Copenhaver to link Reid’s account to first order rather than to higher order theories concerns his distinction between consciousness and reflection. Present-day higher order theories take the (allegedly) Lockean view of consciousness as reflection as their starting point. We saw, however, that although Reid distinguishes between consciousness and reflection, he still considers consciousness, like reflection, as a mental operation that is distinct from the mental operations to which it relates. Obviously, this does not turn Reid’s account into a complex present-day higher order theory, but his emphasis on the distinction between consciousness and reflection cannot be used as evidence that, for him, consciousness is not a higher order operation.

More importantly, Copenhaver argues that Reid is not committed to the constitutive claim of present-day higher order theories, that is, the claim that a mental operation’s or a state’s being conscious consists in its being an object of consciousness.\textsuperscript{27} It is certainly true, as Copenhaver states, that the notion of a mental operation’s or state’s being conscious is foreign to Reid. There is, however, a sense in which Reid’s thesis is stronger than Copenhaver suggests. Although Reid thinks of consciousness only in terms of what is called today

\textsuperscript{23} Copenhaver, ‘Reid on Consciousness’, 613.
\textsuperscript{24} Ibid., 625.
\textsuperscript{25} Ibid., 616.
\textsuperscript{26} Ibid., 619.
\textsuperscript{27} Ibid., 619–20; see also 625.
‘creature consciousness’, it is not the case that for Reid consciousness merely ‘takes mental operations as its objects’, to use Copenhaver’s formulation. Rather, consciousness is an essential feature of mental operations. It is what constitutes mentality for Reid. We saw above that for Reid consciousness ‘is common to all men at all times’ (EIP, 472). For Reid, there can be no mental operation of which we are not in some elementary sense conscious. He makes the point most explicitly in his rejection of Leibniz’s distinction between perception and apperception and, that is, of the notion of unconscious perceptions. Leibniz’s distinction is, according to Reid, ‘obscure and unphilosophical’ (EIP, 190). Reid emphasises against Leibniz that ‘every operation of our mind is attended with consciousness’ (EIP, 191) and that ‘no man can perceive an object, without being conscious that he perceives it. No man can think, without being conscious that he thinks’ (EIP, 191). As these passages indicate, Reid’s point is not merely an epistemic one, as other formulations might suggest, for example when he says that ‘to speak of a perception of which we are not conscious, is to speak without any meaning’ (EIP, 191). Rather, Reid argues that there is, in reality, no such thing as an unconscious mental operation, and that it is for that reason that ‘if we will suppose operations of mind, of which we are not conscious, and give a name to such creatures of our imagination, that name must signify what we know nothing about’ (EIP, 191).28 In short, Copenhaver’s view that for Reid consciousness is not essential to mentality is not consistent with Reid’s explicit rejection of Leibniz’s metaphysical distinction between perception and apperception.

Thus Reid combines two views about consciousness, and this combination creates a problem for his account. First, the view that consciousness is a mental operation, ‘of its own kind’, distinct from the mental operations to which it relates; and second the view that this mental operation called consciousness is essential to the objects or mental operations to which it relates. This combination creates a problem as it generates precisely the regress with which Leibniz (mistakenly) charged Locke.29 Leibniz avoids the

28 In a letter to Dugald Stewart of 1791 Reid argues that it is difficult ‘to conceive thought…to exist without consciousness’; Paul Wood (ed.), The Correspondence of Thomas Reid, 214. I am indebted to Martin Brecher for providing me with this reference.

29 This is discussed in Lehrer, ‘Reid on Consciousness’, 5–8. In his later paper on the topic Lehrer argues that Reid can avoid the regress if consciousness is interpreted in terms of the notion of mental self-signification; Lehrer, ‘Consciousness and Regress’, 52 ff. According to Copenhaver, the regress in Reid’s account cannot be avoided but its viciousness can be mitigated; Copenhaver, ‘Reid on Consciousness’,
recess by arguing that not all mental operations are conscious, a view Reid cannot endorse; Locke avoids the recess by adopting a first order reflexive understanding of consciousness, which is not Reid’s view either. Rather, Reid combines the Lockean thesis that consciousness accompanies all mental operations with the Leibnizian view that consciousness is a mental operation separate from the mental operations to which it relates. That is why the recess threatens his account. Had Reid adopted a Lockean first order understanding of consciousness, there would have been no threat of recess in his theory.

There is a passage, however, which seems to suggest that Reid endorses a first order account of consciousness after all. Keith Lehrer discusses an early manuscript note of 1748 where Reid says: ‘I know nothing that is meant … by Consciousness of Present Perceptions but the perceiving that we perceive them. I cannot imagine there is anything more in perceiving that I perceive a Star than in perceiving a Star. Simply otherwise there might be perceptions of perceptions in Infinitum’. As Lehrer points out, this passage shows that Reid was at one point aware of the recess issue. The passage cannot, however, be taken as an endorsement by Reid of a first order account of consciousness because, as Lehrer concedes, it is an early note in which Reid does not even distinguish between perception and consciousness, a distinction central to his philosophy of mind. It cannot be used as evidence for Reid’s considered view on consciousness.

Certainly Reid’s early critics, referring only to Reid’s published views and arguments, do not seem to think of Reid’s account in terms of a first order understanding of consciousness. Dugald Stewart distinguishes between consciousness and reflection very much as does Reid. Reflection, he says, ‘bears precisely the same relation to Consciousness which Observation does to Perception; the former supplying us with the facts which form the only solid basis of the Science of the Mind, as we are indebted to the latter for the groundwork of the whole fabric of Natural Philosophy’. Unlike Stewart, however, Thomas Brown, criticises and rejects Reid’s understanding of consciousness. In particular, he rejects Reid’s view that consciousness relates to thoughts and feelings as operations that are separate from consciousness itself. According to Brown, Reid attempts ‘to double, as it were our various feelings, by making

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30 Reprinted in Derek Brookes’ edition of Reid’s Inquiry, 228. See Lehrer, ‘Consciousness and Regress’, 49.
them not to constitute our consciousness, but to be the objects of it, as of a distinct intellectual power; and this attempt does not describe the ‘phenomena of the mind’ accurately; rather it ‘is founded, partly on a confusion of thought, and still more on a confusion of language’. For according to Brown, there is no difference between consciousness and a sensation or thought: ‘Sensation is not the object of consciousness different from itself, but a particular sensation is the consciousness of the moment’. It is absurd, argues Brown, ‘to suppose the mind to exist in two different states, in the same moment’. He insists that ‘the consciousness of the sensation … [is] only a tautological expression of the sensation itself’. When we speak of the ‘evidence of consciousness’, Brown says, ‘we mean nothing more, than the evidence implied in the mere existence of our sensations, thoughts, desires’. In short, there seems to be a basis for a first order account of consciousness in Brown, but not in Reid.

Examining Reid’s notion of consciousness highlights the fact that, in order to understand Reid, his engagement with the thinkers that preceded him needs careful consideration. And this is no mean feat as Reid not only discusses Descartes, Locke, Leibniz, Clarke, Butler, Hume, Berkeley, Wolff at length, but also somewhat lesser known thinkers and scientists such as Porterfield. This historical context is largely absent, however, in recent attempts to discuss Reid in terms of present-day debates about consciousness. And yet Reid is a prime example of a thinker who does philosophy historically, and it is critical to take that history into account when examining his views and arguments. Certainly this seems to hold true for his view on consciousness. As Reid says, it is the historical study of philosophy that may ‘give us views of the human understanding, which could not easily be had any other way’ (EIP, 57).

University of Graz, Austria

32 Thomas Brown, Lectures on the Philosophy of the Human Mind (London, 1820), 244.
33 Ibid., 244 – 5.
34 Ibid., 245.
35 Ibid., 247.
36 Ibid., 256.
37 I am grateful to Rebecca Copenhaver, Keith Lehrer, Lucas Thorpe, Martin Brecher and other participants of the 2010 Reid Conference in Aberdeen and Glasgow for their comments and discussion.
Reid’s Discovery of the Sense of Balance

David Vender

When we speak about the senses we usually mean the five traditional senses, but even a slight acquaintance with the scientific research on sense perception tells us that the simplest questions about the senses are currently open questions.

What is here meant by the simplest questions are how many we have and how they should be counted. If there are no good answers to these basic questions, or at least a fairly broad agreement on how to proceed, then we don’t really even know what a sense is.

Until recently there was little concern about the senses in philosophical discussions and when they needed to be mentioned the old list of five was offered or, more simply, vision was enlisted as a paradigm of all perceiving and the problems of vision tended to be discussed as if everything said applied across the whole sensory range. This is easily checked and there is no need to go into examples. It is fair to say that this substitution of vision for perception is not always incautious or misleading, but it has been very widespread.

All this is now changing. Debates are emerging about the counting problem and the problem of the individuation of sense modalities, which is the closely related problem of separating the senses.¹

There are various currents in these debates and it would take some time to go into even the main issues but the aim here is to point out the danger of missing an important opportunity by neglecting to pay enough attention to the most remarkable, the most fundamental sense. This is the sense of balance.

Two things should be made clear. Firstly, what Thomas Reid can tell us about balance and, secondly, how important and astounding balance is. Reid is not generally cited as a contributor to our understanding of balance. Perhaps if one is looking at the senses from a physiological or psychological perspective then his remarks are a bit thin, but looking at what he said in the context of the philosophy of perception is very worthwhile indeed.

So in outline we first look at the senses and the discovery of balance, then review what Reid said about balance, how it fits into the historical picture

and what the crucial points for us now are. After that it is best to catch up with some of the comments about balance in the current debate about the senses. There are some peculiar things said about it and Reid can be asked to help us sort out some of the muddles. Finally, a suggestion or hint from Reid will be taken up in order to show that the point about balance being the most fundamental sense—maybe it is better to say that it is foundational for all perception—is not just grandstanding. This will be illustrated by a few empirical results from the scientists looking at balance.

The Discovery of Balance

We all know what balance is. If you lose your balance you fall over. If you drink too much wine you get wobbly and walking becomes a bit precarious. There are also some terrible afflictions which cause the sufferer to be incapable of orderly movements or even make them unable to stay stable. But is balance really a sense?

Asking this question immediately complicates matters but speaking generally we might expect that to count as a sense there should (a) be an identifiable organ or set of organs, (b) when this is working properly we use it to obtain some specific information about the physical world, and (c) that our possession of this information is not merely inferred indirectly but that it actually informs or at least plays into our direct experience of the world. These may not be separately necessary and jointly sufficient criteria and each can be debated but it is a reasonable starting point.

A question now arises. If balance is indeed as important as has just been said, why has it not been counted among the senses? Why have humans walking and falling over for millennia and developing all sorts of cultures failed to notice it? Three reasons which reinforce each other can be suggested. Firstly, starting with experience, it is a fact that when everything is going well there is little to be distracted by in our bodily balance. We notice when we are about to topple over, we get miserable when seasick or suffering from vertigo, but generally speaking balance is a pretty quiet sense. If we feel anything while going about daily routines then we hardly notice it and how it plays into experience is more subtle than seeing colours or hearing sounds.

Secondly, the organs are well hidden. It is not even clear where they might be. Most of the parts of the body have some role in maintaining posture so it is not obvious where one should look for organs—even if, like touch, it is
a distributed sense with receptors all over the body. As it happens there is
a localised set of relevant organs but scientists now rarely speak of a sense
of balance since that needs several co-operating systems. Arms and legs
and feet and muscles and joints are all needed to maintain posture, but the
keystone holding this elaborate frame up is not in the muscles or joints. A
most important piece of the puzzle is the vestibular apparatus hiding in a thick
piece of bone behind each ear.

It is a complicated organ which transduces the direction of the resultant
force from gravity and linear acceleration, as well as rotations around the three
orthogonal axes in space. Since it is so close to the inner ear there might be
a temptation to think that it has something to do with hearing. Even if that
mistake is avoided, one needs to know quite a bit of physics to understand how
it works. It is not too much to say that before the physics of Galileo and Newton
it would have been a struggle to unravel the mystery of its basic workings.

Thirdly, all the important functions and malfunctions of the vestibular
apparatus seem to point to this organ as something which is important to
the individual, much as the heart or liver might be. To count as a sense for
the naive understanding the organ must be pointed outward, it must tell us
about external objects. Pain and hunger are private and not counted along
with the five. Similarly, motion sickness and even the ordinary feel of walking
have more to do with individual vigour, fitness and disease than with sensory
perception as traditionally understood.

These three reasons seem sufficient for not counting balance as a sense.
As it happens the naive understanding is quite wrong in trying to make a neat
division between our bodily sensations and what the Aristotelians used to call
the five external senses, but to see this one needs to look at how the role of
the vestibular apparatus was clarified.

Among the important names usually associated with the history of
vestibular research are Ernst Mach, whose philosophical fame rests largely
on psychophysics and his radical relativism, Jean Pierre Flourens, the famous
physiologist who described the organs, and Jan Purkyně, who examined vertigo
after rotation. These are all figures from the nineteenth century but Nicholas
Wade from the University of Dundee has looked at the early history and there

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2 Some of the history is covered in J. E. Hawkins and J. Schacht, ‘Sketches of Otohistory
Part 8: The Emergence of Vestibular Science’, Audiology and Neurotology, 10 (2005),
185—190, and N. J. Wade, ‘The Search for a Sixth Sense: The Cases for Vestibular,
175—202.
is an unsung hero there. William Charles Wells was a contemporary of Reid and he deserves the lion’s share of the credit for the early experimental work on how rotation affects our vision.

The point to notice about much of this early work connected to the vestibular organs is that it is not actually about the sense of balance. It is really about vision and how our vision depends on movements and accelerations. The subjects of the experiments on vertigo and nystagmus following rotation were either strapped to a chair and spun about or simply turned till they got dizzy, as children like to do.

If our main interest is in normal healthy balance then these performances are only a small part of the story. They tell us a lot about the interactions and conflicts between vestibular function and the vision system, but little of direct significance about balance and especially agency. To understand the basics of balance, it is better to see what Reid had to say.

Reid’s Remarks on Balance

Reid’s explicit remarks on balance occur in a late essay on voluntary motion. This essay appears in the collection called *Thomas Reid on the Animate Creation* edited by Paul Wood. By the way, Wells published his *Essay on Single Vision With Two Eyes* with a description of the experiments on vertigo in an appendix in 1792. Wells of course knew of Reid and made some comment on Reid’s ideas on vision from the *Inquiry*.

This is what Reid said on balance:

> This Power we have of perceiving the ballance of our Body is so like to our other external Senses, that it might very justly have been accounted  

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5 Ibid., 28.

6 Wade (2000), 130–1.

7 Giovanni Grandi has pointed out to the author that among Reid’s manuscripts there are notes showing that Reid read Wells’ essay in June 1792. There are no comments on the appendix.
a distinct Sense, if it had been so much reflected upon as to require a Name.

In each of the external Senses, there is an Impression made upon the Body or on some part of it, which by our constitution produces a certain Sensation of the Mind, and that Sensation is by our Constitution accompanied with the Perception of something external.\textsuperscript{8}

He also remarked on the importance and excellence of this sense:

When we observe with what ease, and Grace those Motions are performed by those who are expert, and compare them with the Laws of Motion, we must be convinced that this Sense by which we perceive the least deviation of the Body from its Ballance, may by Use be brought to a degree of Accuracy which is hardly to be observed in any of our other Senses.\textsuperscript{9}

Contained in these remarks are tremendous insights about the senses, especially if we pay attention to the context, which is a discussion of voluntary movements. Here is just a little more:

This sense of Ballance may be seen in a Child of two or three Months old. If sitting upon ones knee he begins to tumble, he immediately starts & endeavours to recover himself. But it is greatly improved by Use, in every Employment that requires its exercise… This sense of our Ballance is produced not onely by the impression made by the power of gravity but by any other Force which endangers the Ballance.\textsuperscript{10}

Reid does make some remarks on vision in the same essay, but these are mainly to do with directing the eyes by means of the antagonist muscles—so he speaks of a balance in the nervous power of those muscles—rather than the cross modal effects studied by those investigating vertigo and imposed

\textsuperscript{8} Wood (1995), 110. Reid is here explicitly affirming that the workings of balance are consistent with his epistemological scheme and his distinction between sensation and perception.

\textsuperscript{9} Ibid., 111.

\textsuperscript{10} Ibid., 111.
accelerations. He is primarily concerned with how active agents use the muscles and notes that:

There are however many voluntary Motions in which some previous Perception of the Understanding is necessary to direct us to the Motion which the occasion requires.\(^{11}\)

Not only must we sense how muscles move, muscular exertion is the default state:

Although all voluntary Motion is performed by the Contraction of Muscles, we must not from that conclude that when no Motion is willed, the Muscles are inactive. The Exertion of Muscles is no less necessary to rest than to Motion. In every position of the Body excepting perhaps that of lying prone The reason of this is that there are so many Articulations in the Limbs, & in the Spine & Neck and these in a living Body have such Lubricity to facilitate their Motions that without the Exertion of Muscles, it would sink down to the ground like a Chain of many links. So we see a Man does if he is struck dead or deprived of all power of Muscular Motion in an instant.\(^{12}\)

**Wells, and Reid’s Main Points**

As already mentioned, a few years before Reid’s remarks William Charles Wells published an essay on vision. In an appendix called *On Visible Position, and Visible Motion* Wells speaks about balance. He starts by noting that:

In the estimates we make by sight of the situation of external objects, we have always some secret reference to the position of our own bodies, with respect to the plane of the horizon; and from this cause, we often judge such to be at rest, whose relative places to us are continually changing; and others to be in motion, though they may constantly preserve, in regard to us, the same distance and direction.\(^{13}\)

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\(^{11}\) Ibid., 110.

\(^{12}\) Ibid., 112, emphasis original.

\(^{13}\) W. C. Wells, *Two Essays: One Upon Single Vision with Two Eyes; The Other on Dew* (Edinburgh, 1818), 69.
The concern here is with judgment of visible motions. Wells talks explicitly about bodily balance a little further on, saying:

What is there within us, to indicate these positions of the body? To me it appears evident, that since they are occasioned and preserved by combinations of the actions of various voluntary muscles, some feeling must attend every such combination, which suggests, from experience perhaps, the particular position produced by it. But in almost all the positions of the body, the chief part of our muscular efforts is directed toward sustaining it against the influence of its own gravity. Each position, therefore, in which this takes place, must be attended with a feeling, which serves to indicate its relation to the horizontal plane of the earth.14

Wells then immediately considers how it is that we see objects to be still despite irregular motions of the body such as are experienced on a ship rolling and pitching. The point is that Wells is really interested in visible position and motion and how perception of these relates to bodily motions. Reid in his essay is not particularly interested in the perceptions of sight but in the control of bodily movements themselves.

Three of Reid’s crucial points are:

1) Voluntary movements and efforts maintain balance and posture. The implication here is that this sense is active in that we participate as agents in generating the sensations felt. The perceiver and the actor are one and the same and if we wish to entertain a passive model of perception such as placing the perceiver in a Cartesian theatre then we have to allow them to get onto the stage because without their activity and participation the show simply does not go on.

2) This sense has its own sensations. Without getting into the details of Reid’s views on sensations two remarks are appropriate. Firstly, these sensations are bodily sensations associated with muscles and Reid did associate balance closely with muscular sensations. Secondly, these sensations are normally subliminal unless we are in imminent danger of falling or are pushed and need to act decisively to restore our balance. As Reid might have said, we normally pass over these sensations unnoticed and attend to our other perceptions as we pursue our goals. That does

14 Ibid., 70.
not mean that we are not doing anything in keeping balance. In fact we
are always acting and the sensations informing us of posture and move-
ment are always present.

3) There is evidence of development. Watching infants and young children
rather than normal adult functioning is helpful. Infants spend much
of their time trying to orient themselves and to control their move-
ments. The triumph of this development is getting mobile, particularly
in standing up and walking. Even later we can become more skilled in
performing various motions.

There is no need to play Reid off against Wells in a competition on these
points. Wells made closely related remarks. Here is an example:

> Should the necessity of supporting the body against its gravity, by the
actions of our voluntary muscles, be suspended in whole, or in part, our
judgments of the situation of objects, with respect to the horizon, must
become irregular and uncertain, notwithstanding any general habit we
may have acquired from experience.\(^{15}\)

The main reason why what Reid tells us is exceptional comes from a fourth
point and that is his remark that we should compare our achievements to the
Laws of Motion and count the sense of balance as an additional sense. That
is a very fine suggestion because it challenges our ideas about what a sense is.

Why has balance not been counted as a sense? The simple answer to this, as
suggested earlier, is that the traditional count separates the perceiver from the
world. Information about our own body, however it is acquired, is separated
from perception of external objects and their qualities and properties. The
count is conservative in that only those perceptions for which it seems easy to
draw the line between the objects in the world and ourselves are given to our
senses.\(^{16}\) This separation is not easy for sensations of pain or of warmth and
so we do not traditionally count senses of warmth and pain.

Motions, as it happens, also seem to separate easily into motions of our
body and motions of external objects perceived mainly by sight. But we do not
traditionally count a sense of motion because perception of the motions of
objects is already attributed to the sense of sight and when we feel motion by

\(^{15}\) Ibid., 73.

\(^{16}\) This conservatism is now still reflected in calling bodily sensations private as, for
example, Armstrong does when separating the perceiver from the surrounding
touch then it is not separate from the motion of our body and the boundary between active and passive moving is inconstant and dependent on attentive involvement. Applying then the conservative approach it can be said that feeling movements by touching objects is more like interacting with hot and cold objects than it is like watching passively the movements of objects in space. Hence a sense of bodily motions was not traditionally counted.

This naive separation of the senses from the perception of self evidently did not impress Reid who took the direction of gravity to be external even if we do come to know it primarily by way of sensations within our body. It is interesting that where Reid speaks of ‘external’ Wells writes about ‘sustaining [the body] against the influence of its own gravity’. In any case the naive separation does not survive critical reflection. When we look at the laws of motion, even in the context of Galilean relativity, then the separation of self-motion from motion of objects is not simple after all. It is wholly ambiguous. Even locating stationary objects in space inevitably implicates the perceiver in a relation, just as sticking a cold hand into warm water tells us about the interaction rather than about the absolute temperature of the water.

In one way there does seem to be a natural division of movements. This is the division between moving and being moved. As just mentioned this is complicated by the fact that motion is not always attended to, especially in habitual movements or the skilled movements that we are inclined to call ‘effortless’, and deliberate movement brings in further complications because we cannot confine ourselves to kinematic descriptions—moving body parts deliberately is always dominated by force and friction, resistance and strain. These are the quantities of dynamical descriptions and dealing with them explicitly can only be avoided by resorting to vague discussions of ‘motion’ in the abstract while hoping that an imprecision in describing the phenomena is inconsequential.

If the sensory separations involving motions are to be made systematic, everything is found to depend on accelerations and with those on efforts, muscular strains and voluntary movements. We are speaking not simply of spatial relations and movements of constant speed but about dynamics, with force, inertia, friction, acceleration, velocity, distance and duration all involved. It is important to notice this: moving the parts of our body is more a question of directed effort and acceleration than it is of translation, and the physics of those movements feels more Aristotelian than Newtonian.

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17 Wells (1818), 70.
Before saying a little more about dynamics and how the sense of balance provides the clue that is needed to understand how the separation between the perceiver and the world implicit in the tradition is unworkable, it is instructive to glance at the modern philosophical debate on the individuation of the senses.

**The Current Debate**

In looking at the recent discussion of the senses in philosophy it is apparent that the main concern is with how one should reconcile the discoveries of science, particularly physiology, psychology and more recently neurobiology, with traditional philosophical arguments about perception. In particular, the question is how the senses should be counted and what the meaning of the tradition of five is. An important early contribution is from Grice who considered specific criteria for counting and the search for and analysis of criteria has been central to the continuing debate.¹⁸ Brian Keeley has recently suggested that philosophers should follow the lead of neuroethologists—the scientists who study the sensory endowments of exotic species such as the star-nosed mole and the pit viper. Keeley’s main point is that sensations can be safely ignored when we differentiate the senses or try to decide what is or is not a sense.¹⁹

This idea that sensations do not tell us anything useful about our senses is not confined to materialists such as Keeley and it would seem to be a difficult thesis to defend against common sense views. Reid has a lot say which is relevant, but the present topic is not the role of sensations in general but the importance of the sense of balance so what has recently been said specifically about balance needs to be looked at. However, one important consideration must be kept in mind.

Reid and Wells worked far too early to have known the various functions of the vestibular apparatus. Nowadays everyone who discusses orientation and balance must be aware of its importance, but when we consider what Reid wrote he was evidently talking about a multisensory modality in what he called the sense of balance. Putting this negatively, he still had it mixed up with the muscle sense. Putting it more positively, he was considering an endowment in which both proprioception and vestibular functioning play a role. The relevant

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sensations are what I would like to call compound or complex sensations. To give an example of what this means by using colour, what is sensed is not simply ‘red’ but that colour just over there which has just been noticed and may now be fading or changing hue and must certainly contrast with other colours in the field of view.

With this in mind it is important to notice two aspects of what is said about vestibular functioning at the present time. The first is that the vestibular apparatus provides no specific sensations. Now a sense without sensations would seem to have no place in Reid’s epistemology, and it needs to be asked what the vestibular apparatus could do for us if it does not somehow contribute to our subjective experience. As it happens it is not difficult to see what an organ which transduces the direction of gravity and a set of organs which transduce angular accelerations in the three orthogonal directions of space can do. They provide direction and perspective. They do so by breaking the symmetry of purely relative spatial relations in fixing a dynamical ‘downward’ as well as the directed rotations around the up-down, front-back, and left-right axes of the head. Hence they give us a reference frame and even what might be called, in the context of dynamics, an ‘absolute here’.

Directionality and place is thus potentially available for all sensations if this information is integrated with other sensations and feelings, giving them not just their relative ‘thereness’ but fixing the human frame with respect to the frame of reference of the Earth with its universally shared up and down, thus making it possible to gauge the locations and the relative motions of not just body parts but also external objects.

This role of the vestibular organs in giving directionality and a fixed reference to all sensations can be considered initially as a speculation. Before seeing where it leads there is the other important aspect of vestibular functioning to be noticed. It arises in discussions of how many senses we count and how our own activity in using the relevant organs contributes. Two examples will serve to illustrate the issue.

Firstly, Brian Keeley considers a suggestion made by Anthony Kenny and David Armstrong that part of what we mean by perceiving is the awareness of moving and using an organ to get information. Keeley writes:

Armstrong proposes ... that sense organs are bodily structures that we actively use to gain information about the world, as when we open and move our eyes to see or cock our head to hear. But he continues, this runs up against the problem that we do not actively move organs in all the putative cases of sense. For example, we do not do anything to gain vestibular information. It seems to be ever present (which might explain why Aristotle did not remark upon it). The use of an organ in active perception does not seem to be of help here.21

Armstrong in fact does not mention balance or the vestibular apparatus and does not seem to be interested in orientation in the relevant books dealing with bodily sensations, but from what Reid and indeed Wells have been telling us it is easy to see how mistaken Keeley’s comment is. If we wish to collect vestibular information then it is actually what we do and do all the time that matters. If we simply lie down and make no effort then orientation can eventually be lost.22 It is also because the collection of this information as part of our efforts is ‘ever present’ that allows it to serve as the basis for the intentionality of our voluntary movements. These are intentional in the sense that they have a goal and a desired direction. If we had no up-to-date knowledge of the direction to the objects which we wish to reach, there is no way we could reach out to them.

Since Keeley’s advice is to ignore sensations entirely it is not surprising that he considers the ‘awareness of organ use’ criterion only to replace it with the idea that considering the anatomy, wiring and dedication to a function of the organs is enough. To see the view I am disputing actually espoused, we need to turn to John O’Dea who says that:

It is an odd fact that some rather obvious senses were never included in the traditional five. The account I’m proposing can explain this, in the following simple way: that in these cases there is no feeling of using any sense organ at all. The most vivid examples of this are proprioception and the senses of balance. ... with the sense of balance; you don’t need visual, tactile, or any other cues to know which way the ground is.

22 This should not be taken to imply that relaxing or reducing the effects of gravity by immersion in a flotation tank will quickly lead to disorientation. The connections between attention, habit, action and stimulus are complex. Orientation, as well as proprioceptive knowledge of the extent and position of bodily parts, are in some ways remarkably robust but at the same time surprisingly fragile.
But there is no part of the body that we’re aware of using to find that information out. If my account is correct, it makes sense that these were never counted as sixth or seventh senses.\(^\text{23}\)

It is always debatable just how much we are aware of, but by paying attention to what Reid said about our sense of balance we can see what is wrong here. It is closer to the truth to say that with the sense of balance it is every part of the body that we’re aware of using to remain upright and keep oriented with respect to the vertical and our goal. Paying concentrated attention to the relevant sensations is quite another matter, but we find out which is the downward direction and are constantly reminded of it from the downward pull on our body and the efforts we need to make to resist falling to the ground.

The Foundations of Perception

It might seem that at least some of what has now been said is overstated. If we look at the psychological literature then it is clear that apart from a vestibular judgment of the vertical our vision also provides a reference and the two can even come into conflict. It is also well known that pilots should not fly ‘by the seat of their pants’: if they lose visual reference by flying through clouds they are liable to crash. Perhaps the vestibular apparatus or even balance is not essential after all.

Two clues to what is important, both mentioned by Reid, are relevant. We should not be considering abstractions such as extension and depth, or just one direction or a horizon alone; we should relate our performance to the Laws of Motion. As Reid understood these, this is Newtonian dynamics in which vector forces are taken to be real and the composition of forces determines how one should direct effort in moving and turning and so on. Also, we should consider how balance develops and how our directed actions allow us to acquire habits of perception. That habits are as important in seeing as they are in walking and moving was evident to Reid already in the Inquiry where he speaks of how infants learn to see objects:

From the time that children begin to use their hands, nature directs them

to handle every thing over and over, to look at it while they handle it, and to put it in various positions, and at various distances from the eye.\textsuperscript{24}

He then continues to emphasize the importance of acquired perceptions and perceptual habits. So in brief we don’t want vague talk of motion, nor the abstracting out of spatial relations such as extension, or of duration. We want to determine the precondition for actual purposive movement characteristic of an agent. Whether this be a response to a specific stimulus or the enacting of an imagined scenario, this motion is a from-to movement accomplished by an effort and not just a kind of passive drift or a senseless flailing about. The fundamental starting point here is not knowledge of space as an abstract room to move but knowledge of direction and acceleration.

It is essential to recognise that without direction and orientation we not only cannot move as we will, we also cannot see objects since the precondition for seeing something is to look at it and keep still or at least distinguish motion of the object from the motion of the observer, as Wells pointed out. This is the basis for identifying persistent individual objects rather than merely facing a confused play of colour. The perceiver can eventually acquire habits of seeing so that vision can compensate some acquired deficiencies of balance, but vestibular functioning is the key ingredient for developing spatially informative seeing, just as it is for goal directed movement. In linking balance closely to voluntary motions Reid is effectively granting the agent an ineliminable role in not just moving, but in perceiving. To be a bit provocative, perhaps one can say that balance is a precondition for physical agency and perceptual learning. If vestibular function has an important role in this then this set of organs must be in place before the development of perceptual habits can begin and vestibular information on the spatiotemporal structure and dynamic response of the physical world is then integrated into all these habits. These habits include what we ordinarily call seeing and hearing. These large claims can be illustrated by some recent research into vestibular functioning.

Firstly, all moving organisms which have something invested in going in a particular direction have some organ for determining the downward direction. These organs are some of the most ancient in evolutionary terms.\textsuperscript{25} For an organism which is extended and has proprioceptive knowledge of bodily

\textsuperscript{24} Thomas Reid, \textit{An Inquiry into the Human Mind on the Principles of Common Sense} (Pennsylvania, 2000), 201.

\textsuperscript{25} S. McCredie, \textit{Balance, In Search of the Lost Sense} (New York, 2007), ch. 4.
position only one direction has to be fixed in relation to the environment for the organism to fix its own frame of reference and measure or compare positions and movements of objects. It is difficult to see how this might develop without a universal direction and a means of fixing it.

Secondly, as a recent review of vestibular functioning puts it:

Unlike other senses, vestibular information in the central nervous system becomes immediately multisensory and multimodal. There is no overt, readily recognizable conscious sensation from these organs, yet vestibular signals contribute to a surprising range of brain functions, from the most automatic reflexes to spatial perception and motor coordination.26

Thirdly, as Daphne and Charles Maurer explain in their book on the cognitive development of infants:

Of all the sensory systems, the vestibular system is the first to mature. The organs of balance in the inner ear are mature in shape and are partially innervated before eight weeks of gestation. By six months gestation they are not only mature in shape, they are also mature in size and are completely innervated—the only organs in the body to become adult during gestation.27

This, by the way, is the reason why newborns can already have spatial competencies—they acquired them in the womb. Fourthly, in specific comments on the sensations experienced by newborns the Maurers note that:

Adults’ sensations rarely spill from one sensory system into another, as the newborn’s do. But a signal exception to this lies with our sensations of balance and sight, which work together so closely that if we close our eyes and pirouette, after opening them again, the world looks as if it is moving. In contrast, the newborn’s sensations spill about throughout his brain from one system to another, because his brain lacks the adult’s deep network of neural channels; and one set of these channels that is not mature is the set that links the vestibular and visual systems. So

the one place where adults are signally synesthetic, the newborn baby is not.\textsuperscript{28}

What the baby is learning in perceptual learning is to integrate vestibular and bodily information with external stimulation by light and sound. So, far from separating itself from the environment, it is placing its body and integrating its sensory organs into the dynamic world. Fifthly and lastly, Patrick Wall has something fascinating to tell about balance in his book on pain. In talking about people who have suffered a stroke which has destroyed their inferior parietal cortex, he tells us that:

If the stroke has occurred on the right side of the brain, these people appear completely unaware of anything on the left side of their world. They appear blind and deaf to anything occurring on the left and, most bizarre of all, when shown their own left hand they deny that it is part of them… Now comes the really astounding fact. Italian doctors, whose results were confirmed by many others, discovered that stimulation of the vestibular system in the ear completely restored all sensation on the left side. It disappeared again as soon as the stimulation stopped.\textsuperscript{29}

There is no perception of spatial relations in the world without the enabling role of the vestibular system in our sense of balance.

As already noted, neither Reid nor Wells were actually talking about the vestibular system. Wells in his experiments comes closer to investigating the rather direct link between eyesight and vestibular stimulation, but Reid was really talking about actively maintained bodily balance. Now there is at least one way in which it is right to say that we do not do anything with the vestibular organs when we collect the information needed to balance. The actual organs are beyond voluntary control. The same can be said of the olfactory receptors and even the ears. When we sniff or cock our head to hear we are not really moving the organ but merely orienting it or stimulating it indirectly.

This has important implications for placing the vestibular apparatus correctly into the sense of balance. Vestibular signals are not enough if what one wants to achieve is balance or if they wish to educate their eyes and ears.

\textsuperscript{28} Ibid., 164–5.
about spatial relations and relative motions. To do any of that we actually have to use our muscles and exert effort. Fully functioning vestibular organs are not even essential for balance and once we achieve the upright posture vestibular information plays no part in maintaining it.\textsuperscript{30} It may then well be asked what its main role is in the sense of balance and in perceiving.

The general answer is that the sense of balance involves vestibular, proprioceptive and tactile systems. The extent to which all these systems contribute and how malfunctions are compensated raises empirical rather than philosophical questions. What makes the vestibular organs special is that they provide that ‘secret reference’ directly to the head senses which we use to see and hear with. These are our most important senses for the detection of remote objects and the positioning of and control over the motions of the head are needed to begin perceptual learning with these head senses.\textsuperscript{31}

But given all this it is nevertheless wrong to call the vestibular system a sense of balance for the simple reason that balance requires two participants. The best that the vestibular sense can do is to provide some of the information needed in this interaction, and the value of Reid’s insight lies precisely in his placing the perceiver in the centre of the action of balancing.

Conclusion

Reid’s comments on balance still have the potential to change how we think about our senses and how we draw the line between the active perceiver and the physical world. His remarks occur in the context of a broad consideration of voluntary motion and they allow us to see balance as a modality which involves the whole body in exploratory activity. Without this sense our agency cannot come to expression in purposeful behaviour and the exploring needed for perceptual learning cannot begin.


\textsuperscript{31} Even if the vestibular sense is not essential in maintaining the normal stance, it becomes more important for keeping the head still and oriented while running. There is good reason to believe that this has until recently had significant survival value, see McCredie, \textit{Balance, In Search of the Lost Sense}, 107–15. Large and sensitive vestibular organs are a measure of agility and they facilitate skilled jumping and turning, not to mention accurate throwing. On the other hand, impaired vestibular functioning can be more easily compensated in humans than in other species, see Geldard, \textit{The Human Senses}, 426–7.
There is no perception of dynamical relations or spatial relations in the world without our sense of balance. I would suggest that there is no perception of the world at all.

University of Tasmania
In this paper, I examine Thomas Reid’s view of physical causation. Reid’s view is neither obvious, nor, as I shall argue, in line with what would seem to be a common sense understanding of the matter. The bulk of the paper aims to uncover both Reid’s conclusions about the nature of causation and the reasoning that lead him there. To this end, I attempt to reconstruct the metaphysical alternatives available to Reid as well as the considerations by which he was evidently most compelled. I then make a close examination of the relevant texts to see how Reid negotiates these.

The following interesting results emerge: The metaphysical picture Reid settles on is a version of occasionalism—the view that regularities we observe in nature are not the result of the causal properties of the physical objects themselves, but the moment-by-moment divine ordering of events. Further, I suggest there are actually two separate lines of argument that lead Reid to this conclusion: An epistemological argument of Newtonian inspiration and a semantic argument of Humean origins. These considerations lead Reid to a form of skepticism about the notion of physical (non-agentic) causation; though the Newtonian line recommends a weaker conclusion than the Humean one.

Finally, I argue that Reid need not and, indeed, should not have been led to this occasionalist view: his broader philosophy provides both the motivations and resources to reject occasionalism in favour of the more appealing Lockean account.

**Cause and Power**

According to Reid, for an entity to be the cause of some change it must meet the following criteria: (a) It must act in such a way that it produces a change in some material object and (b) it must do so as a result of exercising its own power and
not merely by being acted upon by some outside power.¹

But what is required for a thing to ‘exercise its own power?’ Does a heart exercise its own power by pumping blood? Does a volcano exercise its own power by erupting and spewing lava? What exactly counts as a power? Reid confirms that we can have ‘no notion’ of cause and effect ‘if we have none of power’ (EAP, 515a). And so, if we are to attempt a reconstruction of Reid’s notion of causation, we will have to focus our attention on what he has to say about ‘power’.

Locke, Agent Power and Body Power:

One candidate theory of power Reid considers is offered by John Locke (EAP, 518b–520a). According to Locke, we have two notions of power corresponding to two types of powers in the world—the active powers of conscious agents and the powers of physical bodies.²

The notion of ‘agent power’ we get by means of our ‘Faculty of Reflection’ (EHU, XXI: iv, 111). That is, by consciousness of the ‘operations of our minds,’ we are made aware of our own powers to set our thoughts or bodies in motion towards various ends. Of this sort of power we have a ‘clear and distinct’ conception, according to Locke: It is an active power (a) by which we are able to ‘command’ the ‘doing or not doing such and such a particular action’; (b) through conceiving some end and willing (that is, deliberately exerting ourselves) to achieve it (EHU, XXI:iv–v, 111–12).

Our idea of ‘body power,’ on Locke’s view, is got by a collaboration of the faculties of Sensation and Reason. That is, we do not have any direct perception of these powers; yet, by means of the senses, we do observe changes occurring in objects. Moreover, convinced that ‘like changes will for the future be made in the same thing, by like agents, and by like ways,’ we place in one object the possibility of being changed, and in another the possibility of producing that change. And so, we come by our idea of ‘body power’ by inference. Thus we say that fire has a power to melt gold (EHU, XXI:i, 110). This power is attributed to the fire as a sort of dispositional property. So, we

¹ Thomas Reid, Essays on the Active Powers of Man in The Works of Thomas Reid, edited by Dugald Stewart and Sir William Hamilton (Edinburgh, 1852; third edn), 511–711, 515a; hereafter cited in the text as EAP.
do have a notion of power in bodies; yet, it is not as clear and distinct as our notion of ‘agent power’ since we have no direct experience of it, but arrive at it through inference (EHU, XXI:iv, 112).

Body Power and ‘Occult Power’

We can get a clearer view of Lockean body power by contrasting it with what was pejoratively called ‘occult power’ by Locke’s contemporaries. One sort of world-view that would certainly have answered to the charge of invoking occult powers is animism. It is characteristic of animist metaphysics that things we ordinarily think of as being lifeless or unthinking are imbued with will and intention. Hence, the sea might be thought to be angry and desirous of destroying a vessel when the water gets rough. From the point of view of early modern science, infusing physical objects with willful, self-moving powers would certainly count as introducing ‘occult powers’. Animism, however, was not really a serious intellectual paradigm in modern Europe.

The primary intended target of the charge was the Aristotelian natural philosophy of the Scholastics. To see why the issue was considered important, consider modern scientific responses to two features of the Aristotelian system—the theory of substantial souls and the theory of gravitation. In the Aristotelian system, vegetative and animal souls are posited as substantial forms which are the cause of growth and mobility in living things. The difference between a living thing (say a plant) and an inanimate thing, is not just the complexity and organization of their material parts, but the fact that living things have substantial forms that enliven matter and dispose it to growth. Similarly, in Aristotelian physics, gravitation is explained by insisting that everything in the universe has its appointed station to which it strives to return. ‘Stones fell toward the earth because they were aspiring to reach their proper place at the center of the universe’.3

The Aristotelian view of the natural world differs from the animist one in that it does not ascribe conscious willing or understanding to falling stones or growing trees. Nonetheless, it shares the belief that the non-human world is endowed with genuinely active powers (for growth and movement) which they exercise, not in simple reaction to some previous event, but as originators of the impetus to change. We might say the natural world, on this picture, is

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endowed with non-conscious, non-willing ‘unmoved movers’ or ‘first causes’. Their powers are exercised not by choice, but automatically; yet, they are not exercised by any sort of strict determination to do so by some previous cause—that is, they are genuinely active. To put it in admittedly modern terms, on the Aristotelian view, there is a plenitude of ghosts in the machine, a hierarchy of souls, each with its own active powers, organizing the causality of matter towards the exercise of their respective functions.

It is these sorts of powers that early modern philosophers were most concerned about in their repudiation of ‘occult powers’. And the reason these needed to be repudiated was that they did not fit the emerging mechanical conception of the world. Consider, as a paradigm example, this passage from Descartes’ *The World*, in which he invites his readers to think of the whole of nature on the model of a mechanism:

> I should like you to consider that all these functions follow naturally in this machine simply from the arrangements of its organs, no more or less than the movements of a clock or other automaton follow from that of its counterweights and wheels, so that it is not at all necessary for their explanation to conceive in it any other soul, vegetative or sensitive, or any other principle of motion and life other than its blood and its spirits, set in motion by the heat of the fire that burns continually in its heart, and which is of a nature no different from all fires of inanimate bodies.⁴

On the conception of the world Descartes envisions, all change in the physical world is, in fact, motion—the movement of parts. Matter is an inert substance; no merely material thing is self-moving or can internally generate motion. Thus, any movement or change in a physical object is the result of either the continuation of existing motion or the transfer of motion from another object. Vegetative functions such as growth and animal functions such as bodily movement can also be explained as movement of material parts—that is, mechanically. A consequence of all this is that substantial forms and other such powers become ontologically unnecessary.

So how do Lockean ‘body powers’ compare with the ‘occult powers’ of the Aristotelians? The exercise of ‘occult powers’ is genuinely active; that is, though they are exercised without intention or understanding, they are not

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determined to do so by previous events. They involve a causality of their own that organizes the causality of mere inanimate matter towards the exercise of various functions. Lockean powers, by contrast, are not properly active at all. That is, not only are they exercised non-volitionally, they are also determined to do so by previous material events. Thus, Lockean body powers are consistent with the deterministic, mechanical conception of the world. Locke admits that we often speak of active and passive powers in bodies, but he insists that, actually, all body powers are passive:

Neither have we from body any idea of beginning of motion. A body at rest affords us no idea of any active power to move; and when it is set in motion itself, that motion is rather a passion than an action in it. For, when the ball obeys the motion of the billiard stick, it is not any action of the ball, but bare passion. Also, when by impulse it sets another ball in motion that lay in its way, it only communicates the motion it had received from another … we observe it only to transfer, but not to produce any motion. The idea of the beginning of motion we have only from reflection on what passes in ourselves (EHU, XXI: iv, 112).

In this passage, we see Locke insisting that body power is not the same as the ‘occult powers’ of the Aristotelians; body powers are determined to be exercised by previous action. They are not originators of action (that is, first causes) as human agents are. In fact, they are tertiary qualities (EHU, VII:x, 46)—dispositions of a thing to determine changes in another thing when they themselves are acted upon in certain ways.

**Reid on ‘power’**

We are now in a position to pose again the questions motivating this essay. We’ve noted that, according to Reid, for a thing to be a cause it must produce some change by ‘the exertion of its power’ (EAP, I:i, 515a). Reid also claims that bodies cannot be causes, properly so-called. The significance of this claim will depend on what he means by ‘cause’; what he means by ‘cause’ will, in turn, depend on his view of ‘power.’ I see two possibilities:

(1) **The Conservative Interpretation**: Reid does not deny that bodies have Lockean passive powers, but only that they cannot have active powers—that is, ‘occult powers.’ Because they cannot have active powers, they cannot be
the originators of change (i.e. first causes) in the same way that agents can. Nonetheless, one physical event can determine another, so long as it is itself determined to do so by previous events. Reid’s claim that bodies cannot be causes properly so-called is really only a benign joining of the modern chorus of repudiation of ‘occult powers,’ not a rejection of the deterministic-mechanical character of the physical world.

(2) The Radical Interpretation: Reid is claiming that bodies cannot have power at all (passive or active). On this interpretation, his claim that bodies cannot be causes amounts to the claim that one physical event cannot determine another—even ‘passively’. In other words, Reid is not just joining the ranks of denouncers of ‘occult powers’, he is actually rejecting the deterministic-mechanical picture of the natural world.

In the remainder of this essay, then, we will allow three questions to guide us: (i) What does Reid mean when he claims that bodies cannot be causes? (in other words, should he be understood in terms of conservative or the radical interpretations above?) (ii) What are his reasons for making such a claim? (iii) Should he have been convinced by these reasons?

Metaphysical Alternatives

What Reid’s view of physical causation comes down to metaphysically is difficult to determine. It will help to lay out some of the available philosophical alternatives he would have had at his disposal. Two options already described—animism and Aristotelianism—were available to Reid, though, no doubt unpalatable. Here are several others that would have been, at very least, creditable and live options:

(1) Cartesian Naturalism: I take this to be both Descartes’ own considered position and the dominant understanding of physical causation among early modern mechanical philosophers. On this view, the physical world is to be understood on the model of a machine, as we’ve already observed: All change is the result of the movement of underlying parts. And while physical objects cannot originate motion or change, they do transfer existing motion from one object to another via contact action. Thus, one body can causally determine change in another (though only as a result of itself being determined to do so); and it is in terms of such underlying mechanisms of

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motion transference via contact action that all phenomena in the physical world are to be explained.

The physical world, thus, has a degree of causal autonomy on the Cartesian picture. It is in this sense that the Cartesian understanding of physical causation is naturalistic. The interactions between physical bodies involve a form of physical determination. The nature of this causal relation is roughly this: Event A causes event B just in case A’s happening directly determines or makes it the case that B happens. ‘Directly determines’ here means that there is no intermediate event that determines B’s happening which is not itself determined by A to happen. ‘Determines’ is supposed to indicate a form of necessitation that is neither the result of logic or direct willing.

Importantly, Cartesian naturalism does not eliminate the role of divine or human wills, and so is perhaps best called ‘quasi-naturalism’. As immaterial substances, both God and human minds are able to interact with the physical order. God creates the world, infuses it with its original motion, and (at least, on some accounts) intervenes occasionally in the case of miracles. Likewise, human beings, in virtue of their immaterial minds, are able to causally alter the physical world on the basis of volitions that are not themselves determined by previous mechanical events. The metaphysics of Cartesian Naturalism, thus, includes both body-body causal interactions (where the mode of causation is physical determination via contact action) and mind-body causal interactions (where the mode of causation is mental determination via volition).

(2) Newtonian Naturalism: Newton’s 1687 *Philosophia Naturalis Principia Mathematica* seemed to challenge, to a certain extent, the mechanistic assumptions of the Cartesian picture, by postulating causal forces (such as gravity and magnetism) that do not operate through contact action. It turns out that Newton’s own view of the metaphysics of causation (as we shall see in the next section), is less decided than this. However, Newton’s work made available a metaphysical view that shares all the basic features of Cartesian mechanical philosophy, except that body-body causal interactions can operate at a distance, rather than exclusively through contact action.6

(3) Malebranchean Occasionalism: According to Nicholas Malebranche, the sequence of events that we witness in the world is not causally ordered as the naturalistic pictures allege. That is, no physical event determines the occurrence of a subsequent physical event; instead, the actual order of events

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6 This metaphysical interpretation of Newton, I take it, represents the views of figures such as Samuel Clarke (see Clatterbaugh, *The Causation Debate in Modern Philosophy*, 1637–1739,177).
is determined moment-by-moment by the will of God. So, properly speaking, fire does not cause (determine) the melting of wax; instead, each time wax is placed by fire, God directly determines a wax melting event to follow. The event of the wax being near the fire is merely the occasion for God to exercise his efficacious will for a melting event, not the cause of the melting event. Fortunately, God acts in such a way that like events always (except in the case of miracles) follow like events—so there is regularity to the patterns of events in our world.

Importantly, Malebranche not only denies body-body causal interactions, but also mind-body causal interactions in human beings. Consequently, the (more or less accurate) correspondence between mental representations and the physical world is not the result of any causal process that links body to mind; instead, the presence of external objects is merely the occasion for God to cause a perception of such an object in our minds. Further, human volition does not cause action in the physical world, but serves as the occasion for God to alter the physical world accordingly.

(4) Berkelean Occasionalism: Not all occasionalists went as far as Malebranche. George Berkeley, for instance, agreed in rejecting the efficient causality of physical bodies; however, he held that both divine and human wills could exercise causal power. Human volition, thus, is the only form of finite causality; all other regularities are simply the result of God’s direct ordering.

(5) Humean Regularity Theory: The simplest way to describe the Humean view of causation is that it is ‘Malebranche without God’. That is, for Hume, a cause is simply ‘an object followed by another, and where all the objects similar to the first are followed by objects similar to the second’. Like Malebranche, Hume denies that there is any sort of necessary or determining relations between physical bodies. At most there are exceptionless regularities—‘constant conjunctions’—between similar events. It is simply a habit of mind that leads us to suppose that not only will event A follow event B, but that it must do so. It is a determination of the mind to move from the first to the second, not a determination in the objects. This picture is now commonly referred to as the regularity theory of causation. There is some reason to think Hume

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7 This characterization oversimplifies Malebranche’s position somewhat. It is more likely that Malebranche thinks God wills the total sequence of world events at creation (including both regularities and exceptions), without needing to act ‘moment by moment’ by a vast number of distinct acts of will (Clatterbaugh, *The Causation Debate in Modern Philosophy*, 1637–1739, 112–27).

might not have, in the end, accepted this view himself; however, Reid certainly understood him in his way.

A consideration of his general influences and an examination of the texts in which the topic of causality is discussed, I think, make these the most plausible metaphysical alternatives available to Reid. The first two—Cartesian and Newtonian naturalism—are both in line with the view expressed by the conservative interpretation that physical bodies have Lockean passive powers and, thus, that there is such a thing as physical causation. The latter three, however, all deny relations of causal determination among bodies, and so, would fall within the radical interpretation.

I now want to turn our attention, and indicate the primary considerations motivating Reid’s discussion of physical causation. In each of the texts where he discusses physical causation, two figures loom large—Isaac Newton and David Hume. Ultimately, I think Reid’s arguments against physical causation are drawn from these two sources.

**Newton’s Agnosticism**

Reid writes that, according to Newton, ‘when physics shall be carried to utmost perfection, there would not be found in the whole of science such a conception as that of cause; nothing but laws of nature…’. To understand what is at the bottom of Newton’s banishment of “causes” from completed physics, we should consider the sorts of views he was positioning himself against. On the one hand, Newton shares with most early modern philosophers the antagonisms already discussed towards the ‘occult powers’ of Aristotelian science (*Fundamental Principles of Natural Philosophy*, 17). On the other hand, Newton was also critical of many of the mechanical explanations of Cartesian science. In particular, the Cartesians—convinced that all action must involve contact action (as previously noted)—had offered various explanations of observed regularities in terms of unobserved mechanisms: Gravity was explained by postulating vortices in the cosmic ether, magnetism by ‘magnetic effluvia.’ In fact, when Newton offered his own theory of gravitation as a

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9 Thomas Reid. ‘Of Power’ (1792), in John Haldane and Stephen Read (eds), *From The Philosophy of Thomas Reid: A Collection of Essays* (Oxford, 2003), 18; cited hereafter in the text as OP.

10 Isaac Newton, *Fundamental Principles of Natural Philosophy* in H.S. Thayer (ed.), Newton’s philosophy of nature: selections from his writings (New York, 1953), 17; hereafter cited in the text as FPNP.
force acting at a distance, he was accused of reintroducing occult forces into natural philosophy.\textsuperscript{11} Newton’s response was twofold. On the defensive end, he clarified that by calling gravity a force he did not mean to suggest that he was attributing forces in the ‘true and physical sense’ to objects (\textit{FPNP}, 17). And, more offensively, he insisted that to resort to postulating ‘causes’ of gravity such as unobserved mechanisms (i.e. vortices in the cosmic ether) was mere hypothesis, not true explanation.\textsuperscript{12}

Newton’s banishment of ‘causes’ from natural science, then, should be understood as follows: He was opposed to explanations of the observable in terms of the unobservable—that is, of ‘phenomena’ in terms of hidden, underlying ‘causes.’ For this reason he thinks that a completed science will be a set of laws describing the observable relations and properties of natural phenomena, but will not include any ‘causes’ in the sense of further explanations of the observed in terms of unobserved forces or mechanisms. However, it was never Newton’s intention to transform this methodological agnosticism into a metaphysical principle. He remained convinced that the observable regularities in the phenomena he was describing had some cause. It was just that, \textit{qua} natural philosopher, he thought it fruitless to speculate on the nature of these.

\textbf{Hume’s Semantic Reductionism}

Hume’s skepticism about physical causation is not rooted in particular controversies in natural philosophy, but in more strictly metaphysical considerations. I have already described the view Hume ends up with; I now want to run through the reasoning that led him there.

As a devotee of what Reid calls the ‘Ideal theory’, Hume is committed to the principle that all our ideas are derived from sensory experience. That is, all our ideas are either copies of impressions or some combination of these impressions. Consequently, the question of the nature of physical causation admits of a straightforward skeptical answer: when we examine the sequence of events we call a ‘cause’ and an ‘effect’, what impressions do we have? Certainly, Hume writes, we perceive ‘that they are \textit{contiguous} in time and place, and that the object we call cause \textit{precedes} the other we call effect’ (\textit{THU}, I:xvi, 155). However, in ‘no one instance can I go any farther, nor is it possible for me to discover any third relation betwixt these objects’. That is, when we

\textsuperscript{12} Ibid., 204
examine our idea of physical causation, we find an impression of one object being contiguous to and preceding another; however there is no impression of a necessary connection between them—of a determining relation.

Hume also considers the notion of ‘power’. His analysis of efficacious power in objects parallels his analysis of cause. When we examine our idea of an object we call a cause, we ‘never have any impression, that contains any power or efficacy’ (THU, I:xvi, 161). All we have is a repeated impression of one object contiguous to and preceded by another object; we have no impression of a power or a disposition to bring about an effect.

It is important to note that Hume’s skeptical conclusion regarding physical causation and power is not just epistemic—it is also semantic. Hume is not simply claiming that we cannot know if a physical object can be a (determining) cause or if a physical object can have power, he is claiming that we have no such idea as ‘physical determination’ or ‘power’.

Several theses stated

Building on the historical preliminaries above, I hope to establish the following theses in what remains:

(1) Reid’s argument against physical causation has three components: (a) He offers an epistemological argument recommending agnosticism about the true location and nature of the causes of change in the physical realm; (b) he offers a semantic argument to the effect that the idea of non-intelligent cause is literally incomprehensible; (c) he offers a developmental explanation of our ordinary causal discourse to justify his uncharacteristic divergence from common sense in this matter.

(2) Reid’s epistemic argument is motivated by his commitment to Newtonian scientific methodology and recommends the Newtonian conclusion that we should be agnostic about the nature and location of physical causes for the purposes of natural philosophy. On the other hand Reid’s second, semantic argument is distinctly Humean—and urges the correspondingly stronger rejection of physical causation.

(3) The metaphysical view that these arguments lead Reid to accept—and which he implicitly recommends—is occasionalist.

(4) This picture is, however, problematic by Reid’s own lights; by adopting it, he is unable to respond to an objection he takes to be decisive against Hume.
(5) Reid ought to have endorsed a naturalistic view of causation: in the first place because he would then have been able to avoid the objection just mentioned; in the second place, because Reid’s philosophy is uniquely capable of defusing the semantic argument; in the third place, because it would have better suited his commitment to the \textit{prima facie} justification of our common sense beliefs.

\textbf{Textual Evidence for Thesis 1}

The thesis that Reid’s case against physical causation has three distinct components should be advanced with some qualification. It is not clear that Reid always distinguished the first two components as starkly as this thesis might suggest. In fact, in ‘Of Power’, they are not clearly delineated at all. Instead, Reid seems to suggest that Newton and Hume offer essentially the same ‘reasoning’ against physical causes, and all his focus is on the semantic argument (\textit{OP}, 18). Nonetheless, I think the epistemic and semantic arguments are \textit{logically distinct} stages in Reid’s overall strategy. Moreover, in the other key passages I am drawing on—\textit{EAP} I:v and Reid’s letter to Kames (December, 16, 1780)—there is an evident \textit{textual division} of the arguments.

Consider, first, ‘Chapter Five’ of ‘Essay One’ in the \textit{Active Powers}. The first seven paragraphs are obviously concerned with epistemology: he opens by noting that it is not \textit{evident} that bodies can be possessed of active power; this is because we \textit{perceive} changes innumerable in things without us … but we \textit{perceive} neither the agent nor the power’ (\textit{EAP}, I:v, 522b). For the purposes of ordinary life, this is no cause for worry, since to \textit{know} the event and the circumstances that attended it, and to \textit{know} in what circumstances like events may be expected’ is sufficient’ (\textit{EAP}, I:v, 522b). But if we insist on speculating about the cause of these regularities, ‘we find various conjectures and theories, but no solid ground on which we can rest.’

The conjectures available for the causes of the observed regularities in nature include: God directly causes the order of events (as suggested by Malebranche); some subordinate intelligent agents do (animism); or various theories claiming that non-intelligent instruments do (as, for instance, in theories of ‘occult power’, but also in Lockean powers, \textit{EAP}, I:v, 522b). However, which, if any, of these conjectures is right, Reid concludes, ‘is a \textit{mystery} placed beyond the limits of human \textit{knowledge}’; the wisest people are those ‘who are sensible that they \textit{know} nothing of the matter’ (\textit{EAP}, I:v. 522b).
Paragraph seven makes it clear that Reid is dropping the epistemic question and moving on to something new.

That something new is, evidently, a consideration of the same question from a semantic angle. He begins by citing Locke approvingly to the effect that ‘the only clear notion or idea we have of active power, is taken from the power that we find in ourselves …’ (\textit{EAP}, I:v, 523a). Since this power in ourselves is necessarily tied up with volition and understanding, it follows ‘that the active power, of which only we can have any distinct conception, can be only in beings that have understanding and will’ (\textit{EAP}, I:v, 523a). He concludes: ‘Power to produce any effect, \textit{implies} power not to produce it. We can \textit{conceive} no way in which power may be determined to one of these rather than the other, in a being that has no will’ (\textit{EAP}, I:v, 523a).

The same textual division between the epistemic and the semantic argument is evident in Reid’s letter to Kames (Dec., 16, 1780).\textsuperscript{13} The first seventeen paragraphs deal with a variety of questions about explanation and physical causation. However, it is clear Reid’s concerns here are epistemological. In the first place, Newton’s agnosticism about discovering causes in natural philosophy is obviously guiding Reid. Again he lists the various alternative theories of the causes of the observed changes in nature—direct ordering by God, ordering by subordinate intelligent beings, ordering by non-intelligent instruments. And again he insists that ‘our \textit{reason} is not able to \textit{discover} which theory is true—‘we can do little else than \textit{conjecture}’ (\textit{Ka}, para. 14, 58).

However, by paragraph nineteen, his approach shifts towards the semantic. He notes that he is ‘unable to find any distinct \textit{conception} of active power but such as I find in myself’ (\textit{Ka}, para. 19, 59). This conception is tied up with will and understanding, so, ‘if there be anything in an unthinking inanimate being that can be called active power, I \textit{know not what it is} and cannot reason about it’ (\textit{Ka}, para. 19, 59).

\textbf{The Epistemic Argument}

Thus far, I have argued that Reid’s case against physical causation contains both an epistemic and a semantic argument, and I have sketched the basic moves of the argument as it is presented in the relevant texts. I now want to give more focus to the logic of the arguments by giving them a more precise

\textsuperscript{13}Sir William Hamiton (ed.), \textit{The Works of Thomas Reid}, 56–60; hereafter cited in the text as \textit{Ka}. 
form, and reflecting on their significance. The epistemic argument can be stated thus:

We know change occurs in the natural world because we ‘perceive changes innumerable in the things without us.’

Further, we know that all changes must have some cause. Reid believes it is a necessary truth that ‘whatever begins to exist, must have a cause which produced it’ (*EIP*, 455a).

But, in order for something to be a cause, it must act on its own power. Yet, we observe no powers producing this change—neither inherent in the bodies themselves, nor in some external being.

Therefore, we cannot know what the causes of changes in nature are or whether bodies can be causes of such change.

Two comments should help clarify the significance of this argument. First, it is certainly Newtonian in character. It concludes from the fact that physical power is unobserved that we cannot know the true causes of changes in nature. Moreover, it recommends agnosticism only. This explains the heavy referencing of Newton in the relevant passages.

Second, the conclusion here should, I think, be read in the spirit of the radical interpretation. That is, the epistemic argument does not simply conclude that we cannot know the originating impetus of changes in the natural world (that is, first causes). It claims that, ‘[we] see an established order in the succession of natural events, but we see not the bond that connects them together’ (*EAP*, I:v, 522b). It is determining relations as such (including passive determining relations) that are not observed. Now this argument does not yet assert that bodies do not have (passive) powers and, consequently, cannot (even passively) produce changes in nature. But it does conclude that we cannot know if they have such power and produce change.

**The Semantic Argument**

Reid’s semantic argument urges a much stronger conclusion. It runs as follows:

For a thing to be a ‘cause’, it must possess its own power by which it produces some change.

To have its own ‘power’, a thing must be able to both produce and
to not produce a change in a given set of circumstances.

To be able both to produce and to not produce a change, a thing must be endowed with will and understanding.

Bodies are not endowed with will and understanding.

Therefore, bodies are not able both to produce and not to produce a change.

Therefore, bodies do not possess their own powers.

Therefore, bodies cannot be causes, properly so-called.

I call this argument ‘semantic’ because it turns on the meaning of the words ‘cause’ and ‘power’. The second and third premises contain the crucial moves of the argument. Reid justifies these premises with the following reasoning: We do not arrive at any conception of power from our observations of the changes in bodies; instead, we get our conception of power from consciousness of our own exertions of power. But the conception we get here is of a power to act and to not act. This conception is tied up with the ability to conceive of an end and will either to produce it or to not produce it. So our only conception of power is of agent-power, of power involving will and understanding. The notion of a non-intelligent/non-willing power is literally inconceivable for us; we cannot understand what someone might mean by these words. Reid writes:

‘If any man, therefore, affirms, that a being may be the efficient cause of an action, and have power to produce it, which that being can neither conceive nor will, he speaks a language which I do not understand’ (*EAP*, I:v, 525a).

Again, some comments are in order. First, the conclusion of the semantic argument is stronger than that of the epistemic argument. Not only can we not know whether bodies can be causes, we cannot even conceive of them being causes. Second, this argument resembles Hume’s. It concludes from the fact that we cannot perceive any power or causal determining relation in bodies, that we can form no conception of such a power or relation. Reid, thus, mirrors Hume’s own reductive analysis of the common notion of physical ‘cause’:

When we ascribe power to inanimate things, we mean nothing more than a constant conjunction by the laws of nature which experience
discovers between the event which we call the effect and something that goes before it \((OP, 22)\).

Finally, the semantic argument confirms the radical interpretation. Reid is not just claiming that bodies cannot have active power (leaving open the possibility that they may have Lockean passive power); he is claiming that the only conception of power we have is of the active powers of intelligent agents. We have no conception of passive power. Thus, bodies not only can’t originate change, they can’t even be intelligibly said to determine change passively.

**Common sense**

The third component of Reid’s case against physical causation is to explain the divergence of his analysis of causation from our ordinary causal discourse. We might think that this stage of Reid’s argumentative strategy is tangential to his skeptical conclusion—and in another philosopher it would be. However, for Reid, a break with the presuppositions embedded in the practice and discourse of ordinary life requires some justification—that is, a special sort of story explaining how the folk get it wrong.

Reid offers a developmental-historical account of the origin of our practice of ascribing causal properties to inanimate objects. He suggests that our original conception of power is got from consciousness of ‘our ordinary active exertions’ \((OP, 19)\). Yet, noticing innumerable changes in the natural world and being convinced that all change must have some cause, we project our own power into the objects undergoing change. At first, this results in an animistic understanding—we imbue lifeless and unthinking things with will and intention. However, this practice of projecting active powers onto the physical world doesn’t end with the passing of animistic metaphysics. Both the ‘Peripatetics’ and ‘the vulgar’ continue to ‘attribute real efficiency or productive power to unintelligent and even to inanimate things’ \((OP, 20)\). When they ‘say that heat melts ice, and that cold freezes water, they conceive the heat and cold as really efficient causes’ \((OP, 20)\). This habit of speaking of bodies as causes has become entrenched in our language and folk explanatory practices.

There is a telling ambivalence in Reid’s account of the ‘popular’ sense of cause. On the one hand, he wants to insist that we have no coherent conception of non-intelligent power/ causation. And, yet, he does not always seem fully convinced of this, and seems to admit we do have some notion of physical
causation. This ambivalence is most evident in the concluding paragraph of ‘Of Power’. He suggests that there are two types of power—agent power and body power—which are ‘essentially different’ from each other. And he adds that ‘their definition is as different as their nature’ (OP, 22). In fact, he seems to offer a definition of physical power: it is a power that is exercised without volition or understanding; it is a power that is exercised ‘with necessity’—that is, ‘must, without miracle, be exerted to [its] utmost whenever the circumstances concur which by the laws of nature are necessary to [its] exertion’. This seems very much like the Lockean conception of ‘body power’; moreover, it seems perfectly comprehensible.

However, Reid backs off almost immediately and insists that by ‘power’ here we really ‘mean nothing more than a constant conjunction by the laws of nature which experience discovers between the event which we call the effect and something that goes before it’ (OP, 22). The ‘determination’ element drops out again, and all we are left to ‘mean’ by it is exceptionless contiguity and temporal order.

Reid as Occasionalist

Ambivalence aside, I think Reid did ultimately settle on an Occasionalist view of metaphysics of causation. At first glance, this claim might seem to conflict with Reid’s repeated declarations of agnosticism about the true causes of changes in nature. However, if the general picture I am offering here is right, then these declarations only represent provisional conclusions based on the first stage of Reid’s arguments. That is, from the point of view of natural philosophy we are unjustified in settling on one of the available metaphysical pictures. However, Reid thinks there are considerations outside of natural philosophy that enable us to reject some pictures. He says as much in his letter to Kames:

Of all these systems…there is not one that, in my opinion, can be either refuted or proved from the principles of natural philosophy. They belong to metaphysics, and effect not natural philosophy, whether they be true or false. Some of them, I think, may be refuted on metaphysical principles … (Ka, para. 16, 59).

If there are considerations from the point of view of metaphysics that enable us to rule out some ‘systems’, what are they and where do they point us?
In the first place, Reid believes it is a necessary truth that ‘whatever begins to exist, must have a cause which produced it’ \((EIP, 455a)\). So, any system in which there are changes that are not caused at all can be ruled out. This eliminates the Humean picture, which recognizes only regularities or constant conjunctions \((EIP, VI:vi, 456)\).

In the second place, the semantic argument eliminates any system that postulates non-intelligent powers/causes. If I am right that we should accept the radical interpretation of Reid, then this eliminates not just the Aristotelian picture with its ‘ occult powers’, but also any view that attributes Lockean passive powers to physical bodies (in other words, both Cartesian and Newtonian naturalism).

Further, it would be an error of hyposstatization to think that the ‘laws of nature’ could serve as a metaphysical basis for the physical determination. A ‘law of nature’ is a ‘rule according to which the effects are produced’; however, as Reid explains, ‘there must be a cause which operates according to these rules’. Laws are descriptions of regularities; descriptions do not move objects any more than ‘rules of navigation’ navigate ships \((OAP, I:vii, para 47)\).

These considerations seem to leave Reid to choose among some systems which postulate either God or some other subordinate intelligent agents as the causes of the changes in nature. Reid clearly does not take animism seriously \((OAP, IV:iii, para 283)\). Moreover, given that he thinks we have independent reasons for believing that God exists, the postulation that other supernatural entities have been delegated causal responsibilities seems ontologically superfluous.

By a process of elimination, then, the only option left for Reid appears to be some version of occasionalism. There is textual support for this conclusion. In the letter to Kames, Reid writes that he ‘can conceive only two ways’ in which the activity of matter can be guided by the exertions of an ‘intelligent Being’ \((Ka, para. 21, 59)\). The first he attributes to Leibniz and gives reasons to think it is highly implausible. The second way is precisely the one he attributes to Malebranche several paragraphs earlier \((Ka, para 15, 58)\). That is, the ‘intelligent Being’ guides matter ‘by continual influence exerted according to its situation and the situation of other particles’ \((Ka, para.21, 59)\).\(^\text{14}\)

\(^{14}\) If this conclusion is right, then it accords with a conclusion recently drawn by Nicholas Wolterstorff concerning Reid’s theory of perception—namely, that he sees sensations as ‘signs’ that occasion perceptions rather than as causes of those perceptions \((Wolterstorff, Thomas Reid and the Story of Epistemology, 55)\). What I am suggesting here is that the occasionalism Wolterstorff sees in Reid’s theory of perception and concept-formation is part of a more general occasionalist tendency
The version of occasionalism most plausibly attributed to Reid, however, is not the total version articulated by Malebranche. As we have seen, Reid thinks we do have an idea of active power in our own agency. In fact, he thinks we must presuppose such a power in our activities as practical agents (OAP, IV:vi). And so, contra Malebranche, his metaphysics retains a belief in the efficacious power of human beings as they exercise their will. This is precisely the view we attributed to Berkeley earlier—an unsurprising result, given Berkeley’s general influence on Reid’s thought.

What Reid Should Have Said

Occasionalist metaphysics is hardly a live option for contemporary philosophers. So saddling Reid with this position will lead most of us to think that he took a wrong turn on the matter of physical causation. However, I think Reid took a wrong turn even by his own lights. In his discussion of Humean regularity theory, Reid criticizes Hume’s position as having no way to distinguish causally-related constant conjunctions from merely accidentally-related constant conjunctions. He writes:

It is sufficient here to observe, that we may learn from [Hume’s view of cause as constant conjunction] that night is the cause of day, and day the cause of night; for no two things have more constantly followed each other since the beginning of the world (EIP, VI:vi, 457b).

That is, we believe that there are some things that are constantly conjoined, but not causally related; so constant conjunction cannot serve as a sufficient account of cause. Yet, it is not clear that Reid, in the end, is left with any way to distinguish accidental constant conjunctions from causal ones. There are no powers or determining relations left in the things themselves on the basis of which to draw the distinction. And, presumably, God wills that day follows night every bit as much as that ‘melting wax events’ follow ‘wax near fire events’. Reid’s view, then, seems vulnerable to the same objection he took to be decisive against Hume.

But not only does occasionalist metaphysics create problems for Reid, he had the philosophical resources and motivation to endorse the more plausible
naturalistic picture: Reid’s theory of concept-formation is not tied to the Ideal Theory—that is, on the Reidian account, our concepts are not constructions from sensations and, so, are not semantically reducible to these. Reid could have said that, in seeing two events constantly conjoined, we are led to form a concept of and belief in a power inherent in the one by which it determines the other. There would be no reason to require some ‘impression’ of necessity/determination or of power in order to be able to form such a conception—and so the semantic argument could be diffused. Moreover, it could have been a relative conception of power along the Lockean lines: a disposition of an object which is exercised necessarily whenever it is determined to do so by some precipitating set of circumstances. No ‘occult powers’ here. If I am right, this is precisely the conception that Reid was tempted to admit we do, in fact, have in his essay ‘Of Power.’

Perhaps most significantly, if Reid had taken this approach, he would not have had to break with the common sense beliefs embedded in our ordinary practice and discourse concerning causality.

University of British Columbia
Introduction

In this paper I will first try to show that there is a long tradition of philosophers defending common sense; a tradition that links J. L. Austin and, nowadays, experimental philosophers back to Thomas Reid, all of whom use common sense as a norm that could appraise philosophical theories or methods; secondly, I will suggest that common sense, after all these years of philosophical use, has become a technical term that carries a certain philosophical burden, implying, at the very least, a pragmatic and naturalistic commitment. However, and this will be my conclusion, if theory enters common sense then it cannot deliver what it bargained for. Common sense supposedly derives its authority from all kinds of propositions we take for granted. If we impose philosophical views on it, it loses the authority that is claimed for it.

To make a long story short, in this paper I will try to show that Reid, Austin and many experimentalists, all sound alike when defending common sense. I should note however, that I am not claiming that those philosophers are the only ones who defend common sense. American pragmatists, such as Peirce and Dewey, or Wittgenstein, among others, might fit a similar reading. However, Austin and today’s experimentalists very straightforwardly appeal to a Reidian sense of common sense and use this appeal to invite pragmatistic and naturalistic views. Their attempt to defend common sense can be used as an example of how common sense becomes a philosophical notion with certain connotations.

Philosophies of common sense

Often in the history of philosophy there have been attempts to ground theses or theories on some neutral principle. Neutral here means not philosophical. So, it should either be pre-philosophical or scientific or even theological. Common sense has been a strong candidate for such a principle because it describes our ordinary dispositions before philosophy influences them.

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1 I would like to thank IKY (the State Scholarships Foundation of Greece) for supporting this research.
In the English empiricist tradition, philosophers often mention common sense: David Hume, John Locke, even George Berkley evoke common sense to verify their views. Their arguments and proposals are mere common sense, they say from time to time.

Thomas Reid writes within the same tradition. He, however, takes common sense to a different level: it is not just used to validate his arguments. For Reid common sense is a criterion by which philosophy is to be measured; it stands against certain doctrines; and it justifies his sarcastic remarks about philosophy, philosophers or the very act of philosophising.2

If a plain man, uninstructed in philosophy, has faith to receive its mysteries, how great must be his astonishment! He is brought into a new world, where everything he sees, tastes, or touches, is a idea-a fleeting kind of being which he can conjure into existence, or can annihilate in the twinkling of an eye.

After his mind is somewhat composed, it will be natural for him to ask his philosophical instructor: Pray sir, are there then no substantial and permanent beings called the sun and the moon, which continue to exist whether we think of them or not?3

The philosopher no longer starts with wonder about the world. Now he wonders about philosophical suggestions. Philosophy is a technical and paradoxical construction that has lost all touch with reality. Hence it should be tested against common sense.

G.E. Moore brings the same attitude to twentieth-century philosophy. He recites a list of obvious beliefs that philosophers have denied:

There exists at present a human body, which is my body … Among the things which have … formed part of its environment … have … been large numbers of other living humans bodies, each of which has, … (a) at some time been born (b) continued to exist for some time after birth (c) been at every moment of its life … , either in contact with or not far from the surface of the earth … 4

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3 Reid, *EIPM*, 299.

Moore goes on with his list of truism. These are all obvious truths that people in common hold. There is no need for further justification; these propositions represent native good judgment. According to Moore, the mere reminder of our certainties shows how absurd sceptical arguments are. And, even though Moore does not cite Reid, one can suspect he is under Reid’s influence. After all, it was written around the time when A.D. Woozley was working on an edition of Thomas Reid’s Essays on the Intellectual Powers of Man, which was published in 1941. Just like Reid, Moore uses our everyday dispositions to attack the scepticism and idealism of his predecessors—in his case, Cambridge neo-Hegelians.

Appealing to common sense was not the only way out: Bertrand Russell turned to logico-linguistic analysis. The linguistic turn also influenced those who would eventually follow Moore, namely ordinary language philosophers. Ludwig Wittgenstein, in his later work, and especially on On Certainty, evoked our background certainties as some kind of criterion in order to explain meaning and understanding. His appeal to our rock bottom certainties is not a straightforward appeal to common sense; in fact, Wittgenstein claims philosophers cannot just defend commonsensical answers on philosophical problems. However they should offer such an analyses of our linguistic terms that would ‘cure us from the temptation to attack common sense. Even though he challenges Moore’s conception of common sense, he too suggests that philosophy should somehow affiliate with common sense. In fact Nicholas Wolterstorff argues that only in the light of On Certainty can one better understand Reid’s appeal to common sense.

While Wittgenstein confronts certain aspects of Moore’s defence of common sense, J.L. Austin explicitly claims Moore is his man. Austin is especially drawn

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9 Austin is said to have declared: “Some like Witters [Wittgenstein], but Moore is my man”. In A. Stroll 2000, 87. However, Wittgenstein’s influence is also apparent in all his work.
to Moore’s analysis of common sense. And even though Moore’s defence only
appears in a couple of papers, Austin evokes common sense throughout his
work. One should note here that probably Moore and Wittgenstein were not
his only influence; Woozley taught in Oxford at the same time that Austin did.
In any case, J.L. Austin is, I think, a true offspring of the tradition of common
sense philosophy as developed in the twentieth century, for he appeals to the
plain man; he straightforwardly asks “what he would say and what he would mean
by it and why”.\(^\text{10}\) Philosophers used to misunderstand the folk; in fact these
misconceptions are the main source of philosophical perplexity. For example:

It is clearly implied [i.e. philosophers clearly imply], … that the
ordinary man believes that he perceives material things … But does the
ordinary man believe that what he perceives is (always) something like
furniture …? We may think, for instance, of people, people’s voices,
rivers, mountains, flames, rainbows, shadows,…—all of which people
say that they see or … hear or smell … it would surely never have
occurred to anybody to try to represent as some single kind of things
the things which the ordinary man says that he ‘perceives’. (SS, 7–8)

Just like Reid, Austin now appeals to folk dispositions; philosophers often
distort our everyday perception of things; and it is important that he corrects
such distortions. Austin and Reid, then, both try to scan our pre-theoretical
dispositions and use them as a norm:

(a) Common sense will correct philosophical misconceptions:

Let us suppose for a moment that it is the real table that we see: must
not this real table seem to diminish as we remove farther from it? It is
demonstrable that it must. How then can this apparent diminution be
an argument that it is not a real table? (IHM, 304)

… then, the familiar case of the stick in water. … Does anyone suppose
that if something is straight, then it jolly well has to look straight at all
times and in all circumstances? Obviously no one seriously supposes
this. So what mess are we supposed to get into here, what is the
difficulty? (SS, 29)

\(^{10}\) J.L. Austin, Philosophical Papers (Oxford, 1979; hereafter: PP). This phrase is from
his 1956 paper ‘A Plea for Excuses’, 181–182. See also: Austin, Sense and Sensibilia
(b) Common sense will also regulate the philosophical use of language:

To say that an object which I see ... makes an impression in my mind, is not ... good English ... (EIPM, 254)

... it is quite plain that the philosophers' use of 'directly perceive', whatever it may be, is not the ordinary, or any familiar, use ... (SS, 19)

And finally

(c) common sense will assess the reasoning patterns of philosophy and the legitimacy of philosophical investigation in general:

Men are often led into error by the love of simplicity, which disposes us to reduce things to few principles, and to conceive a greater simplicity in nature than there really is. (IHM, 470)

... over-simplification, schematisation, and constant obsessive repetition of the same small range of jejune 'examples' are ... far too common to be dismissed as an occasional weakness of philosophers. The fact is, ... that our ordinary words are much subtler in their uses, and mark many more distinctions, than philosophers have realized ... (SS, 3)

Both Reid and Austin accompany their appeal to common sense with sarcasm against philosophy. For it is just absurd to deny common sense. Austin's appeal however is a renewed version because of the emphasis on language. The philosopher no longer evokes foggy commonsensical intuitions for he is able to point to more stable data: linguistic usage.¹¹ Language provides a tool by which we can get to common sense. Commonsensical beliefs manifest themselves in ordinary language distinctions and descriptions. Language guides us all to say the appropriate thing in this or that context and thus can help the philosopher detect common sense, thus providing us with safer data.

Today's 'experimentalists' build on Austin's ideas. They perform experiments in order to discover what the folk would really say in a given circumstance. They design questionnaires that describe some hypothetical story (a thought experiment). Using this story as a stimulator, they ask laypersons about

knowledge, reference, free will, and so on. They claim this allows them to describe how plain people understand that very topic.\(^{12}\) They then use such studies to detect the philosophical errors of the past, and Austin is indeed mentioned as an ancestor of experimental philosophy,\(^{13}\) since, after all, he proposed collecting ‘experimental data’ in philosophy (PP, 274).\(^{14}\)

I am not going to get into the details of experiments here, nor debate their significance. But I need to note that experimental philosophy is not a homogeneous movement.\(^{15}\) I will try though, to limit myself to observations that do apply to most experimental studies. Besides, what interests me is the rationale behind their method. And most experimental studies, following Reid, Moore and Austin defend common sense against philosophy. For they use the same pattern: first they use a thought experiment to ask a question regarding a philosophical problem; then they set folk intuitions against philosophers’ intuitions; finally they use the dispositions of the folk to criticise philosophers who thought otherwise.

They too believe that philosophers have misconceived the folk. A vast variety of experiments show exactly this: philosophers have supposed that a certain belief is intuitive (say, incompatibilism). However experimental studies show that it is not the case, for most folk are compatibilists and see no problem with ascribing blame or praise in a deterministic world.\(^{16}\) Such philosophical misconceptions are the source of philosophical problems, together with philosophers peculiar reasoning strategies. Thus one should first focus on common sense. After all,

\[\ldots\text{ a theory }\ldots\text{ that accords with those intuitions relevant to things we care about, }\ldots, \text{ has, all else being equal, a theoretical advantage over a theory that demands revision or elimination of such intuitions.}\]  \(^{17}\)

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15 For the different aims of experimental philosophers, see: Knobe & Nichols 2008b; Alexander & Weinberg 2007. For some criticism of experimental philosophy see: Knobe & Nichols 2008a&b; Gasparatou 2010a; Gasparatou 2008. For their difference with Austin’s project see Gasparatou 2010b.
16 See for example Nahmias et al 2008.
...if a philosophical theory does turn out to be privileged by the endorsement of the folk, that would seem to position the burden of proof on the shoulders of those who argue contrary to folk intuitions. \(^{18}\)

For…

When we come to be instructed by philosophers, we must bring the old light of common sense along with us, and by it judge of the new light that the philosopher communicates to us. But when we are required to put out the old light altogether, that we may follow the new, we have reason to be on our guard. (EIPM, 224)

Reid, Austin and many experimentalists seem to agree: when a theory accords with laypersons’ intuitions, it is privileged. The burden of proof is always on the theory that contradicts common sense. \(^{19}\) The ordinary, the folk or the vulgar, as Reid writes—that is the pre-theoretical—is the criterion by which to measure philosophy.

**The philosophical burden of common sense**

So far I have tried to show that Reid, Austin and many of today’s experimental philosophers defend common sense as a norm; a norm that can keep philosophy on the right track. Oddly enough, none of the above writers defines common sense sufficiently. Following Wolterstorff, I suggest that they all defend *the vast variety of propositions, beliefs, practices & reasoning habits that normal adults take for granted*. Such an understanding of common sense justifies why it is impossible to give a clear definition of the term; or even a complete list of commonsensical truisms. Most of the time we hardly ever think about the things we take for granted; they are never explicitly taught; sometimes not even realised. \(^{20}\) This also explains why the philosopher has to work hard to unravel

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\(^{19}\) See also Wolterstorff 2001, 247.

\(^{20}\) Wolterstorff, *Thomas Reid and the Story of Epistemology*, 215 – 50: his account incorporates the insights of both Gregory and Somerville, who argue that common sense refers to *practical reasoning*, to an adequate handling of the everyday-life situations (see Gregory, ‘Philosophy and Common Sense’, *The Philosophical Review*, 29:6 (1920), 530–46), or to
them. Wolterstorff analyses Reid’s account of common sense and compares it with Wittgenstein’s but suggests two major differences between them: first, Wittgenstein seems to focus on everyday practices that are taken for granted, while hesitating to speak of beliefs or propositions; and second, Wittgenstein is very reluctant to evoke human nature. None of these reservations can one find in Austin or the experimentalists.

However, the question is whether philosophers’ appeal to common sense is a true appeal to the pre-philosophical dispositions of the folk. Do philosophers just evoke the things we take for granted? I suggest that after all these centuries of evoking it, philosophers’ common sense has become a technical term that carries certain meta-philosophical burden. Here I will limit myself to two very general meta-philosophical symptoms: pragmatism and naturalism.

**Pragmatism**

First, a pragmatistic element is apparent. Pragmatism holds that beliefs or theories are to be assessed by their functionality or their successful application within the existing social, historical and linguistic context. Any of these appeals to common sense involves a form of pragmatism. A philosophical theory should comply with the era’s background. One cannot step outside of our dispositions and talk about truth, knowledge and so forth with absolute or general terms; such an endeavour would not even make sense. Thus, context becomes the yardstick. Whatever works within our current worldview is to be privileged.

The emphasis in the context is also apparent in Reid and Austin’s view of language. Reid’s social acts or Austin’s speech acts associate language with our social practices. Experimentalists imply a similar view. They do the fieldwork Austin proposed: they describe a hypothetical circumstance and then ask the folk what they would say. Putting Austin’s proposal in practice shows they also share the theory behind it. Experimentalists (or at least some of them) suggest that folk reports have some kind of uniformity (at least within a certain cultural group); they suppose then, that there are some (uniform) background

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21 See A. Burkhardt, *Speech Acts, Meaning and Intentions* (Berlin, 1990), 29–31. According to him, Reid’s social acts (some kinds of utterances such as promises, warnings etc) are the forefather of Austin’s speech acts.

22 S. Stich experiments in order to show that this is not the case for different cultural groups; different cultures share different norms. His attitude however, again shows
certainties involved. And that the story described puts those background certainties to work and prescribes what to say. All experimental studies depend on how sufficient the story is, which is why they try many versions of the same thought experiment. The outcome is that context is again the yardstick.

This view of language complies with the more general pragmatistic view that any theory or belief system fits its historical or cultural background. This is why common sense becomes a criterion in the first place.

**Naturalism.**
However, there is also a second metaphilosophical implication in common sense philosophies: naturalism. The first naturalistic element becomes apparent when we ask a question I’ve put off till now: *why* should we trust common sense? Where does its authority derive from? Reid will first answer: We trust common sense because it is the natural thing to do:

> Men need not be taught them [the principles of common sense] … the constitution of our nature leads us to believe them … (*EIPM*, 230)

> [the] Principles [of common sense] … irresistibly govern the belief and conduct of all mankind in the common concerns of life…Such principles are older and of more authority than philosophy: she rests upon them as her basis, not they upon her … (*EIPM*, 102)

Here Austin picks up:

> …our common stock of words embodies all the distinctions men have found worth drawing, and the connexions they have found worth marking, in the lifetimes of many generations: these surely are likely to be more numerous, more sound, since they have stood up to the long test of the survival of the fittest, and more subtle, at least in all ordinary and reasonably practical matters, than any that you or I are likely to think up in our armchairs of an afternoon—the most favoured alternative method. (*PP*, 181–2)

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These concepts will have evolved over a long time: that is, they will have faced the test of practical use, of continual hard cases better than their vanished rivals. (PP, 274)

So, it starts out as a soft naturalism, to use Strawson’s term. For Reid it is our nature that ties us down to certain beliefs; we cannot help it. But this soft naturalistic element gets much harder in Austin: in the quotes above he talks about the long test of the survival of the fittest, about evolution and vanished rivals. The terms Austin chooses clearly come from evolution theory. Many naturalists today appeal to our nature; and they use an evolutionary argument to defend our cognitive powers. In fact, the appeal to evolution is a strong cue for naturalism. D. Dennett, R. Millikan, H. Kornblith (among many) use versions of this argument to justify our reasoning skills. Roughly, they propose that our cognitive systems, sometimes including our linguistic capacities and usage, are the product of evolution, and, as such, they represent the world sufficiently, for we would not have survived if our representations were completely wrong.

In 1951 Austin produced a linguistic version of this argument. The commonsensical descriptions of ordinary language are adequate because they have survived the natural evolution test. Common sense is reliable; if it weren’t reliable, it wouldn’t have survived (and perhaps we too would have vanished together). This does not mean that common sense is incorrigible however; even Reid accepts we might be ‘required to put out the old light altogether, that we may follow the new…’ (EIPM, 224). So there is always a chance that some commonsensical disposition might need revision. Experimentalists too admit that the folk are not always right. In fact, some of our beliefs and intuitions may need modification or even elimination. They explain why their project can help here too. Knobe and Nichols in their ‘Experimental

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23 See P.F. Strawson, _Scepticism and Naturalism: Some Varieties_ (London, 1985). Strawson ascribes soft naturalism to Hume and Wittgenstein. It however can also be ascribed to Reid (bringing him again close to Wittgenstein).


Philosophy Manifesto’ propose that, in order to test or revise folk intuitions, one should get to know those intuitions first, as do Nahmias et al.:

…certain theories…may require us to revise some, but not all, of our current concepts, beliefs, and practices…But in order to know whether a particular theory demands revision (or even elimination) of our concepts, beliefs, or practices, we have to know what these are.

Certainly…ordinary language is not the last word: in principle it can everywhere be supplemented and improved upon and superseded. Only remember, it is the first word. (Austin, PP, 184)

Now accepting the fallibility of our knowledge claims can also be regarded as a naturalistic cue. Austin too struggles with it at length. In his work this struggle is also accompanied with explicit scepticism about the analytic-synthetic distinction. In his 1940 paper, “The meaning of a word” (PP, 55–76), he debates the definition of an analytic sentence: ‘x is y’ is said to be analytic if y is part of the meaning of x. This definition does not satisfy Austin:

Clearly, we suppose, y must be either a part of the meaning of x, or not any part of it. And, if y is a part of the meaning of x, to say ‘x is not y’ will be self-contradictory: while if it is not a part of the meaning of x, to say ‘x is not y’ will present no difficulty—such a state of affairs will be readily conceivable’. This seems to be the merest common sense. And no doubt it would be the merest common sense if ‘meanings’ were things in some ordinary sense, which contained parts in some ordinary sense. But they are not. (PP, 61, Austin’s italics)

Austin denies that this is a helpful definition. He goes on arguing that it is impossible to give any adequate definition of either analytic or synthetic. One cannot classify any sentence as true or false based solely on its meaning (PP, 62–69). When we talk about the analytic- synthetic distinction, we are, according to Austin, ‘using an old working-model, which fails to fit the facts that we really wish to talk about’ (PP, 63). A sentence makes sense or not, depending on its use in context (PP, 64–5). All other ways of classifying and evaluating sentences are bogus. What is more, any change in the world or in our theories

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26 Knobe and Nichols, Experimental Philosophy, 10.
27 Nahmias et al., Philosophical Psychology, 18:5 (2005), 577.
about the world can change what it makes sense to say (PP, 67), meaning that nothing is exempt from revision.

Austin clearly has trouble with the analytic-synthetic distinction. And this would imply that Austin sees philosophy as continuous with science. Indeed he seems to believe that science can help address philosophical problems:

In the history of human inquiry philosophy has the place of an initial central sun … from time to time it throws off some portion of itself to take station as a science … This happened long ago at the birth of mathematics and again at the birth of physics … only in the last century we have witnessed the same process once again … in the birth of the science of mathematical logic … Is it not possible that the next century may see the birth, through the joined labours of philosophers, grammarians and numerous other students of language, of a true and comprehensive science of language? Then we shall have rid ourselves of one more part of philosophy … in the only way we ever get rid of philosophy, by kicking it upstairs. (PP, 232, Austin's italics)

Science could take over and answer philosophical questions. Rather than sitting on our armchairs and fabricating principles then, we should go out and examine our common stock of words (PP, 182–3). We will find out more about our cognition if we study our current ways of understanding. Scientific methodology will help. With this in mind, Austin proposes his ‘laboratory philosophy’. This is a term used by J.O. Urmson (1967) who informed us that Austin had suggested a semi-scientific way to study language. His laboratory team would include native language speakers from different parts of the world. They would focus on a topic, gather all relevant expressions and study them, suggesting examples, distinctions and so on. This is similar to what Austin himself does in many of his Philosophical Papers, such as ‘A Plea for Excuses’ or ‘Ifs and Cans’. Hence he proposes a future science of language and he insists on actual ‘field work in philosophy’ (PP, 183).

Austin proposed a scientific methodology for philosophy; today experimentalists practice it. Such a methodological proposal only makes sense if one sees philosophy as the study of our current cognitive skills. Description then equals prescription. Austin and experimentalists share this view and in a way so did Reid. 28 Reid claimed that philosophy should describe common

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sense so that it does not fall into absurdity. Austin turns to language as a more adequate tool in order to collect commonsensical data. Today experimentalists use questionnaires and statistics for even harder data. Description is the key for the investigation and improvement of our cognition. We should not look for ideal epistemic principles; rather we should examine and refine of our everyday reasoning practices. This is one more naturalistic cue that we meet in the philosophies of common sense.

**Conclusion**

It seems then that philosophical theses have entered common sense. However, if common sense starts bringing philosophical connotations along with it, it cannot deliver what was bargained for. Common sense supposedly derives its authority from all kinds of propositions we take for granted. If we impose philosophical views on it, it loses such an authority.

One should admit that both pragmatism and naturalism are very vague terms. However, the ideas lying behind those appeals to common sense, whatever one may call them, are strong theoretical views about the accepted methods, the accepted questions and the accepted answers of philosophy. The plea for common sense emphases our natural reasoning capacities. Such an idea is in line with the belief that there cannot be any absolute or general view of the world. Our natural, historical, cultural, social background becomes the angle by which we see the world. Our worldview is reliable, yet fallible. We must describe it in order to refine it. These are all philosophical claims. Here I have not tried to debate them. My only suggestion is this: the moment philosophy enters common sense, common sense, by definition, is no longer commonsensical. Common sense philosophies supposedly evoke the things common folk take for granted. This commonsensical cortex of beliefs is the privileged one; the natural one; the one that survived; the adequate, the subtle, the rich; the functional; the one that expresses our worldview; the one that puts the burden of proof to the opposing team. Thus we can set them against philosophy.

However, it is far from commonsensical to attach all these descriptions and all these expectations to the stuff we take for granted. When Reid chose common sense as a yardstick, certain metaphilosophical phantoms slipped in. And every such appeal made them stronger. At least some sort of pragmatism and some variety of naturalism is evident in Austin and the experimentalists and probably to most of today’s appeals to common sense. After all theses
years, the term no longer refers to the everyday beliefs and dispositions of the folk. Thus it cannot be used as a criterion that could judge philosophy from the outside. None of the implications it brings are simply commonsensical; nor can they be justified by appealing to common sense. Reid’s vulgar; Austin’s plain man; experimentalists’ folk; none of them would hardly care about the methods, the questions or the theories of philosophy whatsoever. In fact, the very idea of looking for a criterion can in any case only be a theoretical proposal. Philosophers’ use of common sense as a philosophical norm was paradoxical from the beginning because it gave rise to a philosophical construction of common sense.

University of Patras
Reid’s Theory of Language

David E. Alexander

Reid’s analysis of the origin and subsequent developments of language are given in his *An Inquiry into the Human Mind on the Principles of Common Sense*. Reid presents an argument for the naturalness or innateness of language that is both profound and interestingly connected to some of Reid’s main themes in his philosophy of perception. In the first section of the paper I present Reid’s argument for the naturalness of language and attempt to elucidate some of the notions Reid employs in connection with his argument. In the second section I turn to the views of Rom Harre and Daniel N. Robinson. These authors argue that Reid’s notion of a natural language is non-linguistic. In particular, Harre and Robinson argue that Reid’s notion of the naturalness of language has much more in common with a Wittgensteinian understanding of the origins of language in terms of life forms than with a Fodorian understanding of the origins of language. I argue that according to Reid a natural language is linguistic. In particular, I argue that the only way to defend Harre and Robinson’s thesis is to neglect the similarities between Reid’s account of language and his account of perception. Given the similarities between the two, the Harre and Robinson thesis is untenable. Hence, Reid’s theory of the origins of language is much closer to a Fodorian account than Harre and Robinson would have us believe.

However, a potential motivation for the Harre-Robinson thesis may be to save Reid from the private language argument. Hence, showing that the Harre-Robinson thesis is wrong leaves Reid open to this argument. In the final two sections of the paper I attempt explicitly to make the connection between Reid’s account of language and Fodor’s account of a language of thought. After drawing this connection I will present Fodor’s reasons for thinking that his theory of language does not succumb to the private language argument and point out that the Reidian may adopt the same strategy.
Reid’s Argument for the Innateness of Language

The conclusion that Reid hopes to establish is that language is not, contrary to the common opinion ‘an invention of men’. Rather he seeks to show that ‘… there must be a natural language before any artificial language can be invented’.1 By natural language Reid clearly means a language possessed by all humans, a universal language of sorts, with all the properties sufficient for the development of artificial language. By artificial language Reid simply means what we refer to as natural languages; that is, spoken languages such as English, French and German. The essential feature of an artificial language, as with artificial signs, is that they ‘… have no meaning, but what is affixed to them by compact or agreement among those who use them … ’ (ibid.). The essential feature of natural language is that is has ‘… previous to all compact or agreement, a meaning which every man understands by the principles of his nature’ (ibid.). Thus, communication via language comes in two forms. First, we may communicate our thoughts by natural signs and, second, we may communicate our thoughts by artificial signs.

An important feature of both natural and artificial signs is that both have meaning or more broadly both have an obvious semantic element. As such, assuming that the natural language has more than one sign (and that the various signs can interact) it would seem to follow that the natural language has syntax as well.2 Hence, both artificial and natural languages have a semantics and syntax.

Reid’s argument for the innateness of language proceeds on the (plausible) assumption that artificial language is actual. Given the actuality of artificial language, Reid attempts to show that there is a relation of strict dependence between artificial language and natural language, such that the former strictly depends on the latter. I distinguish strict or strong dependence from simple or weak dependence in the following way:

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2 This would seem to follow if, for example, the natural language has two signs, S and S*, that can interact in various ways (that is, be combined in various ways), where S and S* have different semantic content. S and S* will have, it seems, a structure unique to each and a structure cover their possible combinations, both licit and illicit. This is necessary in order to make sense of the assumption that S and S* have different semantic content.
Simple or Weak Dependence: \( x \) is dependent on \( y \) iff had \( y \) been absent and all other sufficient bases been absent \( x \) would have been absent.

Thus, this is not to say that \( x \) is possible only if \( y \) exists. For \( x \) may be actualized if \( y' \) exists. Strict dependence can then be rendered as follows:

Strict or Strong Dependence: \( x \) is strictly dependent on \( y \) iff had \( y \) been absent \( x \) would have been absent.

Thus, \( x \) cannot exist without \( y \). There are no other sufficient bases for \( x \).

Reid maintains that artificial language is strictly dependent on natural language. He states, ‘… natural language is scanty, compared with artificial; but without the former, we could not possess the latter’.\(^3\) Thus, artificial language cannot exist without natural language.

We are now in a position to present his argument. He writes:

… I think it demonstrable, that if mankind had not a natural language, they could never have invented an artificial one by their reason and ingenuity. For all artificial language supposes some compact or agreement to affix a certain meaning to certain signs; therefore there must be compacts or agreements before the use of artificial signs; but there can be no compact or agreement without signs, nor without language; and therefore there must be a natural language before any artificial language can be invented.\(^4\)

Reid’s argument amounts to the following:

1. All artificial language strictly depends on compacts to assign meanings to signs.
2. Hence, compacts are metaphysically and temporally more basic than artificial language.
3. All compacts strictly depend on signs and language.
4. Hence, signs and language are metaphysically and temporally more basic than compacts.
5. Hence, signs and language are metaphysically and temporally more basic than artificial language.

\(^3\) Ibid., VI.xxiv 
\(^4\) Ibid., 51
6. Since there must be signs and language more basic than artificial language, there must be a natural language.

The reasoning behind premise three is straightforward and may be captured with the following reductio of the contradictory position (i.e. there is a compact that does not depend on signs and language).

1. Assume that there is a compact that does not depend on signs and language.
2. Artificial language strictly depends on compacts.
3. If artificial language strictly depends on compacts and there is a compact that does not depend on signs and language, then that compact must be artificial as well.
4. But if compacts are artificial, then compacts depend on artificial language and artificial language strictly depends on compacts, which is viciously circular.
5. Hence, it’s false that there is a compact that does not depend on signs and language.
6. Hence, all compacts strictly depend on signs and language.

I will not attempt to examine the soundness of the above arguments, since my present interest is in understanding the significance that should be placed on the conclusion of the main argument. What did Reid have in mind when we argued that there must be a natural language, given the presence of an artificial one? In the next section I will present and critique the recent views of Harre and Robinson on the nature of natural language in Reid’s thought.

The Similarity between Natural and Artificial Signs

In ‘What Makes Language Possible? Ethological Foundationalism in Reid and Wittgenstein’, Rom Harre and Daniel N. Robinson seek to establish a similarity in the thought of Wittgenstein and Reid concerning language. As they develop their argument they attempt to establish that the inhomogeneity principle (IP) is applicable to Reid’s theory of language. IP states that

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foundations for something of type X are non-X. For example, IP, when applied to epistemology, states that the foundations for justification of belief in some proposition ultimately must end in something non-propositional. IP stops familiar regress problems. These authors believe that Reid (and Wittgenstein) employ something like IP when arguing for the thesis that artificial language cannot depend on artificial language. Hence, as I have characterized things, Reid’s attempt to show that artificial language strictly depends on natural language, must be understood, according to Harre and Robinson, as equivalent to saying that artificial language depends on something non-linguistic in character. They write:

Reid’s expression ‘natural language’ was intended not to convey something ‘linguistic’ as such but the very scaffolding on which artificial signs could be practically arranged and supported. For Reid, not every natural process is foundational for language. Rather, of the many natural or constitutive features of human creatures, there are some—and only some capable of expressing what Reid called ‘… the thoughts, purposes, and dispositions of the mind.’ To a first approximation he identified ‘… the features of the face, the modulation of the voice, and the motion and attitude of the body’ as among the chief means by which mutual influence and joint action become possible; the means by which the very conventions on which linguistic meaning depends can be brought about.

Thus, the class of artificial signs includes things like words whose meaning is given through compact or agreement, gestures whose meaning is given by compact or agreement and the like. The pivotal question is whether or not in the class of natural signs we find words or anything word-like or only gestures. If IP is to be appropriately applied to Reid’s thinking here, then linguistic entities cannot be amongst the natural signs. This is the thesis that Harre and Robinson offer.

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6 Ibid., 498
7 Below I seek a motivation for attributing IP to Reid by pointing out that without IP Reid seems to be endorsing a strong private language. The authors take Wittgenstein’s private language argument to be sound. Hence, the application of IP safeguards Reid’s theory of language from this argument.
8 Ibid., 498
Reid and IP

Does Reid include linguistic-like entities amongst the class of natural signs? Reid writes, ‘It appears evident from what hath been said on the subject of language That there are natural signs, as well as artificial; and particularly, That the thoughts, purposes, and dispositions of the mind, have their natural signs in the features of the face, the modulation of the voice, and the motion and attitude of the body’ (Inquiry, V.iii). Prima facie, it appears as though Reid does not make room for linguistic-like entities amongst the class of natural signs. Yet this is premature. Reid goes on to suggest that there are three separate types of natural signs. ‘The first class of natural signs comprehends those whose connection with the thing signified is established by nature, but discovered only by experience’ (ibid). So, the sign and the thing signified are connected by a principle of nature, but we come to know such a connection only by way of experience. For example, smoke is a sign of fire. Yet, the connection between the particular sign (smoke) and the particular thing signified (fire) is not innate. The naturalness of the connection is much more general. A first approximation to the schema of the general connection that is supplied by nature is the following:

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\text{General Connection Necessary for Particular Connections: if } x \text{ is always (or mostly) observed to be conjoined with } y, \text{ then } x \text{ is a sign of } y. \]

Seeing smoke conjoined with fire only once is not sufficient to establish this kind of connection. Multiple instances of smoke conjoined with fire would warrant one to take smoke to be a sign of fire. Without the general connection such an inductive procedure could not get going. As such we will call this type of natural sign ‘inductive natural signs’.

Inductive natural signs allow for the learning of connections between particular signs and particular things signified. This is to be distinguished from Reid’s second class of natural signs. ‘A second class is that wherein the connection between the sign and thing signified, is not only established by nature, but discovered to us by a natural principle, without reasoning or experience’ (ibid). Reid places within this type ‘… the natural signs of human thoughts, purposes, and desires, which have been already mentioned as the natural language of mankind’ (ibid). That Reid notes that we can discover

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9 Hence, Harre’s and Robinson’s use of this passage of Reid’s to defend their claim.
10 See Inquiry, VI.xxiv.
the connection between the sign and the thing signified without reasoning or experience should not be interpreted too rigidly. Rather, he means to contrast this second type with the first type. Thus, where the first type of connection was learned by multiple experiences, this second type is learned or triggered by only one experience. For example, a frown is immediately associated with sadness. All that is required to make this connection is the one experience of frowning.

The connection between the sign and the thing signified in this second class is itself given by nature and hence innate. In contrast to inductive natural signs, where a general connection is natural and particular connections are learned, the second class of natural signs is comprised of particular connections. Thus, this class is much more robust than the first, having as its members each connection between particular sign and particular thing signified, when learning is not involved. Reid writes:

> Our original perceptions, as well as the natural language of human features and gestures, must be resolved into particular principles of the human constitution. Thus, it is by one particular principle of our constitution that certain features express anger; and by another particular principle, that certain features express benevolence. It is in like manner, by one particular principle of our constitution, that a certain sensation signifies hardness in the body which I handle; and it is by another particular principle, that a certain sensation signifies motion in that body (*Inquiry*, VI.xxiv).

We may accordingly call this type of natural sign ‘particular natural signs’, noting that all of the particular natural connections are found within this type.

The third type of natural sign is a bit more complicated than the first two. It is however, connected to the second type of natural sign. Reid writes, ‘A third class of natural signs comprehends those which, though we never before had any notion or conception of the things signified, do suggest it, or conjure it up, as it were, by a natural kind of magic, and at once give us a conception, and create a belief of it’ (ibid). Pretty clearly this third type of natural sign is intimately connected with Reid’s account of perception. With respect to the latter Reid states, ‘… that the perception of an object implies both a conception of its form, and a belief of its present existence. I know moreover, that this belief is not the effect of argumentation and reasoning, it is the immediate effect of my constitution’ (*Inquiry*, VI.xx). The third type
of natural sign is such that the connection between the sign and the thing signified is grounded in a natural principle so that when I conceive of the thing signified I immediately have a belief of it. This is virtually identical to his formulation of perception and so perhaps the connection between the two is more than intimate, but rather one of identity.

The distinctive features of particular natural signs are their being rightly interpreted on the basis of one experience alone and there being numerous instances of this type. The same can be said with respect to this third class. What does distinguish them from particular natural signs is that ‘…we never before had any notion or conception of the thing signified …’ The conception that is present after the right sort of experience is one that was absent before the experience. This is not the case with respect to particular natural signs. For particular natural signs the conception of the thing signified (for example, sadness) is present before the sign (as in frowning). For the third class the conception of the thing signified (for example, hardness) is not present before the sign (as in the relevant sensations).

The above-mentioned difference between particular natural signs and the third class of natural signs, although significant for Reid’s realism, should not overshadow the obvious similarity. Both of these types of natural signs are such that the sign triggers a conception of and belief in the thing signified. As such we will call this third type of natural sign ‘magical particular natural signs’; noting first that the conceptions gained by this type are distinctly different than the signs sufficient to yield them and second that they nevertheless belong as a sub-class of particular natural signs because of the noted similarities.

With respect to the entire class of particular natural signs it is evident that certain experiences simply trigger an interpretation of signs in such a way that the interpretation is itself natural. Hence, Reid places meanings of certain signs squarely within one’s natural constitution. That is, one of the principles of our human constitution is that certain of the meanings of certain signs are built into our nature. This stands in sharp contrast to the thesis proposed by Harre and Robinson. IP is applicable to Reid’s theory of language, according to them, precisely because Reid’s notion of a natural language is not linguistic in the way that artificial language is. However, as we have seen Reid places meanings at the center of his natural sign theory. Meanings are central to artificial language and so this similarity is sufficient to warrant our calling both natural and artificial languages.

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11 Reid explicitly places the conception of a mind and hardness within the third class of natural signs (Inquiry, V iv)
Before turning to a possible motivation for the view of Harre and Robinson it will be instructive to consider one final straw in Reid’s own writings that count against the Harre-Robinson thesis. This should also have the added bonus of helping to further clarify any ambiguities remaining from the above discussion.

As we have shown, magical particular natural signs are a sub-class of particular natural signs. What about artificial signs? How are these connected to natural signs? According to Reid, these are strictly dependent on particular natural signs. So, for example, acquired perception is strictly dependent on original perception, where original perception is perhaps located in magical particular natural signs. Thus, IP does not apply to Reid’s account of perception. The same reasoning can be appropriated to language. Artificial language is strictly dependent, according to Reid, on natural language such that both share certain properties classifying them as language, but differ with respect to the mode of acquisition.

Reid’s own hand makes it clear that just as acquired perception is strictly dependent on and similar to original perception, artificial language is strictly dependent on and similar to natural language. Reid writes, ‘… both [perception and language] are partly natural and original, partly acquired by custom. Our original or natural perceptions are analogous to the natural language of man to man…’ (*Inquiry*, VI.xx). The analogy consists in both possessing signs. Perceptual signs, just as linguistic signs, signify things either by a connection between sign and thing signified that is natural or by a connection that is conventional. Reid writes:

> In the testimony of nature given by the senses, as well as in human testimony given by language, things are signified to us by signs: and in one as well as the other, the mind, either by original principles, or by custom passes from the sign to the conception and belief of the thing signified (*Inquiry*, VI.xxiv).

The analogy between perception and language is so close that if similarities exist between original perception and acquired perception such that both are rightly called perception, the same type of similarity should be found between natural language and artificial language.

Speaking about acquired perception Reid notes that ‘[t]he connection between the sign, and the thing signified, is established by nature: and we discover this connection by experience; but not without the aid of our original
perceptions, or those which we have already acquired’ (ibid). The relevant thing to notice is that in both acquired and original perception there is a connection between sign and thing signified. According to Reid the connection is given by nature. Although with respect to artificial language the connection between sign and thing signified is not given by nature, there is nevertheless the obvious connection. It is simply the connection between sign and thing signified that operates both at the acquired/artificial level and the original/natural level that is enough to show the relevant similarities between each respective level. It is safe to say then that for Reid IP is not applicable either to his theory of perception or to his theory of language.

Reid’s Answer to the Private Language Argument

A motivation for the views of Harre and Robinson is not difficult to find. If IP does not apply to Reid’s theory of language, then to some degree language is innate. But if language is innate, there can be no way of telling whether or not one is using that language accurately. If there is no way of telling whether or not one is using a language accurately, there can be no meaning in that language. Language is meaningful. Hence, the notion that language is innate is false. Harre and Robinson, effectively blunt the force of this objection by claiming that Reid’s theory of language is not committed to the innateness of language. Hence, their view that IP is applicable to Reid’s theory of language. Given that I have shown that they are mistaken in applying IP to Reid’s theory of language the onus is upon me to blunt the force of the conclusion. This is the task to which I now turn.12

Fortunately, Reid is not alone in his insistence on a natural (or innate) language. In *The Language of Thought* Fodor gives reasons for why there must be a natural language and he defends these reasons against none other than the private language argument (and other objections as well).13 Before turning to his defense, and how the Reidian can appropriate it, it will be instructive to see just how close his argument for a language of thought is to Reid’s arguments for a natural language.

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12 I do not mean to suggest that the interpretation of the private language argument presented in this paragraph is the right one or the only one. What I mean to suggest is that the interpretation presented in this paragraph may be the one behind Harre and Robinson’s attempt to make Reid more Wittgensteinian than he actually is.

Fodor systematically argues that if the common or folk psychological theory is at least partially undeniable (and this he thinks is so), then language users must possess an innate language or language of thought (LOT). Let’s first look at why Fodor believes that the folk psychological theory is, at least partially, undeniable.

Fodor believes it is self-evident that some of the behavior of $S$—where $S$ is an organism that thinks—is constituted in part by $S$’s beliefs about its own behavior. He writes, ‘I take it to be self-evident that organisms often believe the behavior they produce to be behavior of a certain kind and that it is often part of the explanation of the way that an organism behaves to advert to the beliefs it has about the kind of behavior it produces’.14 Hence, there is both a first and a third person component to ascriptions of certain kinds of behavior to an organism. If this is so, then, according to Fodor, it follows that the agent has a means of representing his/her behavior to herself. If it did not have such a means of representing, then we must ‘… give up the possibility of explaining the behavior of the agent by reference to his beliefs and preferences’ (31). Hence, in the case of behavior an agent must have a representational system by which he is able to compute over when deciding to perform various actions.

Fodor connects this up with language by noting, ‘… representation presupposes a medium of representation, and there is no symbolization without symbols. In particular, there is no internal representation without an internal language’ (55). Fodor further argues that when learning a language a child must be in possession of something like a language to begin with. He writes, ‘… we have no notion at all of how a first language might be learned that does not come down to some version of hypothesis formation and confirmation’ (58). That is, the learning of a language depends on one’s ability to form hypotheses about correct applications of predicates and on their ability to confirm these hypotheses. But, if one must be able to form hypotheses before one is able to learn a first language, one must have an unlearned or innate language. In a footnote Fodor explains it thus:

There is an analogy between learning a second language on the basis of a first and learning a first language on the basis of an innate endowment. In either case, some previously available representational system must be exploited to formulate the generalizations that structure the system that is being learned. Out of nothing nothing comes.15

14 Ibid., 28.
15 Ibid., fn. 4, 59.
We are now in a position to fully state Fodor’s argument that there must be an innate language. Since his formulation of the argument is perfectly clear I will quote him at length.

Learning a language (including, of course, a first language) involves learning what the predicates of the language mean. Learning what the predicates of a language mean involves learning a determination of the extension of these predicates. Learning a determination of the extension of the predicates involves learning that they fall under certain rules (i.e. truth rule). But one cannot learn that P falls under R unless one has a language in which P and R can be represented. So one cannot learn a language unless one has a language…. But first languages are learned. Hence, at least some cognitive operations are carried out in language other than natural languages.\(^{16}\)

Granting that Fodor is right about what it takes to learn a language, an objector may chime in and reply that it is not the case that learning that P falls under R requires that one has a language in which P and R are represented. At this point we can now see how close Fodor’s and Reid’s theory of language really are. For, according to Reid, this step in the argument has to be true, else a regress or a vicious circle ensues. That P and R must somehow be represented is undeniable. If they are not represented somehow or other, then they cannot be learned. For, on Fodor’s account of things, learning involves hypothesis formation and one cannot form a hypothesis without being able to represent it. On Reid’s account of things learning an artificial language involves acceptance, either implicitly or explicitly, of compacts. But one cannot learn a compact unless one already has a language in which that compact can be represented. According to Reid, if one could not represent the compact in some language, then the compact could not be learned. For, the compact itself, like Fodor’s first learned language, depends on a prior language. The theories advanced, and the arguments deployed, are similar enough so that problems with one will most likely be problems for the other. As we have seen there is, \textit{prima facie}, a problem, namely, the private language argument. If problems for one are problems for the other, then presumably solutions for one are solutions for the other. Fodor has developed a solution to the private language argument. After laying out his solution I will

\(^{16}\) Ibid., 64.
conclude by showing how Reid’s own overall programme fits perfectly with this solution.

Fodor’s Formulation and Solution to the Private Language Argument

Fodor states the problem that the private language argument poses for LOT by first noting that coherent use of language is correspondence between S’s beliefs and S’s words used to express those beliefs. With respect to artificial languages “…this correspondence holds because the speaker knows and adheres to the conventions that govern the language”.17 Fodor goes on to point out,

The kind of private language that Wittgenstein envisages departs from this paradigm insofar as the relation between linguistic forms and propositional attitudes is not mediated by public conventions. The challenge that the private language argument poses to the notion of a language of thought is, therefore this: Show how such a relation could be mediated by something other than public conventions.18

In sum there is a relation between language and propositional attitudes that can be accounted for in the case of natural languages. The speaker adopts the conventions. This is straightforward. But what is the relation between language and propositional attitudes when the language is itself innate? Clearly, the speaker cannot choose to adopt the innate language. If the speaker could, then why posit the innate language at all? It is this fact that the speaker cannot adopt LOT—that is in need of explanation.

Fodor first illustrates that on any computational theory there will be causal laws at the base, which explain the behavioral output. In the case of psychological explanations the causal laws at the base19 of the organism will explain its “cognitive states and, particularly, its propositional attitudes.”20 Fodor then outlines three conditions that bear upon deciding which computational processes are to be ascribed to organisms. For the purpose of deflating the

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17 Ibid., 72.
18 Ibid., 73.
19 The base on Fodor’s account is physical. I assume that a Reidian could appropriate much of Fodor’s account without forfeiting his dualism.
20 Ibid., 75.
private language argument the most important condition is the third. ‘Finally, and this is the important one, that for any propositional attitude of the organism … there will be a corresponding computational relation between the organism and some formula (e) of the internal code such that (the organism has the propositional attitude iff the organism is in that relation) is nomologically necessary’ (75). On this characterization the salient difference between adhering to conventions of the natural language and adhering to the private language is that the former is nomologically contingent, whereas the latter is nomologically necessary. With respect to the former, the speaker adheres to the conventions because of place of birth, language taught and so forth. In the case of the latter, the speaker ‘adheres’ to the private language because she ‘…is presumably determined by the innate structure of the nervous system’.21 Both kinds of relations have the characteristic representational element.

In the case of a speaker’s adherence to the conventions of some language, Fodor suggests that something like condition C is present.

\[ C. \text{ (S uses } [a \text{ is } F] \text{ to represent } a’s \text{ being } F) \text{ just in case } ((S \text{ believes that } a \text{ is } F \text{ just in case } S \text{ assents to } [a \text{ is } F]) \text{ is conventional}). \]

The differences between condition \( C \) and the condition describing S’s use of a private language is (a) ‘assent to’ is replaced by a sequence of one or more of the basic relations from which computational relations to internal formulae are constructed and (b) ‘is conventional’ is replaced by ‘is nomologically necessary’.22 That concludes Fodor’s way out of the private language argument. It appears that a great deal of work is being done by Fodor’s insistence that the private language is nomologically necessary. That is, it is a part of the constitution of the organism. Without such a constitution the organism would not be able to learn a first language.

It should be relatively clear how a Reidian can appropriate Fodor’s response to the private language argument. In fact Fodor’s response seems to be an instance of Reid’s overall programme. We may summarize that overall programme as stating that there are certain principles of human nature such that these principles enable humans to live and know.23 In other words, humans are so constituted that the deliverances of perception, reason, moral thinking, and so on, generally are correct or correspond to reality. Thus, where common

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21 Ibid., 78.
22 Ibid., 78
23 See Reid’s abstract of the Inquiry, 257–62.
sense is genuinely threatened, Reid’s programme comes to its aid by positing a principle of human constitution. If Fodor and Reid are right in thinking that either we must posit a representational system within agents or do without folk psychology, then, according to Reid, we must posit a representational system. For, doing without folk psychology is as offensive to him as it is to Fodor, and as it is to common sense. Furthermore, such positing is buttressed by Reid’s introduction of a principle of the constitution of human nature. Without such a principle, folk psychology and common sense perish. I take it that the relevant principle for Reid is quite similar to the nomologically necessary one posited by Fodor.24

Fodor cites as the main difference between a public language and a private one the fact that in the case of the private language the computations over it will be necessitated nomologically by the physical constitution of its nervous system. It is precisely at this point that Reid would introduce a principle of human constitution. Humans are so constituted, according to Reid, that they possess an innate language. We have seen that positing an innate language is necessary in order to vindicate common sense.

Huntington University

24 Inquiry, 261.
First principles in mathematics as data and as vincula:  
A critique of Thomas Reid by Dugald Stewart

Claire Etchegaray

The Scottish Common Sense School was keen to draw an analogy between mathematics as a system and the general logics of the mind. It did so in order to understand what the evidence of judgment and of reasoning consist in. That is a feature by which, according to Richard Olson, the Common Sense School ‘diverged from its Baconian foundations to adopt an almost Cartesian stance’, presumably under the influence of ‘the great emphasis placed on the axiomatic basis of mathematics by Euclid’ brought to the fore through the English translation of the Elements by Robert Simson (published in 1756) as well as his works on Greek geometry. Thus, at the beginning of the First Essay on the Intellectual Powers of Man, Reid credited mathematicians for ‘having had the wisdom to define accurately the terms they use, and to lay down, as axioms, the first principles on which their reasoning is grounded’. He wished to do the same in the philosophy of the mind, by clarifying basic terms and laying down the proper principles in the many different domains of reasoning. Given that the philosophy of common sense aimed at accounting for mental operations in each domain, one of the issues it had to address was mathematical reasoning. Thus, a leading thread can be noticed, that goes from mathematics (especially Euclid’s Elements) to common sense principles, and then from common sense psychology and the logics of the mind to mathematical reasoning again.

Dugald Stewart was well aware of the issues that derived from this give-and-take, and he devoted quite a lot of work to understanding its merits and its limits. According to him, the theory of mathematical reasoning which was a part of a philosophy of the mind, the latter being inspired by a mathematical

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3 D. Brookes (ed), Thomas Reid, Essays on the Intellectual Powers of Man (Edinburgh, 2002), First Essay, chapter 1, 17. In this article, the reference will be abridged in the following way: IP, I.1 B 17.
model, should have been more cautious in the conception of ‘principles’ and ‘axioms’. It is in this context that he developed an original and searching critique of Reid’s thought.

Stewart identifies an ambiguity in the Reidean concept of ‘first principles’ which, according to him, leads to an unsatisfactory account of mathematical evidence. In doing so, he brings forward the issue of foundations in mathematics in a very different way than Reid’s, and opens the way for further considerations on systematical axiomatisation later in the nineteenth century. First principles were indeed for Reid the source of evidence of the judgment. He focused on the question of mathematical foundation by analyzing the evidence upon which reasoning is founded; in other words, he was interested in the warrant of mathematical assent. With Stewart, we move from this question to the following one: how must the body of mathematical science be framed? Stewart focuses on systematical foundation and not only on psychological foundation, because he requires a distinction between first principles as elemental truth which are taken for granted, but not sufficient to infer some specific conclusions, and first principles as first data which have to define the objects of the subsequent reasonings.

This critique is but one of the pieces of Stewart’s general attack against the widespread view that the principle of identity is the only foundation of mathematics. Dealing with mathematical demonstration, in the second volume of the Elements, Stewart indeed criticizes the theory, which according to him is commonly received since Leibniz, that ‘all mathematical evidence ultimately resolves into the perception of identity’. He thinks that this thesis (I shall call it MI) leads to skepticism in mathematics and consequently, as mathematical evidence was traditionally regarded as the highest kind of evidence, to an even more radical skepticism. If (MI) is right, he argues, then mathematical judgment would be tautologic or nugatory, and mathematical reasoning would fail to make us discover any unknown properties. Stewart

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4 Dugald Stewart’s father, Matthew Stewart, was Simson’s student and friend. Matthew Stewart was Professor in Mathematics in the University of Edinburgh, although at the end of his career (from 1773 to 1785) a severe illness constrained him to be supplied by his son. So Dugald Stewart’s reflexion on mathematics is not from a distance. His background includes the practice of his father, that of his friend John Playfair, as well as his own practice as a teacher in mathematics.

5 Elements of the Philosophy of the Human Mind, Second volume (1814), Part II, ch. 2, section 3, article 2 (in Sir William Hamilton (ed.), The Collected Works of Dugald Stewart (Edinburgh, 1854), 123. In this article, this reference will be noted: Elements, Vol. 2 (1814), II.ii.3–2, 123.
quotes the end of Diderot’s *Letter on the Blind* as the paramount of the sceptical argument:

Put the question to any candid mathematician, and he will acknowledge, that all mathematical propositions are merely identical; and that the numberless volumes written (for example) on the circle, only repeat over a hundred thousand forms, that it is a figure in which all the straight lines drawn from the centre to the circumference are equal.  

Reid on mathematical knowledge

Actually, Reid did hold that trifling truth is not qualified to be knowledge. In a Lockean way, he demanded in the Sixth Essay, that axioms should be distinguished from trifling propositions. Axioms are characterized by self-evidence, and dignity and utility as well, while identical propositions are so ‘trifling’ and so ‘surfeited by truth’ that ‘no knowledge can be derived from them’. Reid subscribed to Locke’s opposition to the view that ‘all our knowledge is derived from these two maxims, to wit, whatever is, is; and it is impossible for the same thing to be, and not to be’. Besides, in Reid’s view, evidence of reasoning must not be reduced to axiomatic evidence. The latter is the ground of assent to propositions believed as soon as understood; the former is the ground of assent to conclusions drawn from these already known and believed propositions (properly called reasons or premises). Therefore, according to Reid, the confusion between an unfruitful syllogism and a proper abstract reasoning has to be avoided. A syllogism only develops in an unfruitful way the axiom of necessary logical truth that ‘what is affirmed of a whole genus, may be affirmed of all the species and individuals belonging to that genus; and that what is denied of the whole genus, may be denied of its species and individuals’. On the contrary, proper abstract reasoning discovers some

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8 *IP*, VI.7 B 521.
9 *A Brief Account of Aristotle’s Logic*, ch. IV, sect. 4, in Alexander Broadie (ed.), *Thomas Reid on Logic, Rhetoric and the Fine Arts* (Edinburgh, 2004), 125. As early as 1753, in an oration delivered in Aberdeen on April, 9, Reid argues that the syllogism is useless in the sciences in general and especially in mathematics. He observes: ‘If
new truth because from mathematical conceptions which are ‘true and adequate’, it deduces some properties inseparable from the nominal essence of the mathematical objects conceived. ‘There is nothing belonging to a plane triangle which is not comprehended in this conception of it, or deducible from it by a just reasoning’.10

Indeed mathematical truths can be learned because the application of this genus-axiom makes us conceive properties which we did not conceive before, although they are inseparable from the nominal essence of the object conceived.

As is well known, although Reid attacks the ‘way of ideas’ regarding judgment and reasoning about existential or contingent things, he admits Locke’s theory of abstract reasoning provided that ‘ideas’ be only acts of conception and not mental objects of conception. Indeed the only real objects of mathematical conceptions (or ideas), according to Reid, are the primary qualities of things: extension, figure, movement (and, we might perhaps add, duration)11. More accurately, mathematical conceptions are universals, which are formed by abstraction. We perceive such and such extensions, such and such figures; and though they are never perfectly circular or triangular, we are able to form general conceptions joined to a general word (‘circle’, ‘triangle’, and so on) as its sign. As mathematical judgment is ontologically neutral, its truth depends only on connections between the notions that are implied. Note that Reid accounts for the origin of the idea of number in accordance with this thesis. A number is a conception needed to compare conceived durations, extensions, and so on. Because of the quantitative nature of the primary qualities, their meson (common measure) is a metron (quantitative standard).12

In any case, this account of mathematical reasoning implies that at the starting point the mathematician may not conceive intuitively of all the properties

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10 IP, IV.1 B 304.
11 IP, II.17 B 203.
12 Cf. IP, III.3 B 259. Reid also notices that (integer) number is not always sufficient to measure agreement or disagreement between primitive qualities. Reid, like other post-empirical philosophers, is aware of the issues entailed by irrational and imaginary numbers; hence he says (in contrast with Hume) that the agreement is evaluated with ratio rather than units (IP, B 546).
which are nonetheless inseparable from the mathematical conception. We might attempt to solve the paradox in distinguishing three ways of conceiving a mathematical object, for instance, a triangle: (a) the conception of nominal essence that is the definition which *de jure* includes every property of the triangle; (b) the conception which is *de facto* limited by nature (that means: by the nature of the constitution of the human mind) but which is *de jure* the conception that every mathematician *should* have, namely: the clear and distinct notion which is correlative to sound judgment and right reasoning;13 (c) the *de facto* conception which is relative to individual skills and understandings, and which *cannot* be a standard in Reid’s view. The first conception (a) is not a transcendent idea: it is a mental act that the mind should accomplish although the limitations due to human finitude preclude its being done immediately. The genus-principle is the means by which we shall be able to have a conception (b) of what is comprehended in the conception (a).14

Although Reid attempted to account for the status of mathematical reasoning as an *informative* application of the genus-principle, Stewart thinks that Reid did not save it from skeptical threats, because he made two major mistakes. First, he did not explain clearly the sense of the word ‘principle’; second he wrongly held that mathematical evidence was intuitive. The next sections are devoted to these pointss.

**Stewart’s discussion of the role of the principle of identity**

Stewart thinks that past philosophers did not realize that the principle of identity was not sufficient because they did not grasp the distinct meanings of the word ‘principle’. Reid in particular entertained the confusion. Past philosophers failed to use properly the meaning of the *principle* of identity, and thence did not pay attention to the systematical requisites of mathematics as

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14 The standard of truth, according to Reid, is not relative understanding but necessary conception, for objective meanings of the conception of the subject and the conception of attribute have to be compared in order to yield necessary relations. This is the reason why he opposes the *de facto* principle of conceivability, which he interprets as a principle in the way proper to Hume, for instance in the following text: ‘Mathematicians have, in many cases, proved some things to be possible, and others to be impossible; which, without demonstration would not have been believed: Yet I have never found, that any Mathematician has attempted to prove a thing to be possible, because it can be conceived; or impossible, because it cannot be conceived’ (*IP*, IV.3 B 330–333).
a body of knowledge. Thus, Stewart inquires into the grounding of (MI) in order to point out the origins of its plausibility, but then objects to them. The origins, and consequently the objections, are twofold.

(1) (MI) can be interpreted as a consequence of the thesis that ‘the axioms of Euclid are the first principles of all our subsequent reasoning in geometry’ (call it AxP), and more generally that axioms are the foundations on which any of the sciences is built—including mathematics. Indeed, Euclidian Axioms or ‘Common Notions’ (as, for instance, ‘the whole is greater than its part’ or ‘things equal to the same thing are equal to one another”) might be considered as identical propositions. The link between (AxP) and (MI) had been sustained by Alexander Campbell who argued that Euclidean axioms are ‘all in some respects reducible to this axiom, “whatever is, is”’ because they are mere ‘particular exemplifications of that axiom’. In this respect, Campbell agreed with Locke’s views on axioms that, although an axiom can be enunciated in a general proposition, it is already assented to in a particular instance. Though Campbell did concede that ‘if axioms were propositions perfectly identical, it would be impossible to advance a step by their means’ because no knowledge can be drawn from any proposition where the predicate is the same as the subject, he assumes

[W]hen the thing, though in effect coinciding, is considered under a different aspect; when what is single in the subject is divided in the predicate, and conversely; or, when what is a whole in the one is regarded as a part of something else in the other; such propositions lead to the discovery of innumerable and apparently remote relations.15

But according to Stewart, (AxP) is wrong, because, these propositions (or Common Notions), which are no less essential in arithmetic than in geometry, do not delineate any domain of objects.

[T]herefore, to explain in what manner the mind makes a transition, in the case of numbers, from the more simple to the more complicated equations, throws no light whatever on the question, how the transition is made, either in arithmetic or in geometry, from what are properly called axioms, to the more remote conclusions in these sciences.16

(2) (MI) can also be interpreted as a consequence of another thesis, that ‘the geometrical notions of equality and of coincidence are the same’ (call it EC). This time, Stewart concedes that (EC) is a correct assumption. But because of the confusion of identity with equality, it was thought that in geometry and in arithmetic the mind always states mere identities. Two reasons lead Stewart to object to the view that identity and equality are synonymous. First, if they were synonymous, some mathematical conclusions would be absurd. Thus, Stewart says, that the area of a circle is equal to the area of a square does not mean that they are identical. This example shows that Stewart takes ‘identity’ to be an identity between the objects conceived. He does not deny that mathematics conflates ‘equivalences’ and ‘equalities’. In arithmetic in particular, he agrees that the mind performs a mere ‘comparison of different expressions of the same quantity’. But—and this is the second reason—even if all mathematical propositions (which all express equalities) could have the form of the proposition of identity a=a, the inference itself could not be reduced to an identical proposition.

Granted, for the sake of argument, that all mathematical propositions may be represented by the formula a=a, it would not therefore follow, that every step of the reasoning leading to these conclusions, was a proposition of the same nature?

The evidence being the ground of assent to the (alleged ‘identical’) proposition, is not an identical proposition itself. Even if identical propositions could express mathematical truths, as in arithmetic, they cannot constitute mathematical evidence.

Thence the following questions occur. Firstly, what are the first principles of mathematics according to Stewart, and how could they delineate some specific objects (either in geometry or in mathematics)? Secondly, where does the evidence of mathematical reasoning come from?

The first principles in mathematics

The expression ‘first principles’ is a legacy of Reid’s. As is well known, Reid begins the Essays on the Intellectual Powers by listing some principles that every man

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17 Elements, Vol. 2, II.i.1, 28.
18 Elements, vol. 2, II.ii.3.2, 129.
ought to ‘take for granted’ in so far as he is not lunatic\(^{19}\). They are mentioned at the beginning of the work, because they are points of minimal agreement between the author and his readers. They constitute both the ‘foundation of all reasoning and of all science’ and ‘the common sense’ without which any discussion would be impossible. As Reid previously said in the *Inquiry*:

> If there are certain principles, as I think there are, which the constitution of our nature leads us to believe, and which we are under a necessity to take for granted in the common concerns of life, without being to give any reason for them; these are what we call the principle of common sense; and what is manifestly contrary to them, is what we call absurd\(^{20}\)

As no discussion is possible with the fool, no discussion is possible with the man who sustains absurdities. Here is Reid’s strategy against the skeptic: he tries to make the skeptic concede that in his mental operations, he always acknowledges the truth which he denies in words. According to Reid, even the skeptic, as well in his mental acts as in his practical conduct, takes for granted that he is a *self*, that his faculties are not deceptive and that there is an external world. His answer to the skeptic consists in bringing him to admit for himself that he does so. And then, once the skeptic is constrained to become aware that he recognizes evidence as a *just ground* of belief, he must admit that the principles *taken for granted* are principles of truth, that means principles which he (the skeptic) takes as true. This is the reason why, in the Sixth Essay, Reid is prepared to enunciate principles of contingent truth and afterwards principles of necessary truth. In mathematics in particular, these principles are the well-known axioms that ‘from the days of Euclid’, ‘mathematicians have very wisely laid down’\(^{21}\).

Notwithstanding, Stewart thinks that this account is not sufficient to understand the mental operation of reasoning—especially those of abstract reasoning—because in his view Reid confused two very distinct meanings of ‘principle’. The Latin couple *datum* / *vinculum* is used by Stewart to distinguish them. By *data* in the reasoning, he understands that from which the reasoning proceeds (typically, the starting premises). By *vincula* he means what is required to make an inference (as ‘links’ uniting the reasoning). *First principles* may be first *data* of reasoning, namely premises, reasons. In this sense a *principle* is an

\(^{19}\) *IP*, I.2.
\(^{20}\) *Inq*, II.6 B 33.
\(^{21}\) *IP*, VI.6 B 491: ‘Every one knows there are mathematical axioms’.
‘assumption … upon which, as datum, a train or reasoning proceeds.’\textsuperscript{22} But \textit{first principles} may denote something else, namely the \textit{vincula} (the chains or links) in the reasoning. In this sense, a first principle is what is taken for granted in the exercise of reasoning in order to perform an inference. \textit{Vincula} of human reasoning are ‘those \textit{elemental} truths … which are virtually taken for granted or assumed in every step of our reasoning; and without which, although no consequences can be directly inferred from them, a train of reasoning would be impossible.’\textsuperscript{23} For instance, belief in our own identity, or evidence of memory which Reid holds as principles ‘taken for granted’ and principles of contingent truths are only \textit{vincula}, and not \textit{data}. They are, according to Stewart, the ‘fundamental laws of belief’ without which neither judgment nor reasoning about reality would be possible.

In the rest of his work, Stewart calls ‘first principles’ only the \textit{data}, and ‘elemental truths’ only the \textit{vincula}. According to Stewart, the first principles (as \textit{data}) in mathematics, are the \textit{hypothetical definitions}, whereas Euclid’s Axioms (Common Notions) are the \textit{vincula} or ‘elemental truths’ of mathematics. The ‘Common Notions’ are precisely so common that they cannot afford \textit{data} upon which a specific science (about specific objects) may be built. Euclid’s Axioms are so universal that they do teach us nothing at all. They would be reduced to the useless ‘trifling propositions’ pointed out by Locke and Reid, were they not so \textit{necessary}. For mathematical evidence depends on them. But they are not sufficient. Beside them, reasoning needs some \textit{data} to fix what it is about: by way of hypothetical definitions, as we shall see.

The simple arithmetical equations $2+2 = 4$ ; $2+3 = 5$, and other elementary propositions of the same sort, are (as was formerly observed) mere \textit{definitions} ; perfectly analogous, in this respect, to those of the beginning of Euclid ; and it is from a few fundamental principles of this sort, or at least from principles which are essentially of the same description, that all the more complicated results in the science are derived.\textsuperscript{24}

Now, Stewart’s distinction between hypothetical \textit{data} on the one hand, and logical \textit{vincula} on the other hand, is striking not only because it is a point of disagreement between two Common Sense philosophers. It is also a matter of

\textsuperscript{22} \textit{Elements}, Vol. 2, II.i.1–2, 36.
\textsuperscript{23} Ibid., 37.
\textsuperscript{24} \textit{Elements}, II.ii.3;1, 121.
philosophical significance for it opens the way of assigning contingence to the former, and evidence to the latter.

The first data are hypothetical definitions

Stewart criticizes the (Lockean and Reidan) thesis that first principles, as first definitions, must be intuitively certain. For Reid, a ‘true and adequate’ conception was an intuitive conception of the nominal essence of mathematical objects. Thus, in the Fourth Essay on the Intellectual Powers, Reid says that the conception of a plane triangle as ‘a plane surface bounded by three right lines’ is altogether ‘true and adequate’. Although the human mind of the mathematician could not immediately grasp every feature of the nominal essence of the triangle, he has a distinct notion of it if this notion is such that every property of the mathematical object is included in it, at least deductively. So, according to Reid, the mathematician has an immediate conception of some essence, the properties of which he is not completely aware. For Stewart, on the contrary, it is enough to assume some hypothesis as first data, provided that they are jointly consistent and do not express any impossibility. Inclusion of properties in the first mathematical definitions is not a standard adapted to provide us with absolutely true definitions: it is only a standard for the correctness of the deduction from hypothetical data, namely a standard for conditional truth.

26 IP, IV.1 B 304.
27 Stewart found the distinction between absolute truths and conditional truths in Pierre Prevost’s Essais de philosophie (1804), a Swiss philosopher with whom he regularly corresponded, as some manuscripts in the Library of Geneva attest. Prevost had said that absolute truth is the truth of the reasoning about facts, and that conditional truth is the truth of pure abstract reasoning. They were nonetheless in dispute about (MI): Prevost sustained that the principle of identity was the foundation of mathematics, although he admits that mathematical propositions are not only tautological, because hypothetical definitions are some determinate instantiations of the principle of identity according to him. Cf. Letter from Prevost to Stewart written on 12 October 1814 (BGE Ms. Suppl. 1067/1, f. 5–6), and remarks from Prevost included in the Appendix of the second volume of the Elements, 407–14. Cf. Cl. Etchegaray, K. Haakonssen, D. Schulthess and P. Wood (ed.), “The correspondence of Dugald Stewart, Pierre Prevost and their Circle, 1794-1829” and “The Context of the Stewart-Prevost Correspondence” in History of European Ideas, special issue on Dugald Stewart, forthcoming.
In mathematics, the propositions which we demonstrate only assert a connexion between certain suppositions and certain consequences. Our reasonings, therefore, in mathematics, are directed to an object essentially different from what we have in view in any other employment of our existences, but to trace the logical filiation of consequences which follow from an assumed hypothesis.  

Significantly, when he analyses some attempts to endow the factual sciences with a demonstrative evidence, for example, to confer on physics, morals, politics, and so on such a demonstrative evidence, he refers to the ‘artificial or conventionalist’ structure of hypothetico-deductive physics, morals or politics. He concedes that with a set of ‘arbitrary definitions’ it seems that it might be possible to form a science as certain as geometry if we draw consequences correctly. But those artificial and conventional physics, jurisprudence, and so on, lack the very species of evidence which render their system true, just, good. We must be cautious nonetheless in any assignation to Stewart of some kind on conventionalism in the contemporary sense. In this text, he does not defend any mathematical conventionalism strictly speaking, he only argues that mathematical physics, more geometrico politics and deductive ethics are ‘artificial or conventional’ systems because it is only necessary that first definitions express no impossibility and be not inconsistent; so, they might or might not fit the facts. So, what are we to understand when Stewart considers that first data may be arbitrarily given in mathematics?

Richard Olson has claimed that like Reid, Stewart ‘did not leave mathematicians the same freedom to define mathematical entities and formulate mathematical axioms as did [other philosophers]’ because ‘for Reid and Stewart the … hypotheses of the mathematician had to be suggested and controlled by experience.’ Olson argued that for Stewart, because mathematical concepts are suggested by experience and framed from abstraction and generalization, and though they become afterwards free from any dependence on facts, they can be used in natural physics. Though, this description of the process of formation of mathematical ideas is true, we still think that Stewart is more conventionalist than Olson might believe. Several points support the thesis that Stewart’s nominalism entails the assumption that mathematical definitions are contingent. As M. D. Eddy has already shown, in the first volume of his

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29 Ibid., II.ii.3–1, 115–16.
Stewart thinks in contrast with Reid, that our reasoning depends on signs rather than on conceptions.\textsuperscript{31} Certainly, Stewart’s criticisms of Reid’s conceptualism are more striking in the first volume of the *Elements*. There, in the chapter on ‘Abstraction’, Stewart says that although Reid was right in denying the existence of universal essences, he was wrong in assuming also the existence of general conceptions. Actually, for Stewart an idea is ‘the particular quality or qualities in which it [an individual] resembles other individuals of the same class; and in consequence of which, a generic term is applied to it.’\textsuperscript{32} Stewart deplores that Reid neglected the mediation of language. The generic term is only a matter of convention. Indeed, the particular quality to which it is applied is no more essential than another one:

As all classifications are to a certain degree arbitrary, it does not necessarily follow that it is more essential to its existence as an individual, than various other qualities which we are accustomed to regard as accidental.\textsuperscript{33}

Resemblances are contingently assigned to different individuals. Classifications are ‘to a certain degree arbitrary’: they are so, because they do not express a natural or real essence, but not totally so, because they generally depend on the human way of life. In this sense, they are conventional. Up to this point, Stewart does not seem so far away from Reid’s and Locke’s commitments in relation to nominal essence. But Stewart defends a nominalism which is more achieved than Reid’s. And this nominalism entails both the rejection of (MI) and the possibility of a new status for the first data in mathematics. Although the claim of nominalism is less radical in the second and the third volume of the *Elements*, throughout the three volumes Stewart insists on the necessity of the mediation of language for the needs of the mind. In 1814, Stewart points out some mental powers involved in generalization in referring to the unconscious habit of induction by which we apply a sign to other similar things. Nonetheless he still denies any power of general conception since he says that in the process of demonstration, in geometry for instance, ‘we certainly think of nothing but the individual diagram before


\textsuperscript{32} *Elements*, Vol. 1 (1792), Liv.2, 175.

\textsuperscript{33} Ibid.
us’; and then, there is a process of generalization, that is an induction by which we form the habit to ‘consider it [the particular conclusion] as a proposition comprehending an indefinite variety of particular truths’. There are neither general objects nor is there general conception. There are only particular conceptions to which a sign are applied, which can also be applied to other particular conceptions. Obviously, the rejection of the general conception may explain Stewart’s reluctance to admit some process of identification in mathematics. Generality is not the burden of one general conception. It is the feature of one name which could be applied to different particular conceptions. Thus, even in arithmetic, ‘names of numbers are nothing else than collectives, by which we are enabled to express ourselves more concisely than could be done by enumerating all the units that they contain’. Equations settle equivalence between signs, not identification of particular conceptions in one general conception. If so, we understand that mathematics are informative, because, by the mediation of signs, we assign some new equivalence between individuals (whether they be some particular figures or some particular collections of units) which are not those we had in mind at the starting point.

Now are mathematical definitions arbitrary? In the second volume of the *Elements*, Stewart introduces the following specificities of mathematical definitions. First, mathematical definitions are settled in unambiguous words. Their use can be ‘proper’, because of the limited vocabulary and ‘the distinctness of the ideas’, whereas in other sciences, words have various meanings and the distinctness of the ideas is not sufficient to establish an existential and realistic assumption. In physics we need to show that the definition we lay down corresponds with the facts. Thus, in mathematics, definitions serve as principles, data or outset of the reasoning, while in other sciences, they rather are the results of the enquiries. Thence, they may be taken as certain in mathematics, whereas in sciences of facts they remain questionable.

So we might think that mathematics is the only science where definitions are not arbitrary because they are ‘proper’ and ‘perfect’. Yet, actually, this propriety and this perfection is inseparable from the status of arbitrary definitions. First, since mathematical definitions result from contingent abstraction too, we may think that they are conventional in the sense that they depend on the human needs in doing mathematics. Certainly this point

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34 *Elements*, Vol. 2, I.ii.2–1, 90.
35 Ibid., I.ii.2–1, 90–1.
36 Ibid., I.i.1–1, 28.
37 Ibid., II.i.3–1, 118–19.
is not sufficient to prove that the status of mathematical definitions entails a mathematical conventionalism in Stewart. A feature of ‘arbitrary’ definitions in mathematics of the nineteenth century is not only that they depend on the needs of the mind, but that their content could be different owing to the mathematician’s decision. As we shall see, Stewart does not exclude that this sense of mathematical generic terms can be a matter of choice depending on mathematician’s needs. Thus, Stewart says that generic terms in mathematics furnish ‘an exception’ to the imperfection of our definitions because in this science, ‘the precise import of its generic terms is fixed and ascertained by the definitions which form the basis of all our reasonings, and in which, of consequence, the very possibility of error in our classifications is precluded by the virtual identity of all those hypothetical objects of thought to which the same generic term is applied’.  

On the whole, Stewart stands in contradistinction to Reid because although he admits that mathematical truth depends on a relation between ideas, he does assume that they rest neither on ‘true and adequate’ conceptions formed by the virtue of the constitution of our nature, nor on identification in one general conception of different particular conceptions. For these reasons, the mathematical evidence cannot be resolved into the perception or intuition of identity. Moreover, since the requisites of an appropriate definition are only, (1) that it fixes the sense in an unambiguous way; (2) that this generic term be applied to virtually identical hypothetical objects of thought, the possibility of merely stipulative definitions remains open. In any case, my aim is not to show that Stewart was a straightforward precursor of axiomatic mathematics, because as we shall see, in some other respects, especially his considerations about evidence, his thought was not ready for such an epistemological turn.

The vincula of evidence are axioms

The way Stewart considers the axioms (vincula) of mathematical reasoning seems to involve a strong reluctance to an undertaking such as mathematical axiomatisation. Undoubtedly, Stewart thinks that there are axioms in mathematics. But, they are of limited utility because they are very universal and involved in our mental operations. Although it can be interesting to enunciate them in order to point out some mistake, there is no need to take pains to

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38 Ibid., II:i. 2–1, 95.
39 Cf. *IP*, IV.1 B 304.
formulate all the accurate propositions which express these vincula—because mathematical evidence does not stem from such propositions. In reference to Locke, and in perfect faithfulness to Reid, Stewart says that although an axiom can be enunciated in a general proposition, we already assent to it in particular instances. Thence, the genus-axiom is always assented in the mathematicians’ practice, and does not even need to be enunciated. Its enunciation is not a mathematical requirement. It gets naturally applied in abstract reasoning in order to discover some new truth, and in syllogism in a rather fruitless way. When Stewart formulates it, he gives it a nominalistic formulation: ‘whatever is true universally of any sign, must also be true of every individual which that sign can be employed to express’. Anyway, it describes a natural operation of the mind which does not depend on any propositional expression. So finally, Stewart inherits Reid’s opinion on this point. Reid did not intend to settle some propositional evidence in the list of first principles of truth. He just formulated evidence of our different kind of judgment in some general propositions. Reid avows in the Second Essay on the Intellectual Powers that ‘evidence is more easily felt than described’. Mathematical evidence in particular rest on the natural fact that the negation of tautological principles is unbelievable. Thus, Reid says ‘that the rules of demonstrative sciences ... have no authority but that of human judgment’. Stewart certainly agrees with Reid on this point. In mathematics the attempt at formalizing logical correctness is far from being Stewart’s commitment. The source of evidence cannot be propositional or reduced to an identical proposition because it is naturally involved in our mental operations.

Besides, Stewart argues that logical deduction is not sufficient in mathematics. The mathematician involved in algebraic investigations has to exercise judgment (interpretation) otherwise he might irrelevantly apply conclusions. It is not very clear whether Stewart thinks of some non-mathematical applications (in physics, or in any other science of facts), or of mathematical applications themselves. There is some plausibility in favor

40 In the first volume of the Elements, the genus-principle is subservient to radical nominalism: ‘the evidence of our conclusions appears immediately from the consideration of the words in which the premises are expressed; without any reference to the things which they denote’ (Elements, vol.1 (1792), I.iv.1, 177). But as we shall see, Stewart takes pains to distance himself from mere Leibnizian or Condillacian calculus of signs.

41 IP, II.20.

of the latter hypothesis. In any case, he believes that beside deduction, mathematicians have the task of interpretation and judgment. They have to attend to the meaning of signs and to limit their conclusions to theses conditions of meaning. The difference between signification and denotation is not explicitly expounded by Stewart although it can be reconstructed on the basis of what he says. Understanding the meaning means being able, or having ‘in our power’, ‘to substitute, instead of general terms, some one of the individuals comprehended under them’. But this understanding does not require us actually to do it ‘at the moment’. It is sufficient to have the power to denote. This is why algebraical art is distinguished from arithmetical computation in the first volume of the Elements. The commentator M. D. Eddy already stressed the role of judgment in algebra, in contrast with calculus: because the mind has to hold that such or such word (here, the mathematical sign) is representative of particular qualities (here, some quantities), it must exert judgment: ‘Without this cautious exercise of judgment, in the interpretation of the algebraic language, no dexterity in the use of calculus will be sufficient to preserve us from error’. Stewart concedes that the ‘talent for ready and various illustrations’ could be useful ‘for correcting and limiting our general conclusions’. Twenty-two years later, Stewart does not change his mind. In the second volume of the Elements, he opposes both Leibniz’s Ars Combinatoria Characteristica and the Condillacian project exposed in the Langue des Calculs. Condillac indeed assumed in this posthumous work that algebraical reasoning is a model for every reasoning, in so far as in algebra reasoning is performed without any need to know the signification of the signs. He shows that such a mechanical way of reasoning is not sufficient to preclude errors.

To sum up, Stewart’s distinction between data and vincula in mathematics attests how much a new way of thinking about principles and axioms allows new interests in the systematical structure of mathematics to arise in the early nineteenth century. Stewart pays attention to the necessity of assuming

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44 Ibid.
48 Stewart is aware that this thesis was discussed by the French Ideologues as De Gérando and one of Stewart’s friend and correspondent: Pierre Prevost. Cf. Joseph-Marie De Gérando, Des signes et de l’art de penser considérés dans leurs rapports mutuels (Paris, 1800) and Pierre Prévost, Des signes envisagés relativement à leur influence sur la formation des idées (Paris, 1800), 20.
hypothetical definitions as first *data* in mathematics. Nonetheless he does not defend the mathematical needs for the task of *axiomatisation* as the explicit enunciation of axioms because, for Stewart, axioms are still naturally involved in our mental operations, especially in the mathematical practice of reasoning.

*University of Neuchâtel (Switzerland)*
**Theses philosophicae in Aberdeen in the early eighteenth century**

Giovanni Gellera

**Introduction**

I shall investigate aspects of the philosophy curriculum that Thomas Reid studied during his student years in Aberdeen, and shall therefore be focusing on the decade or so from about 1720. A few theses from the Arts Faculty of that period survive. They are by P. Hardie (1719, 1722), J. Anderson (1720), D. Verner (1721, 1730), G. Turnbull, Reid’s regent (1723, 1726), and W. Duff (1732).¹ I believe that in order to assess the nature of philosophy teaching in early eighteenth-century Aberdeen, graduation theses must be read with reference to the philosophy of the period but also must be included in a longer and established tradition of teaching, which reaches back into the seventeenth century. I shall trace some debates and themes back to the 1680s, with a view to shedding light on the graduation theses from the 1720s.²

My main sources are a form of text peculiar to Scottish universities, the graduation theses (usually under the Latin title of *Theses philosophicae*), which were written by the regent for the class of students. In the 1720s, a graduation thesis is a work of about 8–12 pages in quarto, while in the previous century it can even take the form of a short treatise (up to 120 pages, as for Andrew Cant, *Theses philosophicae*, Marischal College, Aberdeen 1658) or, more rarely, of a short commentary on Aristotle. Graduation theses usually cover all


areas of philosophy, offering in a concise and precise format the sum of the undergraduate curriculum. Given the significant freedom granted to regents, these works are not repetitive and standardized; rather, regents expound their own philosophy.

Thanks to the graduation theses of the 1720s we now have a brief yet revealing insight into the philosophy of the two colleges of Aberdeen, King’s and Marischal. Regents were discussing some of the most debated topics of the early eighteenth century, with particular attention to physics and philosophy of mind. Graduation theses display both tradition and innovation. On the one side, ‘tradition’ means the rich background stemming from the seventeenth century: Scottish academic philosophy was taught in the Scholastic fashion, and it appears as a lively, debateful common philosophy lasting from the Reformation until at least the start of the Enlightenment. Key aspects of Scottish academic philosophy in the seventeenth century are the influence of Scholasticism in the shape of a Reformed Scholasticism and the uninterrupted tie with continental philosophy. As regards the latter, Scottish regents in the 1660s quickly adopted Cartesian elements in their teaching, in such a way as to permit us to speak of ‘Scottish Cartesianism’. On the other side, ‘innovation’ points to the beginnings of the Scottish Enlightenment.

The graduation theses show evidence of these great philosophical movements, and I shall seek to show that Scottish Reformed Scholasticism did not die out in the seventeenth century but continued in the eighteenth, thus prompting the question of its influence on the Scottish Enlightenment. Until at least the 1720s all developments in academic philosophy occurred sometimes in contrast with, sometimes as a further development in continuity with Scholasticism, but always with an eye to Scholasticism, which was the main philosophical background and was a significant part of the philosophy that Reid’s teachers learnt as students. I shall suggest that early modern philosophy was not the only background of the Aberdeen regents, that they were still committed to the Scholastic way, and, finally, that this legacy with the past might have decisively influenced some features of the early Aberdeen Enlightenment.

In order to understand the type of philosophical text at issue, further historical details are required. The authors of these works were the regents in charge of the four-year curriculum; the theses were not written by the students. This is the most distinctively Scottish feature of graduation theses. In the rest of Europe, universities favoured the practice of individual graduation theses, written by the students. In the 1720s (and until Reid’s Orations around
the 1750s) Aberdeen colleges still maintained the regenting system, and class graduations theses were part of the system. They consist of paragraphs of variable length, usually arranged in the order of the teaching during the four years Arts curriculum (logic, metaphysics, ethics, physics), summing up the most important and debated theories.

The occasion for the writing of these theses was the graduation ceremony, which took the form of a public debate among students before local authorities, students’ families and members of the university, following the medieval practice of *disputationes*. Students were supposed to engage in debate by defending or attacking a thesis, mainly in order to show their logical and rhetorical skills. Despite the *ad hoc* nature of the theses, they are invaluable source materials for the historian of philosophy. Regents were free to teach their own doctrines on many topics, and in no way are graduation theses (and philosophy teaching) a mere repetition of an impersonal, ‘official’ philosophy.

With regard to the strictly philosophical theories, external political and religious authorities did not shape the teaching in significant ways. Throughout the seventeenth and early eighteenth centuries, theses show continuity and unity which allow the historian of philosophy to read them without reference to the historical events which shaped modern Scotland. This does not mean that universities as a whole did not suffer or benefit from such political and religious influence: the history of universities is rich with depositions and appointments of regents on the basis of changed political and religious conditions. What I mean is that the content of the philosophy taught was unaffected by external authorities. Two considerations might explain this evidence: 1) graduation theses are part of the undergraduate teaching, whose aim was to be philosophically advanced but also pedagogically effective. The Scholastic curriculum was still held in high esteem, and universities resisted the several attempts to reform the curriculum. 2) There is evidence in the theses that the philosophy taught had a Reformed character, but further political or religious divisions within Scotland did not play a role at the undergraduate level of university life.

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3 This is not true for all Scottish universities. Edinburgh and Glasgow abandoned the regenting system in 1707–8 and 1727 respectively, later followed by St Andrews (1747). Aberdeen colleges were the last, Marischal in 1753 and King’s in 1800. To my knowledge, the only example of class graduation theses in Arts in the seventeenth century written by a student is to be found in G. Meldrum, *Theses philosophicae* (Marischal College, Aberdeen 1659); in the *Nuncupatio*, p. 6, the regent warns the readers that the *Theses mathematicae* were written by Gulielmus Sanderus, who is listed among the candidates to graduation on the same page.
An example can be taken from political philosophy, a discipline which by its nature is open to changes according to political events. For a period after 1707 Aberdeen teaching in political philosophy continued to have much the same content that it had a century earlier. Regents still taught the traditional Scottish Scholastic political philosophy of the early seventeenth century, without mention of authors such as G. Buchanan, or of any of the events which preceded or led to the Acts of Union. University political philosophy insisted for example on the divine origin of political authority, on the absolute power of monarchs and on the traditional parallel between state and family. Many of the developments of seventeenth century political philosophy are thus rejected. This prompts the question of the social influence of university teaching, since generations of clergymen and laymen were taught a philosophy apparently unrelated to historical events in Scotland.4

I am not directly concerned here with either Reid’s Orations or with Turnbull’s theses, on which scholarly work has already been done.5 In Thomas Reid’s Orations and earlier graduation theses, two main disciplines appear to be at the centre of the debate: on the one side philosophy of mind and on the other an engagement with the heritage of the past (an approach that today we would possibly call history of philosophy). Until Reid’s time this engagement took the form of an explicit rejection of Scholasticism in favour of the new philosophy and science. Yet, this rejection might be less clear-cut than commonly believed. As I will show, regents in Aberdeen taught a philosophy that was original in many aspects, that originated and influenced debates, and that contributed to the philosophical formation of Thomas Reid, but that was nonetheless a philosophy still much indebted to Scholasticism.

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4 In political philosophy, Gershom Carmichael in Glasgow is a remarkable exception. J. Martin’s Positiones philosophicas (Marischal College, Aberdeen 1681), are a set of theses almost entirely ad hominem against Buchanan, and are very representative of academic political philosophy.

Philosophy of mind

Descartes set much of the philosophical agenda in Scotland after his first appearance in the graduation theses written by Andrew Cant for Marischal College in 1654. From 1680 to 1700, all regents in Aberdeen were more or less Cartesian. After this date the debate was still influenced in respect of form and content by Descartes, even if regents started to endorse Newtonianism in an enthusiastic way. Nevertheless, even at the peak of Scottish Cartesianism around the 1670s Aberdeen regents were suspicious of some Cartesian themes, such as the role of scepticism in philosophical enquiry. Regents seem not to have fully endorsed Descartes’ use of scepticism as the starting point of philosophy though they also believed Descartes had finally shown scepticism to be wrong. This apparent contradiction can probably be best explained in terms of the role that faith and revealed theology played in Scottish Scholasticism in the seventeenth century: scepticism is first ruled out by true faith and revelation, and Descartes’ work was welcomed as a convincing philosophical argument against scepticism. With some qualifications, regents in the early eighteenth century still read Descartes in the same way.6

Philosophy of mind was taught in a Cartesian form. We find a traditional definition of the Scholastic equivalent of philosophy of mind in Chauvin’s Lexicon, published in 1692: ‘Pneumatology [this is the Scholastic term for what we now call philosophy of mind] is the science which studies the spiritual substance, or mind, as such. […] In particular, it deals with the Divine, Angelic and human mind’.7 In the Scholastic curriculum it finds its place in metaphysics, understood as the science of spiritual substances, which is a common understanding of metaphysics in Scotland in the seventeenth century. I believe that a metaphysics which concentrates on spiritual substances and relegates the study of ens (being) to a secondary role is a feature of Scottish Reformed Scholasticism, a feature which predates Descartes. Given the serious incompleteness of present-day

6 Another interesting feature of Scottish Cartesianism is the inversion of the relation between the Cogito and God. In Meditationes II–III, Descartes moves from the certainty of the Cogito to the certainty of God in the ‘analytical’ way, while regents favour a ‘synthetical’ exposition of the philosophical preminence of God over the Cogito. It appears that the role of scepticism is more limited in the interpretation of Descartes’s philosophy given by the regents.

7 E. Chauvin, Lexicon rationale sive Thesaurus philosophicus, Rotterdam 1692, art. Pneumatica. Chauvin’s original text: pneumatology is a “scientia quae contemplatur substantiam spiritualem, seu mentem, qua talem […] accuratus tractat in specie de mente Divina, Angelica et humana.” All translations are mine.
accounts of Protestant Scholasticism, it seems artificial to label this approach as ‘Reformed’ **tout court**: the qualification ‘Scottish’ is necessary. According to the regents, the subject of pneumatology is included in that of metaphysics, and pneumatology gradually became more important in the curriculum. After Descartes regents dropped the analysis of angelic minds to focus on divine mind and primarily on human mind. Scottish regents are not an exception in this shift from metaphysics to philosophy of mind.

All regents in the 1720s hold that every substance is either spirit [spiritus] or body [corpus], and that the two differ in that spirit is immaterial and unextended, its main attribute being *cogitatio*, whereas matter is extended, divisible and possesses figure, the main attribute being *extensio*. This starting point is Cartesian, even if regents go beyond Descartes in two key aspects:

1) both *cogitatio* and *extensio* are the main attributes of spirit and matter, but are not their respective essences. When we approach the 1720s it is clear that regents dropped essentialism, as it appears from, for example, their claim that we can be certain of the existence of the soul, but cannot know its essence. In so claiming, they are extending the Cartesian doctrine of our ignorance of the essence of movement to all essences. Regents claim that we have a clear idea of spirit and matter, but that we do not know their essences. It also seems that the Newtonian approach to gravity (our fundamental ignorance about what gravity is, even if we can give a mathematical and physical description of its behaviour) influenced this claim. The reception of Newton, no less than of Descartes, found its place in the philosophical agenda of the regents: for example, we read in Peacock 1714 that Newton discovered the true essence of spirit and matter. According to Peacock, the new science took the place of Scholasticism in the discovery of the essences of things, which is not Newton’s position.

2) The Cartesian ‘dogma’ that mind is always thinking and that we are always conscious of our mental processes is usually rejected after the 1690s.

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8 Anderson 1720, § IV, claims that metaphysics follows logic, and metaphysics explains *the general affections of all things* (*Rerum omnium generales affectiones*) and the first principles of things. The analysis of spirits starts from the metaphysical division of all beings in substance and accident (§ VI), and is called *de Spiritibus scientia* (§ VII).

9 Anderson 1720, § VIII: ‘Unicuique patet propria Mentis Existentia; ejusdem tamen Essentia haud acque perspecta est, nequitiam vero consistit in Cognitione, nullam quippe praeter actualem agnoscinus, quae omnis Mentis respectu, merum est Accidens sive Modus.’ Duff 1732, § VII: ‘Hinc autem minime affirmamur, intimam vel totam materiae essentiam, nobis manifestam [esse]; only God knows it.

while it was accepted in the 1690s. In brief, the reception of Descartes and Newton deeply influenced the regents, but interpretation followed reception: regents were always engaging with contemporary philosophies, yet never endorsed them without scrutiny.

The two main faculties of spirit or mind are intellect and will. Regents differ on whether we can say that intellect is only passive and will only active. In the 1720s this is the dominant position, which, with some qualifications, is to be found in medieval Scholasticism and Descartes. Intellect is understood to be passive because it perceives, or ‘receives’ the ideas, while will is active because it is the directive, and therefore motive principle of the mind. It is very unlikely that regents taught this theory without reference to Scholastic doctrines. For first, they engaged in proving Scholasticism obsolete up to the time of Reid (Reid himself is not an exception, as the Orations show), and this proves that Scholasticism was still debated. Second, regents were aware of the deep novelty represented by the recent advances made by scientists from Bacon to Newton, for they thought of themselves as living in an age crucially discontinuous with Renaissance and late medieval philosophy. Despite this conscious rejection of Scholasticism, graduation theses show a still strong link with the recent past, manifesting some deeply-rooted and long-lasting doctrines that regents did not expressly ascribe to Scholasticism.

Activity and passivity were understood by regents in the 1720s as unambiguous terms. This attitude took hold by the 1690s, and is well exemplified in Peacock 1693: matter is passive, *motus* (local movement in this context) is the active principle in the physical world. Much of the later dichotomy between activity and passivity was shaped by the structure of this physical theory. Regents appear to have rejected (or simply abandoned) the Scholastic doctrine of act and potency, which, in the form it took in the Scottish universities in the seventeenth century, offered a twofold analysis of each concept: activity and passivity are not predicated of any physical thing without qualification, for something in act can always be in potency to something else and conversely something in potency to something can be in act, even if the act is imperfect (e.g. is a movement). Only God is active absolutely speaking. The stricter opposition found its way into the philosophy of the regents. For example in Verner 1721 we read of the activity of the intellect which is ‘perceiving’ and also ‘forming’ (*formare*) the perceptions of good and evil.

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11 Regents seem to employ the Latin *mens* and *spiritus* with the same meaning.

12 George Peacock, *Theses philosophiae*, Aberdeen 1693, § VI: ‘Materia est principium passivum […] Motus est principium activum qui non est de essentia materiae, sed a Deo Opt. Max.’
which reminds us of the kind of activity ascribed by Scholastics to the ‘agent intellect’. Verner offers a holistic account of the activity of mind, since mind is one in essence and in action, and it is wholly active (when desiring) and wholly passive (when perceiving), so that mind is active and passive, though not at the same time.\footnote{[mens] verum, ubi actiones exercit, prorsus activa, ubi passiones sustinet, omnino passiva. Verner 1721, § IV.} When referred to minds, activity and passivity seem to be only formally different: this theory is indebted to the Scotistic formal distinction, a common theory during the seventeenth century in Scotland.\footnote{Also influential later on in the eighteenth century: A. Broadie, ‘The Scotist Thomas Reid’, American Catholic Philosophical Quarterly, Vol. LXXIV:3 (2000), pp. 385–407, in particular pp. 392–3.}

Comparison between graduation theses during the seventeenth and the early eighteenth centuries brings to light a problem regents were facing—the role of reason. Usually, from the 1680s on, reason is the faculty of drawing inferences, so it involves syllogistic reasoning. Hence the downgrading of syllogistic logic led to a silence, in the theses, on the analysis of reason. As we read in Anderson 1720, the new logic of discovery (the Newtonian logic, as regents call it), is about apprehension and judgement (\textit{apprehensio} and \textit{judicium}), with no role for \textit{ratiocinatio}.\footnote{Anderson 1720, § II.} This absence seems odd and needs clarification, given that the medieval Scholastics ascribed to reason the role of finding ultimate justification for claims to knowledge. This absence can be explained by the fact that ideas and perceptions are said to play what is in fact the very role ascribed by the medieval Scholastics to reason.

Thomas Aquinas defines ‘idea’ as the \textit{‘form of a certain thing, existing beyond the thing itself’},\footnote{Thomas Aquinas, \textit{Summa theologiae}, I, q. 15, a. I: idea ‘Latine forma dicitur […] forma autem alcinus rei praeter ipsum existens, ad duo esse potest, vel ut sit exemplar eius cuius dicitur forma; vel ut sit principium cognitionis ipsius’.} which can mean both the exemplar (archetype) of the thing (in the mind of God), and the principle of our knowledge of the thing as it is in the knower. In Scholastic philosophy the former meaning prevails, and ‘idea’ is rarely employed in theory of knowledge. This definition foreshadows the key problem in modern philosophy concerning ideas, as they can be understood to be what we know (\textit{quid}) and to be that through which we know (\textit{quo}). During the seventeenth century, the role of the terms ‘idea’ and ‘perception’ became more important in the theses, to the extent that they took the place of the traditional terms \textit{conceptus} and \textit{species sensibilis} in discussions of our knowledge of the external world.
Regents speak of perceptions of external things, but also of perceptions of good and evil; ‘perception’ is often treated as synonymous with ‘simple idea’. In the theory of knowledge the role of perceptions seems prior to that of ideas. Regents held natural philosophy in the highest esteem, not only for the progress in knowledge possible thanks to Newton, but also as revealing the deep harmony of the world as a moral standard for the wise man. In this context, perhaps, the importance of the philosophical analysis of perception is explained by the parallel importance of natural science and the question of how we know the external world.

A further reason for the priority of perception could be that regents endorsed a specific form of the so-called theory of ideas, one in which the idea is not what we know, but that through which we know. Some regents hold that perceiving is a complex act of understanding, an act that puts us in direct contact with external objects as they really are, so that perception is epistemologically richer than Scholastic sensation, which only conveys sensible species to the intellect. In the philosophy of the regents the act of the intellect, and therefore the very act of knowledge, is a perceiving (percipere) in general, and perceiving a single real thing in particular. Arguably one reason why scepticism did not seem a viable philosophical option was that it failed to notice this natural, constitutional openness of our intellect to truth. I believe that regents still held onto a traditional definition of truth as ‘concordance’ between the perceived object and its idea in our mind, but the greatest role in the process of knowledge is played by the complex and yet immediate act of perceiving, which is the act of the intellect. This meaning of perception seems to carry on in different forms the traditional moderate realism as expressed in Scottish Scholasticism in the seventeenth century. Thus, the aforementioned problem concerning reason is resolved: truth seems to be the natural harmony between objects that we immediately perceive and the ideas of them in our minds, rather than being a conclusion of a judgement, as in Scholasticism. The epistemological work is done with the act of perception, so intellect can be conceived of as naturally open to truth and passive in receiving truth. I believe that regents downplayed reason as a discursive act and emphasized perception, as an immediate act, by intellectualising it. Our knowledge does

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17 G. Turnbull, *Theses philosophicae de scientiae naturalis cum philosophia morali coniunctione*, Aberdeen 1723, § IV: ‘Omnino fatendum est mundi corporis ordinem elegantisimum maximeque concinnum esse. Illoque certe nobis optimum vitae et morum exhibetur exemplar.’

18 Not all of the regents in the early eighteenth century endorse this view: some degree of generality is inevitable in the account of philosophers belonging to the same context yet individually working out their own interpretations.
not fail us thanks to our natural constitution and to the nature of our acts of perception.\textsuperscript{19} As already noted, differences with the Scholastic theory of knowledge regents held in the seventeenth century are remarkable; nonetheless, the presence of a moderate realism in the theses from the 1610s to the 1720s, through the reception of modern philosophy, is remarkable as well.

Two regents bring forward a more inclusive notion of perception. Hardie 1719 speaks of \textit{perceptio persuasiva} (persuasive perception); it is different from ‘normal perception’ not because it puts us directly in touch with ‘things as they truly exist’ (which perception does in any case), but because by necessity it draws us gently to the act of judgement, which is said to be perception’s ‘inseparable companion’.\textsuperscript{20} Judgement seems to be just a confirmation of a process whose reliability is granted elsewhere (in how things are and in the nature of perception). Verner 1721 perhaps goes a little further. Unlike Hardie he does not speak of judgement, but introduces an element which might include judgement. He claims that our perceptions (in the very broad sense of perceptions or simple ideas and of \textit{appetitio boni}) take place ‘always with participation of the will and some rational pleasure’.\textsuperscript{21} As noted earlier, elsewhere Verner writes that the intellect forms some perceptions, and not only receives them: perhaps this act of ‘forming’ a perception is carried out with the participation of will.\textsuperscript{22}

Regents employ the term perception for both perceptions of things and perceptions of good and evil. Though not holding that good and evil are ‘things’, they do hold that we perceive them.\textsuperscript{23} Moral philosophy mirrors the structure we find in philosophy of mind: we know the good and evil of things in exactly the same way we know things, by perception. In the theses we read of perceptions of good and evil which depend on the nature of things, but the overall theory is more complex than this. God has given a moral law which is valid for all things and all men, which is based on \textit{recta ratio}, right reason,

\begin{itemize}
\item \textsuperscript{19} ‘\textit{Cum genus humanum, istiusmodi facultatibus instructum esse voluerit naturae Author.’ Hardie 1719, § XVI.
\item \textsuperscript{20} ‘\textit{Res tales, tamquam vere a parte rei existentes, perpetuo repraesentabit perceptio persuasiva, quae judicii actum, comitem suum individuum, necessario allicit’}. Hardie 1719, ibidem.
\item \textsuperscript{21} ‘\textit{Neque verum percipit quisquam, neque bonum appetit absque Voluntate: imo simplicissimi qui assignari possunt Mentis Actus, perceptiones sive Ideas simplices intelligo, sine lubentia sive Complacentia rationali, b.e. sine Voluntate non eliciuntur’}. Verner 1721, § XIV.
\item \textsuperscript{22} A theory which might remind us of Reid: ‘The faculties of Understanding and Will, are easily distinguished in thought, but very rarely, if ever, disjoined in operation’. Quoted in A. Broadie, ‘The Scotist Thomas Reid’, p. 403.
\item \textsuperscript{23} Verner 1721, § V: ‘\textit{In istis de Vero et Falso, Bono et Malo, perceptionibus formandis ac recipiendis, animam, ab inimico infantiae statu, continuo occupatam deprehendimus’}. 
\end{itemize}
whether divine or human. Morality involves a circular movement, starting from our perceptions of good and evil, passing through our reception of these perceptions in the mind, then past our election of them by free will, and finally to the desire for the very natures which originated our perceptions. The paradigm is always the search for conformity, either of our perceptions to objects, or of our actions to the divine law or divine reason. Verner 1730 sums this up by quoting Cicero: ‘the measure of good is what is to be found in nature’. Again, we find in moral philosophy the same concept of immediate and reliable openness to the external world that we find in philosophy of mind. Turnbull appears to stand apart from the regents in respect of the fact that he places greater stress on moral law more than on moral perception.

Minor differences aside, regents taught the same theories and worked on the same problems. There is agreement on many aspects: the dual nature of mind, intellect as mainly passive (as explained), perception as playing a larger role than ideas, and the ultimate dependence of perceptions on ‘how things really are’. Perceptions are the antecedently-shaped building blocks of knowledge that we receive (perceive) in fixed combinations that we cannot re-arrange at will. I believe that regents held a correspondence theory of truth: the relation is established between perceptions and things outside our mind. It seems that regents incorporated Cartesian and Newtonian themes in a still strong Scholastic frame. One sign of this attitude is the reliance on the senses, said to be ‘minime fallaces’ (meaning ‘hardly at all deceptive’ or ‘not at all deceptive’), by Peacock (1714) who was still sympathetic to Cartesianism. Peacock’s position could be representative of a deep and shared attitude among regents. Given this faith in our ability to acquire, via the senses, reliable information about the external world, the regents’ narrative regarding God’s role too is un-cartesian: God is the ultimate warrant of existence and essence of things, but he is needed less as epistemological warrant than as, say, giver of a moral law, or giver of essences.

I shall close this section with a brief comment on Locke. He is not absent from the theses, though his role is not the one we might have expected him to play. Regents were acquainted with his works, but, unlike Descartes and Newton, his reception in Aberdeen was not favourable. He is referred to almost exclusively in critical terms. Before 1700 regents, probably under the influence of Descartes, were open to a limited version of innatism, mainly concerning the idea of God. As a consequence, in order to defend their own

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24 ‘Mensura boni […] quod in Natura posatum est’. § VI.
25 ‘Sensus minime sint fallaces, quippe sint ministri fidelissimi, nobis a Deo concessi’. § IV.
understanding of the innate idea of God, regents criticised Locke’s criticism of innate ideas. I think that what they had in mind is some sort of intuition of God rather than a philosophical notion of an innate idea of God, a constant which can be traced back to Scottish Reformed Scholasticism and theology in the previous century, in the form of a rejection, or at least suspicion, of natural theology and a strict distinction between philosophy and theology. Similarly, up to the 1710s Locke’s philosophy is considered too close to atheism, since regents see in the reduction of all ideas to sensation and reflection a pathway to the negation of some sort of privileged status for the idea of God. We read in Smith 1712 that Locke’s ‘theory [viz. that all ideas come from sensation and reflection] weakens piety and virtue, and favours Atheism too much’. Locke’s theory of ideas favours atheism too much because if we do not accept an intuition of God or an innate idea of God, the idea of God too could be a mere product of our praejudicia. I have found no direct discussion of Locke in the theses of the 1720s. In general, he seems to have exerted little influence on the regents; arguably they misunderstood him on innate ideas and they do not mention him in respect of a series of doctrines to which Locke made important contributions.

Regents’ look to the past: tradition and innovation

During the first decades of the eighteenth century, the two colleges in Aberdeen lived through a period of profound transformation, yet at the same time the philosophy of mind in the theses of the 1720s tends to support the claim that regents were still under the influence of the Scottish Scholastic tradition. In this paper I highlight continuities rather than differences, because differences are evident (just as they were to the regents themselves) whereas the continuities are less apparent even if no less influential. Continuities, which profoundly connect this period to the previous century, are not restricted to philosophy of mind. They are to be found in other areas of philosophy also.

We have considered the formal distinction between intellect and will, the ‘correspondence’ theory of truth, the particular meaning of metaphysics and

26 William Smith, Theses philosophicae, Aberdeen 1712, § II: Locke’s ‘commentum hoc pietatem et virtutem enervat, atque Atheismo nimium favet’.

27 With the exception of a brief remark in Hardie 1719, § I. The regent writes that Locke, along with other very famous recent philosophers, deals with the prejudices of the senses ‘prolixe ac accurate’.
the ongoing influence of Reformed Scholasticism. A clarification is necessary. My emphasis on the role of Reformed Scholasticism is an acknowledgement that all philosophical activity is historically situated and that in Scotland influence was exerted on the philosophers by a form of Calvinist confession that itself had a Scholastic background. I shall now seek to clarify this influence in terms of two philosophical doctrines which represent a continuity from the seventeenth to the early eighteenth century: 1) the relation between substance and accident; and 2) matter as extension; and I shall close by noting the fact that, despite Newton, the regents were still in part under the influence of a Scholastic concept of gravity.

The relation between substance and its attributes is a good example of continuity between Scholastic and early eighteenth-century philosophy in Aberdeen. It was commonly held during the early modern period that every accident inheres in its substance. The very definition of accident includes such inherence. Descartes and Boyle were among those who held that while each substance in the natural world exists independently of every other substance, there is no such thing as an accident that inheres in no substance. Also, all substances are either material or immaterial: we cannot find material minds or immaterial bodies, or better, extension cannot be a property of minds and thinking cannot be a property of matter. In 1719 Hardie structures his graduation theses on this fundamental distinction. The importance of this last theory will be clear in the analysis of matter.

The theory of the essential inherence of an accident in its substance is not exclusive to the so-called modern philosophy. It plays a role in Scottish Scholasticism as early as the 1610s. This theory is usually found in the context of the Reformed reading of the dogma of transubstantiation. Reformed Scottish philosophers and theologians did not believe that the accidents of bread and wine could exist without their substances, in order to inhere in the substance of Christ. The philosophical point is that on the basis of Aristotelian philosophy it is not possible to accept the notion of an accident which is not inhering in its natural substance. More precisely, in the seventeenth century regents read the Catholic theory of transubstantiation as implying that an accident can exist with no substance at all. Thus, regents rejected the

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28 Eustachius a Sancto Paulo for example offers a different account of the substance-accident relation, which is explained by theological more than by philosophical means. The notion of inherentia aptitudinalis as belonging to the formal ratio of the accident responds to the Catholic need for an accident clearly and essentially connected to its substance but also potentially separable (by God) from it. Eustachius a Sancto Paulo, *Summa philosophiae quadripartita* (Paris 1609), IV, II, II, VIII.
Catholic account of the miracle of the eucharist, and duly criticised Descartes for not doing likewise.\footnote{J. Buchan, \textit{Theses philosophicae}, King's College, Aberdeen 1681, § XLI: the regent holds that the Cartesian hypothesis subverts the Catholic dogma, and that Descartes was under the threat of ecclesiastical censorship, and was thus not acting freely when accepting the dogma.} This is a central aspect of Reformed Scholasticism that we still find operating in Scottish graduation theses at the beginning of the eighteenth century. The origin of this theory is a Reformed reading of the Bible, and Scottish regents identified a deep agreement between this reading and the Aristotelian theory of substance. We thus find within a Scholastic tradition a philosophical theory of the necessary inherence of the accident in its substance, which originates from theology and predates its version in ‘modern philosophy’. In this regard, Scottish Reformed Scholasticism is part of modern philosophy.\footnote{By ‘modern philosophy’ I mean here non-scholastic philosophy of the seventeenth century. The distinction between non-scholastic and Scholastic philosophy is still regarded as a valid historiographical distinction. It relies on the assumption that Scholasticism is by form and content an alternative to modern philosophy, which has its beginning in the period of Descartes. Scottish regents of the seventeenth century seem to be conscious of the division among philosophers, whom they call either \textit{Scholastici} or \textit{Moderni}. I argue that the picture is more complex than this: some modern Scholastic philosophy is part of modern philosophy.}

A similar point has to be made about matter and extension. As early as the 1610s Scottish regents were teaching that prime matter is essentially a quantified metaphysical act, the quantification being understood as spatial extension (parts outside parts). This theory has a direct bearing on the understanding of the relation between substance and accident. In fact, no extension, which is an accident of matter, is possible without its substance. Conversely, matter is not possible without extension. In Scottish universities, this theory is not indebted to Descartes, but is Scholastic in form and limits, and originates within the Scotistic tradition. The concept of matter as a metaphysical act and as having the attribute of extension is closer to \textit{materia extensa} than is the Thomistic \textit{materia ut pura potentia}. Thus, it is little surprise that Descartes’ theory of matter was quickly integrated into the teaching of the Arts curriculum in Scotland, for the form of Scholasticism which was being taught in the seventeenth century contains anticipations of the early modern narrative.

Natural philosophy saw great changes in the seventeenth century, while, as Turnbull’s writings bear witness, moral philosophy benefited from the new scientific method. The authority of traditional syllogistic logic was diminished
despite asseverations of respect. Anderson 1720 (§ II) defends what appears at first sight to be traditional logic, the defence being that it is a science that enables us both to discover truth and to expound it. But on closer inspection the logic in question turns out to be based on apprehension and judgement alone, and to have little in common with Scholastic logic. The new inductive logic from Bacon to Newton, which regents in the 1720s regarded as a unitary scientific enterprise, had replaced it.\textsuperscript{31}

In natural philosophy, the theses show evidence of a confident endorsement of the new science. One interesting aspect of the endorsement is the respect shown for a new concept of physical law. Duff titles his 1732 theses \textit{Dissertatio Philosophica de Natura et Legibus Materiae}. Regents (for example Turnbull 1723, § III, who claims that physical causes are only \textit{vires et leges}, forces and laws) abandoned the traditional concept of cause. In Scholasticism substances alone can properly be called ‘causes’, since they alone can act. A force is a power through which a body acts, a law is a rule given by a mind (either divine or human) and always related to a mind which thinks of the law. Regents were familiar with the concept of law in moral philosophy: moral law is binding for all men because it is based on right reason and divine essence. Implicit in the concept of law is universality. In Scholastic natural philosophy universality is not explained in terms of a physical law which describes the behaviour of bodies, but in terms of the immutability of natural genera. By induction we can conclude to the essences of bodies and by deduction the essence is then predicated of individuals. The physical world is a world of individual substances, whose behaviour is not characteristically described by Scholastic philosophers in terms of law.

Difficulty arose when regents had to deal with concepts different from traditional ones while yet employing the terminology inherited from Scholastic Latin. For example, some regents indicated certain kinds of activity (that of a faculty of mind, or a principle and so on) with the word \textit{actuosus}, to mark the difference from the semantic field of the Scholastic ‘act’, a term too compromised by the old act/potency theory. This is the case as regards Smith 1712: ‘since all the movements of the universe cannot be derived from a passive principle [matter], we must admit some actuous [actuosa] principles […].’\textsuperscript{32}

\textsuperscript{31} On the favourable reception of Newtonianism in Scotland, see David B. Wilson, \textit{Seeking Nature’s Logic} (Pennsylvania, 2009), ch. 1.

\textsuperscript{32} ‘\textit{Sed quum a Passivo hoc Principio [matter] omnes in universo motus provenire nequeant, Actuosa quaedam Principia, unde generentur et conserventur motus, Gravitatem vel Attractionem […] admittenda esse statuif’}. § XI.
Gravitas has a particularly interesting history. In Scholastic Latin the term denotes heaviness, or the form of a heavy body. Regents in the seventeenth century preferred to speak of gravity (and levity) in terms of gravia et levia, ‘heavy things and light things’. But in the early eighteenth century regents introduced both a new meanings and new grammatical uses. The noun ‘gravity’ and the verb ‘gravitare’ answered to new theoretical needs prompted by Newton’s work. Gravity became a law, and an activity of bodies. Of course, such far-reaching changes cannot take place overnight, so regents sometimes seemed to ascribe to ‘gravity’ a meaning that was a mixture of the old and the new. In the space of few lines, Anderson 1720 uses the term in three distinct grammatical forms and with three different meanings: ‘it is demonstrated that all terrestrial bodies gravitate [gravitant] towards the centre; those bodies, which are called light, are pushed upwards because they are less heavy [gravia] than the air fluid in which they swim. In the same way by gravity [gravitas], as a universal natural law, all physical bodies are impelled mutually one against the other, as the celebrated author demonstrated’.

Conclusion

In the early eighteenth century the graduation theses still reveal influences stemming from, and some doctrines rooted in, the seventeenth century. We might conclude that the open rejection of the ‘old Scholasticism’ usually claimed by the Moderni is perhaps less strong in the case of the regents than we would expect, given the way regents themselves describe their work. As I hope to have shown, the eighteenth-century moderate realism nuanced by Reformed religion and Scotism is inherited from the generations of regents before the 1700s.

I have sought to expound a few theories we find in some graduation theses from Aberdeen in the 1720s. Above all in philosophy of mind and epistemology, but also in metaphysics, natural and moral philosophy, there are still strong ties with theses of the previous century, though it has to be acknowledged that there are also discontinuities with the past, especially in consequence of the arrival of Newtonianism.

33 ‘Demonstratum est ipsum Aerem, aliaque omnia Corpora Terram ambientem versus eis centrum gravitare. Ea vero, quae Levia dici solent, sursum pelli, propter eam quod fluido Aeris, cui innatant, minus sunt gravia. Idem gravitate, tanquam universali Natura Lege, omnia Systematis mondani Corpora, versus se mutuo urgeri, demonstravit praedictus Eximius Auctor’. § XIX. The ‘eximius auctor’ is Newton.
From the point of view of historiography, Scotland’s relatively coherent and limited Scholastic philosophical production can help us gain a better understanding both of Scotland’s later philosophical achievements and also of Reformed Scholasticism, the latter an area of research sadly neglected as compared with Catholic Scholasticism. In the early years of the Scottish Enlightenment the philosophical debate in Aberdeen’s two universities was rich and groundbreaking, but in order to understand the depth of this change it is necessary to provide an account of the various philosophical horizons and backgrounds of the regents, and Scholasticism is part of that narrative. Some Scholastic theories might, more than is generally acknowledged, have left a mark on the young Thomas Reid and influenced (or at least favoured) the beginning of the Scottish Enlightenment. Such researches as I outline here should also give us at least a partial idea of what being a Scottish Reformed philosophy regent meant in the early eighteenth century. In a regent’s own words, ‘philosophers seek truth, theologians find it, only true believers own it’.34

University of Glasgow

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34 ‘Veritatem Philosophi quaerunt, Theologi inveniunt, soli Religiosi possident’. G. Peacock, Theses philosophicae, Aberdeen 1711, title page.
James Mylne: an early Critic of Thomas Reid

Stephen Cowley

Introduction

Professor James Mylne (1757 – 1839) was a church minister and social reformer who taught moral philosophy at Glasgow University from 1797 to 1836. He was also an insightful early critic of the philosophy of his predecessor but one, Thomas Reid (1710 – 96).1 Whilst these two philosophers shared some non-sceptical positions, Mylne diverged from Reid both on questions of general philosophy and on the practicality of social reform. Here I will sketch the context and content of Mylne’s philosophy, outlining his general disagreement with Reid on the relation of reason to common sense; and then address two specific issues on which he takes Reid as a conversation partner, namely the role of touch in perception and the question of free will.

Rational Piety and Social Reform

I conceptualise James Mylne’s thought under two headings, ‘Rational Piety’ and ‘Social Reform’. The first term ‘rational piety’ marks common ground with Reid:2 both philosophers were Ministers of the Church of Scotland who at times projected an image of piety, Reid accompanying the advert for his Essays on the Intellectual Powers of Man (1785) with the scriptural citation ‘Who hath put Wisdom in the inward parts?’3 whilst Mylne in his lectures taught the division of duties into those to God, neighbour and self.4 Their works both contain nuanced accounts of the workings of human rationality. However, Mylne’s reason is not reined in by the fixed ‘common sense’ premisses of Reid and this is related loosely to the second decisive aspect of Mylne’s thought, ‘social reform’.

1 Reid was succeeded by Archibald Arthur from 1780 – 97, who was succeeded by Mylne.
2 It is used in an obituary of Reid, Glasgow Courier 8 October, 1796.
3 Glasgow Mercury 4 August, 1785, citing Job 38:36.
4 Adam Smith’s division in Theory of Moral Sentiments had been into duties to others and to ourselves.
Thomas Reid supported a number of social reforms, including prison reform and abolition of the African slave trade. He had the typical profile of a churchman in support of charitable endeavours, but drew back from reform of political representation when the French revolution led to civil conflict in the early 1790s. Mylne was the first generation of Scottish thinkers who embraced the French Revolutionary era and, in contrast to many figures of the Scottish establishment (including Reid) he retained a commitment to political as well as economic and social reform. Politically, this led him in later life to actively promote the liberal constitutional agenda that led to the 1832 Reform Act through the Glasgow ‘Fox Club’, named after the leading Whig statesman Charles James Fox (1749–1806). Mylne also gave the first lectures on political economy (under that title) at the University of Glasgow from 1801, fulfilling an ambition of Law Professor John Millar (1735–1801). In respect of both general philosophy and the pursuit of reform, his work foreshadows that of the Glasgow Idealists and thereby contributed to the social ethos of contemporary Glasgow, perhaps more so than Reid.

Mylne and Reid were both members of the Glasgow Literary Society in the 1780s and 1790s, while Mylne was minister of the second charge at Paisley Abbey church and Reid was (emeritus) Professor of Moral Philosophy at Glasgow. A contemporary witness notes that Reid was opposed at these meetings by John Millar, who argued for a version of Hume’s philosophy.

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5 Glasgow Journal has a letter from Reid on the prison reformer John Howard (7 September, 1786).
6 Reid joined with businessman David Dale, John Millar and others in publicly supporting the Abolition Bill (Glasgow Mercury 1 March, 1791).
7 Reid supported the French Revolution until 1791 (Glasgow Mercury 28 June – 5 July, 1791), but drew back from the cause of reform in his talk on the ‘Dangers of Political Innovation’ to Glasgow Literary Society in 1794 (Glasgow Courier 18 December, 1794), which was republished in 1796 and as an appendix to William Richardson’s edition of Arthur’s Discourses on Theological and Literary Subjects (Glasgow, 1803).
8 For example, see Glasgow Chronicle, 25 January, 1823 for summary of one of Mylne’s speeches to the Glasgow Fox Dinners. This group were also known as the ‘Friends of Civil and Religious Liberty’. For sympathetic contemporary witnesses to Mylne’s politics see also John Strang’s Clubs of Glasgow (London, 1856), 549; J Fyfe (ed.), Autobiography of John McAdam (Edinburgh, 1980), 6.
9 Adam Smith had lectured on trade and finance (Glasgow Mercury, 3 August, 1790), but as part of his moral philosophy course.
After his appointment as Professor of Moral Philosophy in 1797, Mylne was in the reformist camp headed by Millar. In his college teaching, he also took a critical stance to the inheritance of common sense philosophy derived from Reid and then associated with Dugald Stewart in Edinburgh.

Recovering Mylne’s thought

Mylne’s thought was not published in his lifetime other than in a few unrepresentative fragments, though several of his students went on to publish books that drew on the ideas in his lectures. However, his thought can be recovered in some detail from manuscript lecture notes or ‘minutes’ left by students, amounting to around 250,000 words. These exemplify the advanced note-taking skills students acquired in George Jardine’s Logic class and are in substance mutually corroborating. In my view, they represent a scorecard of philosophical debate amongst the future opinion forming classes of Glasgow over a period of 38 years when educated public opinion was typically more reformist than before or after in relation to the political arrangements of the day. They also demonstrate that philosophical opinion in Glasgow differed substantially from the common sense philosophy of Reid and Stewart.
Outline of Mylne’s philosophy

Turning to mental philosophy, Mylne agrees with Reid in making judgement an independent faculty of the mind in addition to sensation and memory, though his list of elementary mental faculties stops with these three. These are not necessarily the same as the more complex operations that go by the same names. For example, a memory that something happened in the past already includes elements of conception (of the something) and judgement (that the something happened). Mylne’s simple sensation and memory correspond instead roughly to Hume’s impressions and ideas. Simple judgement is a primitive act of comparison which has for its object at least two sensations or memories. For example, the primitive judgement that it is getting colder involves a comparison of a present sensation of cold with the memory of a past sensation of relative warmth. This too corresponds roughly to Hume’s reason or judgement.19

Mylne’s conception of mature reason is judgement operating on more complex or abstract mental objects, typically mediated by conceptions and guided by considerations of causality. Mylne’s basic philosophical project is thus to explain how human mental life (including Reid’s judgements of common sense) is built up from these three primitive or simple mental operations.

General disagreement on the scope of rationality

A contrast thus emerges between Mylne and Reid’s respective views of the relations of reason and common sense. Mylne gives the leading role to reason over all other considerations. He thus attacks Reid and Stewart’s limitation of reason by fixed first principles of common sense that, according to Reid, ‘reason can neither make nor destroy’.20 This is a guiding thread running through Mylne’s course of lectures and manifesting itself on several particular issues. Thus he cites critically Reid’s observation that the mind is ‘inspired with the various principles of common sense’21 by degrees, arguing that this

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have transcribed one (the other being in shorthand) and it amounts to 43,900 words. Obviously the evidence is not ideal, as what was heard and written may diverge from what was said.

21 Inquiry, chapter 5 section 7, 130.
‘inspiration’ is in fact the discovery of general conclusions ‘in proportion to our knowledge and experience’. On two subjects that form major set piece arguments in his moral philosophy lectures this disagreement has content: the first is the role of touch in perception and the second is free will.

Mylne’s general position is that what Reid classes as ‘principles of common sense’ and ‘active principles’ are in fact complex judgements about sensations and memories that have become habitual and of which we are therefore no longer directly conscious. In a remarkably intellectualist analysis of human nature, Mylne goes on to argue that the will is ‘not a distinct and separate faculty, but only an exercise of judgement’. The identity is to be taken literally. He thus identifies active principles with beliefs and insists on their rationality. In support of this, he argues that Reid’s work is deficient in analysis of mental phenomena. Mylne told his students:

Many of the springs of our actions which Dr Reid has treated as the primary active principles are evidently complex. They have been thought simple, but are compounds that may be analysed into their proper elements. Dr. Reid has not handled this subject right; he has not explained distinctly the will and understanding. For example, what is opinion, it is a principle of action and belongs to the understanding. It is a rational principle, and these are very nearly allied to the intellect. Opinion and a great number of other principles given by Dr Reid are no other than the powers of reasoning and thought.

This refers to Reid’s placing of opinion amongst the ‘animal principles of action’ in the Essays on the Active Powers. The same thought reoccurs when Mylne expounds his philosophical agenda in his own terms. He notes that ‘passions, affections, habits and appetites’ move us to action and turns to consider passion. He explains firstly in relation to passion in general:

The principle of thought is the primary [part] of any of the passions, because we must first think, compare and judge before we have any passion. [For] example: we cannot be angry at any[one] until we

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23 Wicksteed notes, Lecture 68.
24 I have collated the following passages from the 1799/1800 (MS Murray 207), Pollock (MS Gen 1355/101 – 103) and Mackenzie (MS Gen 466) notes at GUL. Material in square brackets is either dubious readings or inserted by me to clarify the meaning.
25 Reid, Active Powers 3.2.7.
perceive, reason and pass a judgment, viz. believe an injury to be received. It is thus with all the other passions and affections. [There is] thought in the most sudden gust of passion.

The remaining parts of passion, according to Mylne, are bodily emotion and movement. Reid also makes the point that passions are intentional (about something), but for Mylne this undermines the view that passion and the like are not themselves rational, but akin to instincts. They are ‘the offspring of reason and modification of it’, though, he concedes, ‘it may be erroneous, ill directed reason’.26 Moral actions, as a special kind of action, are subject to the same laws. He explains of the above analysis:

If this be true in common actions it must also be true in moral actions. Indeed it is not denied by those who place morality in instincts that these are connected with the intellect. Man is only a moral agent so far as he is an intellectual creature. [Thus] to discover all the principles of action, we must consider the intellect.

Hence Mylne includes an analysis of the intellectual powers in his moral philosophy lectures. It emerges in the course of these that the disagreement with Reid over reason is in part merely verbal. In the Inquiry for example, Reid restricts reasoning to deliberate reflective acts. He writes:

When I hear a certain sound, I conclude immediately, without reasoning, that a coach passes by. There are no premisses from which this conclusion is inferred by any rules of logic. It is the effect of a principle of our nature common to us with the brutes.27

The justifications here given equate reasoning with a conscious process of deduction. Mylne on the contrary regards reason as virtually omnipresent in mental life even when not slowed down by deliberation. He said:

We are not conscious of reason in the greatest number of everyday actions yet reason [is not] unfelt. These operations have been so often performed, [and] are consequently so quickly done, that they pass [as] natural. Reason is not always slow. In general our reason proceeds with

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26 Pollock notes 24/1/1821.
27 Reid, Inquiry, chapter 4 section 1.
the velocity of [that] which we call feeling. In any discourse the rational faculty makes both slow and hesitating steps. Then we know that we act from reason, but when there is no doubt, the velocity [with] which reason [decides] is very great.

In passing, this shows that an idea of unconscious mental activity later associated with Mylne’s student William Hamilton\textsuperscript{28} is already present in Mylne’s lectures. In one of his common argumentative strategies, Mylne seeks to ‘illustrate’ this analysis by reference to ‘examples’. He says:

Suppose a man to see his house on fire. He is [thrown] into violent agitations, but his reason is not quenched. If the fire be [of little strength] he will endeavour to extinguish it himself; if at another, he cries to his neighbours; if at another, he may not try to extinguish [it], but to rescue the valuable, or the most valuable [of his possessions], out of its way.—In all these different circumstances, he acts from the conceptions which he forms, which the circumstances oblige him to form. […] In the most hurried case [then, his] action must be regarded as springing from reason.\textsuperscript{29}

Turning to a moral example, Mylne instances a case where someone in authority denies that he acts out of rational considerations, but out of passion. Mylne said:

Considerations drawn from reason and reflection also occur where we attribute our actions to passion and thus excuse ourselves by saying our passions are too strong. […] The person who beats his servant or his dog has probably some mixture of cowardice in his action and is sensible that they can’t oppose him. The rage will be less shown if it is an equal or superior that has offended him. If he knew that his servant could toss him over the window or that his dog had the strength and ferocity of a genuine bulldog, he would not act thus.\textsuperscript{30}

In this case, the intellectual analysis in itself generates a case for moral reform. The observational humour and implied sympathy with the underdog illustrate


\textsuperscript{29} Pollock notes 23/1/1821.

\textsuperscript{30} MS 1799/1800, 231, and Pollock 24/1/1821.
the broadly Christian and Whig sensibility that are an attractive aspect of Mylne’s lectures.

The role of touch in perception

The first issue where the contrast of Mylne and Reid on the scope of reason has philosophical content is Mylne’s account of the role of touch in perception. In this, Mylne seeks to vindicate the rationality of belief in an external world in an exposition drawn largely from Étienne Bonnot, Abbé de Condillac (1714–80).31 There is a contrast here between Reid’s *Inquiry into the Human Mind on the Principles of Common Sense* (1764) and Condillac’s *Traité des Sensations* (1754, hereafter ‘Treatise’). It appears that Condillac wrote this work in part as an answer to Berkeley’s immaterialism32 and its central purpose is to derive externality from sensation. Reid appears not to have been familiar with the argument of Condillac’s Treatise when he composed the Inquiry.33 The bulk of Reid’s Inquiry is taken up with a detailed treatment of sight that deals at length with scientific theories and subsidiary topics such as squinting and double vision. His treatment of touch is relatively sketchy and makes no mention of scientific literature. In contrast, Condillac in the Treatise treats sight briefly as one of the senses that do not give knowledge of externality, whilst the bulk of his book consists instead of a detailed account of the sensations of touch and an explanation of how the judgement of externality is derived therefrom. This sets the scene for Mylne’s critique of Reid on touch.

Mylne takes issue with Reid’s view that sensations of touch only ‘suggest’

31 Mylne owned a three-volume 1777 edition of Condillac’s *Oeuvres* (see Skirving catalogue III–47, at GUL) containing the *Essai sur l’Origine des Connaissances humaines; Traité des Systèmes; Traité des Sensations* and *Traité des Animaux*. Mylne also owned copies of Condillac’s later works.

32 Condillac was challenged by Diderot to answer Berkeley. Berkeley’s *Three Dialogues* were translated into French in 1750—see Léon Dewaule, *Condillac et la Psychologie anglaise contemporaine* (Paris, 1892), 6. It is notable that Adam Smith owned English translations of Condillac’s *Essai* and *Traité* (held at Glasgow University Library) and his discussion of external perception should be seen in this light rather than as a contribution to an autonomous Scottish debate.

33 Reid says in the *Inquiry* that advocates of externality on the basis of the ideal system ‘seem for half a century past to decline the argument’ with Berkeley (chapter 5, section 7), which is precisely what Condillac seeks to do. Paul Wood has recently identified from the professor’s receipt books held at Glasgow that Reid borrowed Condillac from the library between 1765 and 1773 (see Wood, forthcoming). The significance of this for Reid’s later work is beyond the scope of this article.
the conception of an external object which they in no way resemble. In a series of graded thought experiments, Reid asserts in the *Inquiry* that ‘we need not surely consult Aristotle or Locke, to know whether pain be like the point of a sword’.\(^{34}\) They are quite unlike, he thinks. Mylne’s critique points us to the *Inquiry* (quoted by Mylne), where Reid writes of an imaginary person:

> We shall first consider his body fixed, immovably in one place and that he can only have the feelings of touch by the application of other bodies to it. Suppose him first to be pricked with a pin; this will, no doubt, give a smart sensation: he feels pain: but what can he infer from it? Nothing surely with regard to the existence or figure of a pin.\(^{35}\)

The sensations we feel in other situations, Reid argues, if we attend to them only in isolation, likewise do not directly indicate externality.\(^{36}\) Mylne discusses this and the following passages at length. He argues that Reid is too rash to conclude that no combination of sensation and reflection indicates external reality. Mylne says:

> After different modifications of the same case, the Doctor comes to the sweeping conclusion that philosophers have imposed upon themselves, and upon us, in pretending to deduce from sensation the first origin of our notion of external existences, of space, motion and extension and all the primary qualities of body. How then is this notion acquired? By common sense, says Dr Reid. This common sense can only signify innate ideas, or instinct. It overthrows all investigation. As for the argument, it leads to scepticism instead of curing it.

Mylne proceeds to offer his own account drawn from Condillac:

> If Reid had not concluded so soon, he would have been able to come to the idea of an external world. He is right in saying that those changes in sensation that make his imaginary being feel cannot give him the notion of solidity, extension &c, but he goes too far when he says that no touch will give any notion of the external world. We allow that the first prick of a pin would give no [room] for inference and that certain sensations

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\(^{34}\) Reid, *Inquiry*, chapter 5, section 7.

\(^{35}\) Reid, *Inquiry*, chapter 5 section 6 ‘Of extension’.

of touch, however long acting, can give no idea of external matter, any more than any sensations from our other senses. Thus heat and cold, but to pass over these, we shall find that sensation alone gives us no information of external bodies. Memory and judgment are required before we can have perceptions. We need not expect that without the internal faculties to record the sensations of touch, we could have information of the qualities of matter.

[...] Let us not be so unreasonable as, like Reid, to confine our being to one spot. Let our man have all his senses, all his powers of motion and all his [internal] faculties, though in a dormant state. In these circumstances it is very amusing to conjecture his feelings, vide Condillac and Buffon, who has written with more elegance but less accuracy.

This refers to Buffon’s *Histoire Naturelle*, a work widely available in Glasgow. Mylne goes on to argue that the conception of an external body is composed of three classes of idea derived from touch, firstly ideas of tangibility arising from sensations of resistance; secondly of figure, which arises from ‘touch modified’ and by ‘traversing the outlines of things’, which would give the ideas of a continuous surface and of its interruption; and thirdly spatial externality, which is at issue. Mylne concludes:

> It is gross scepticism to say that such a being cannot [form these] notions, as Dr Reid thinks. The two classes of tangible and figurate qualities make up a great portion of our ideas of an external world. Now we only want to find out that they are external.

Following Condillac, Mylne seeks to derive the concept of externality from reflection on the sense of touch. To appreciate what is going on in the moral philosophy classroom here, we must note Condillac’s insistence that his argument be thought through as an experiment, that we enter into the spirit of his statue, which in Mylne has become an ‘imaginary being’. There is a preliminary step here by which we identify extended sensations of touch as belonging to ourselves. This reflects Condillac’s analysis of the *sentiment fondamentale* deriving from bodily sensation, and his consequent view that

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under my hand when I touch my skin, I feel ‘a continuity of self’. Mylne said:

There is a third class of ideas that must be learned, viz the ideas of externality. What means this term: that which is out of our own bodies. I would give him this idea in this simple manner: again by the sense of touch. Some ascribe it wholly to resistance. Condillac’s explanation is better. There is an easy way by which he may distinguish between himself and other bodies. [It arises from] the difference of feeling which we have when we touch ourselves from that which we have when we touch other objects. When we touch our own bodies, we have a double sensation. When we touch our arm with the hand [for example,] we have the same kind of feeling as if we were to touch any other substance unconnected with ourselves, but it is a double feeling, both in the arm which is touched and the hand which touches. His own body would afford sensations of continuity and resistance, but the sensation would be returned, not only from his hand but also from the part of his own body to which it was applied, but it would not return from a tree. When he touches any other body he would have only a single sensation of touch: his sensation would only be in one direction. All single feelings would be called, by the same [being], external. Sufficient experiments of this kind would teach him what belonged to him and what did not.

In this way, Mylne concludes, we would at length learn that the surface of our body was continuous and thus would have the idea of an external world beyond it. The sense of touch, he concludes, is the source of our ideas of externality. In a final twist, he concedes that having the idea of an external world does not guarantee its truth. At this point, he calls in common sense and probability, but not at the expense of investigation. This analysis was developed further in French phenomenology, but in Glasgow appears to have been forgotten until revived in the work of John Macmurray (1891–1976).

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39 Condillac, *Traité* 2.5, 104.
40 This borders on the idea of ‘active touch’ that is prominent in later French analyses.
41 The history of this is given in Gabriel Madinier’s *Conscience et Mouvement* (Paris: Alcan, 1938, 2nd edn, 1967).
42 See *The Self as Agent* (London, 1957), chapter 5.
Free will and Necessity

Let us turn to Mylne’s second area of detailed disagreement with Thomas Reid. This concerns free will. Reid had argued for a version of free will in his *Essays on the Active Powers of Man* (1788), according to which freedom is a power of the human mind over the determinations of the will. We are not determined to act necessarily by motives, Reid argues, but rather we determine ourselves to act freely by means of our own mental self-energy. In contrast, Mylne argues that actions are necessarily determined by motives or reasons. He argues that the dispute is in part verbal, in part technical in nature. His own use of terms appears in the following passage:

We may act against inclination, but not against will. The lover leaves his mistress much against his inclination, but he has a motive stronger to leave her than to stay, and by this motive his will must be determined.43

Mylne gives Reid pride of place as an exponent of free will and summarises Reid’s three arguments in support of it. Briefly, these are: firstly, that such freedom is a common sense belief, for which Reid offers a variety of evidence; secondly, that it is implied by accountability; and thirdly, that it is implied also by our ability to pursue a fixed purpose through time. Mylne’s lectures on freedom and necessity expound the views of a number of authors and he takes an even-handed approach that disdains attacks on the motives of either party. Other than Reid, he recommends Jonathan Edwards, ‘whose Treatise on this subject is perhaps the most masterly we have’. 44 His own views are interleaved with these expositions and lean to the side of necessity. In my view, this probably reflects the ideas of the Glasite or Sandemanian Church as found in William Godwin’s *Enquiry into the Principles of Political Justice* (1793), a work which Mylne refers to earlier in the lectures, but probably also direct knowledge of Glasite ideas, Mylne having been brought up a son of the Manse in the Perthshire heartland of the Glasite movement.45

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43 Pollock Notes 16/2/1821 (GUL: MS Gen 1355).
44 He also mentions on the side of necessity David Hume, Lord Kames and Joseph Priestley; and on the side of freedom Bishop Butler, Richard Price and Bishop Horsely.
45 Mylne owned a second edition of Godwin’s *Inquiry* (London, 1796, see Skirving catalogue) and cites it in the 1799/1800 lectures. Godwin’s acknowledges the determining force of Sandemanian ideas on his early work (see “The Principal Revolutions of Opinion” in *Collected Novels & Memoirs*, Vol. 1 (London: Pickering,
argued that belief or faith (they equated the two) was not a meritorious act, but a swaying of the mind through rational deliberation and presentation of evidence.\textsuperscript{46}

Mylne thus introduces into the argument on free will the intellectualist bias of his general philosophy in opposition to Reid. He says: ‘The view which we have taken of the will is, that it is not a distinct and separate faculty, but only an exercise of judgement’.\textsuperscript{47} Mylne agrees that we are not pushed around by motives against our will, but that we are determined by our will, which he identifies with reason. He prepares the ground by quoting Reid against himself. Mylne states:

In the 1st chapter of Reid’s second Essay on the Active Powers, we find a striking admission: “In all determinations of the will” says he [i.e. Reid], “that are of any importance” (the occasion for inserting this clause is not very apparent) “there must be something in the preceding state of the mind, which disposes us to, and indeed produces, that determination.” Now this would seem equivalent to granting that the judgement is concerned in all determinations of the will. And he adds: “If the mind were always in a state of perfect indifference, then our active powers would be given us in vain.” That is to say, we require some motives and inducements to act.\textsuperscript{48}

As he thinks judgement is not a capricious act, but involuntary recognition of a state of affairs, Mylne is led to accept necessity. He is typically unimpressed with Reid’s first appeal to common sense and presents counterarguments that common sense endorses the determination of action by motive. To Reid’s second argument, on accountability, Mylne replies that instead: ‘such freedom is inconsistent with accountability. If we could conceive the moral conduct of man to proceed from self energy without attention to motives, we could give his actions neither praise nor blame’.\textsuperscript{49}

On Reid’s third argument deriving free will from persistence in a plan, which Mylne considers unique to Reid, he comments as follows:

\begin{footnotesize}
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\item[\textsuperscript{46}] Robert Sandeman, Letters on Theron and Aspasio (Edinburgh, 1757).
\item[\textsuperscript{47}] Wicksteed notes (GUL: MS Gen 97/101–103, Lecture 68).
\item[\textsuperscript{48}] Ibid. citing Reid’s Active Powers 2.1, near the end.
\item[\textsuperscript{49}] Ibid.
\end{itemize}
\end{footnotesize}
As to Dr Reid’s third argument, that a man shews his free-agency by carrying into effect a plan that he has determined upon, in spite of all motives which might lead him to the contrary, […] it ought to be remembered that some motive led him to form the plan, and under the influence of the same motive he continues it. If he finds the plan less favourable than he expected, he may continue it from his pride, or change it for a better: but in either case he would act under the influence of motives.⁵⁰

Mylne ends his exposition with the remark: ‘Perhaps the objections [to necessity] would not appear so ill if we would substitute the word reason instead of the term motive’.⁵¹ In this sense, his position on free will should be seen as an expression of the intellectualist bias of his thought. In this way, as well as in others unconnected with Reid, the significance of Mylne’s philosophy appears as a reassertion of the sovereignty of reason.

Conclusion

In my view, the historical significance of Mylne’s philosophy is twofold. Firstly, Mylne’s twin commitments to rational piety and social reform, qualifying the influence of Reid, were influential on the work of the English dissenters and Unitarians⁵² and on his former students in Ireland,⁵³ Australia⁵⁴ and America,⁵⁵ as in some respects on William Hamilton in Edinburgh.⁵⁶ Secondly, through the idea of the unity of the mind implicit in the sovereignty of reason, Mylne more than Reid is a spiritual forebear of the Glasgow Idealists. Recovery of Mylne’s work thus fills in the first half of a near-eighty year gap in the history

⁵⁰ Ibid, Lecture 71.
⁵¹ Mackenzie notes (MS Gen 466/246).
⁵² James Yates, Lant Carpenter and James Martineau.
⁵³ John Young and John Cairns.
⁵⁴ John Dunmore Lang.
⁵⁵ James McCosh and Frances Wright.
⁵⁶ John Veitch, Memoir of Hamilton (Edinburgh, 1869), 21. Hamilton’s edition of Reid (Works of Thomas Reid (Edinburgh, 1872) shows that his concepts of the Absolute and Infinite as opposed categories are based in part not only on versions of Kant’s Antinomies of Pure Reason, but on direct knowledge of the Arminian/Calvinist arguments on free will found in Mylne’s lectures (Vol. 2, 599n (note to Active powers 4.1 & references on). Incidentally, Veitch may well be wrong to assume that Mylne knew of De Tracy as early as 1804.
of philosophy in Glasgow between Reid’s *Essays on the Active Powers of Man* (1788) and James Hutchison Stirling’s *The Secret of Hegel* (1865). There is still a generation gap between the idealists and Mylne.\(^{57}\) However, a knowledge of the Mylnean ethos can be identified as passing from Mylne to the early idealists via such figures as Robert Buchanan and John Pringle Nichol who taught or were related to the early Idealists.\(^{58}\)

Finally, Mylne’s work also has a philosophical and educational significance. The priority he gave to investigation over common sense in the study of the mind leads out naturally into investigations of the social acts of the mind that are fitted to shed light on the work of the liberal professions, as instanced by his own lectures on political economy. In this sense it represents a model of philosophical activity embedded in the early stages of professional education that extends and modifies Reid’s published work on first principles.

*New College, University of Edinburgh*

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\(^{57}\) To my mind, the writings of William Fleming are pale copies of Reid and Mylne.  
\(^{58}\) For example, John Pringle Nichol offered to stand in for Mylne as moral philosophy lecturer and was father of the leading Glasgow Idealist John Nichol; whilst one of Mylne’s pupils, John MacLeod Campbell (1800–72) was later honoured by the Idealists John and Edward Caird.
In a recent article on Reid’s theory of single and double vision, James Van Cleve considers an argument against direct realism formulated by Hume. In the *Treatise of Human Nature*, Hume argues for the mind-dependent nature of the objects of our perception from the phenomenon of double vision. As Hume says, ‘[w]hen we press one eye with a finger, we immediately perceive all the objects to become double, and one half of them to be remov’d from their common and natural position.’ Since we cannot ascribe continued existence to either of these objects, they must both be mind-dependent. Reid does not address this particular argument, but Van Cleve considers possible answers Reid might have given to Hume. He finds some fault with all the answers he considers.

In what follows, I will first present Van Cleve’s reconstruction of Hume’s argument. I will then suggest that both appearances in double vision could be considered visible figures of the object, and show how this solution might preserve Reid’s direct realism. However, this solution is not compatible with the single appearance of an object predicted by Reid’s theory of single and double vision. This consequence will appear evident, once we consider the critique of Reid’s theory of single and double vision formulated by William Charles Wells (1757–1817) in his *Essay upon Single Vision with Two Eyes* (1792).

**Hume’s Argument**

According to Reid’s *Inquiry*, double appearances occur as a result of shifting attention to an object on which our eyes do not converge. If we attend to a finger closer to us than a candle on which our eyes converge, the finger will

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3. Reid briefly reviewed Wells’ *Essay upon Single Vision with Two Eyes* (Aberdeen University Library, Birkwood Collection, MS 2131/3/1/4): see Appendix II.
appear double. If we attend to a candle situated further away from us than a finger on which our eyes converge, the candle will appear double. These double appearances do not last long, since our eyes follow the direction of our attention and converge on the object that we attend to. But the argument to be drawn from this experiment is the same as in the case of double vision presented by Hume. In the systematization of Van Cleve, when you attend to your finger while focusing on the candle:

1. You see two fingery objects.
2. There are not two (existent) physical fingers before you. Therefore,
3. a. You see at least one fingery thing that is not an (existent) physical finger.
   b. It is a mental finger—a fingery image or sense datum existing in your mind.
4. The other fingery object you see is (as Hume says) ‘of the same nature’ as the mental finger (i.e., is phenomenologically just like it). Indeed, every finger you have ever seen is of the same nature as the mental finger.
5. Items that are phenomenologically alike have the same ontological status. (Ontology recapitulates phenomenology, to echo an old slogan.) Therefore,
6. Every finger you have ever seen has been a merely mental finger. Generalizing: you have never seen any objects in the physical world but only mental images of them.

Van Cleve examines how each of the five premises could be denied. I won’t discuss Van Cleve’s observations on premises 4 and 5. Premise (3b) says that at least one of the two fingery objects exists only in your mind. This premise follows from the premise (3a), according to which, at least one of the two fingery

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5 Ibid., 134/15–135/23.
6 Van Cleve, ‘Reid on Single and Double Vision’, 11. Van Cleve’s reformulation of Hume’s argument is debatable, as John P. Wright has pointed out to me. For Hume, the immediate conclusion of the argument is that ‘all our perceptions are dependent on our organs, and the disposition of our nerves and animal spirits’ (Hume, *A Treatise of Human Nature*, Liv.2, 140). The dependence of perceptions is a dependence on the state of our bodies—or more precisely on the mind/body union. Thus, the contrast between what is ‘mental’ and what is ‘physical’ would not really capture Hume’s discussion of double appearances. His final conclusion in the paragraph is merely about the lack of independence of our sensory perceptions.
Van Cleve: Double Appearances Cannot Be Visible Figures

As we have seen, premise (3b) says that at least one of the two fingery objects exists only in your mind. New Realists—as Van Cleve calls them—deny this premise. In their view, ‘both’ of the fingery objects you see are externally existing physical and finger-like objects, even if at most one of them is (or is part of) a flesh and blood finger.7 If this account is correct, you still don’t have any guarantee of perceiving an object directly in a case of double vision, but at least you directly perceive two other external physical objects that represent the original object.

Van Cleve adds that ‘at most one of [the fingery objects] is (or is part of) a flesh and blood finger’.8 It may not be clear why they can’t both be parts of the same flesh and blood finger. Given that objects have different parts, why can’t both the fingery objects we see be parts of the original flesh and blood finger? Presumably, Van Cleve just extends to both fingery objects, conceived merely as parts of the blood and flesh finger, what can only be said of the fingery objects conceived as distinct physical objects. No two distinct physical objects can exist in the same place at the same time, and no two parts of a numerically identical object can exist in the very same place at the same time. However, these principles do not prevent two distinct parts of a numerically identical object to exist in different places at the same time. But it would appear an impossible task to show that the two fingery objects I see in the case of double vision are both parts of the same object. After all, the two fingery objects are not contiguous to each other, and there is not a continuous path from one to the other that remains within the same object. They certainly look to our sight as two distinct things rather than two parts of the same thing.

Perhaps, Reid’s notion of visible figure could be put to use to explain how both fingery objects could be parts of the same blood and flesh finger. Van Cleve is aware of this possibility, and he explains why it can’t work. He first introduces the distinction between real and visible figure of an object. In Reid’s words:

7 Ibid., 13.
8 Ibid. Emphasis added.
As the real figure of a body consists in the situation of its several parts with regard to one another, so its visible figure consists in the position of its several parts with regard to the eye.\(^9\)

An example of visible figure mentioned by Reid is the elliptical shape of a round plate viewed obliquely.\(^10\) As Van Cleve says, Reid explicitly denies that visible figure is a mental item (an impression or an idea), since it is extended in breadth and length and no mental item can be extended and figured. Therefore, visible figure is real and external to the eye.\(^11\) These claims are sufficient for making visible figure a suitable candidate for explaining the two appearances in double vision. As Van Cleve says: ‘Perhaps, then, Reid would say that when you see double, what you see are two visible figures, both of them existing in the space external to the eye’.\(^12\)

Van Cleve then applies to double appearances conceived as visible figures, the following dilemma: either (1) the two visible figures of the finger are external objects numerically distinct from the finger itself, or (2) they are parts of the surfaces of the finger. As Van Cleve argues, if they are numerically distinct from the finger itself, then Reid’s direct realism is compromised, since we perceive an object only by perceiving something else that is not even part of it. We are bound to accept this consequence, if we want to consider double appearances as visible figures, since, according to Van Cleve, the second horn of the dilemma is not true: visible figures are not parts of the surfaces of things we perceive by sight.

A possible development of this position would be that visible figures are generally (though not always) parts of the surfaces of physical things like fingers and tables, and that one can see a finger in virtue of seeing its facing surface or some part of it. For better or for worse, however, Reid’s views about the geometry of the visual field make this strategy unavailable to him. Reid believes that the familiar geometry of Euclid holds for tangible figures, but not for visible figures; for example, the tangible surface of a rectangular tabletop has an angle sum of 360 degrees, but any visible rectangle will have an angle sum greater

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\(^10\) Ibid., VI.7, 95/20.


\(^12\) Van Cleve, ‘Reid on Single and Double Vision’, 13.
than 360 degrees. It follows that what I see when I look at my tabletop cannot be part of its surface.¹³

Van Cleve’s reasoning is compelling: the geometry of visible figures is different from the geometry of the (parts of the) surfaces of objects; therefore visible figures cannot be parts of the surfaces of objects.

Reply to Van Cleve: Double Appearances Can Be Visible Figures

We should reject Van Cleve’s dilemma. It is not true that visible figures in double vision must be either two objects distinct from the real object or two parts of the surface of the object. In perceiving two visible figures we directly perceive the very same object but from two different points of view. Therefore, we see it differently since the object has different properties in relation to these different points of view.

As we have seen, visible figure is determined by the position of the parts of an object with regard to the eye. We originally perceive the visible figure of an object by sight, but we do not perceive the object’s distance. An object that is further away from us will subtend a smaller angle at the eye than the same object close by: as a consequence, its visible figure will occupy a smaller portion of the visual field in the former case than in the latter case, although the object remains the same in its tangible properties. In a similar manner, it is not surprising that the sum of the angles of a square tabletop should be more than 360 degree in relation to the point in space where the eye is located, and that this angle sum varies in relation to the point of view. We are speaking indeed of different properties of the same object: the position that the parts of the object have in relation to each other is ascertained by the sense touch, while the position that the object has in relation to a point in space where the eye is located is ascertained by the sense of sight. While the first is an intrinsic property, the latter is relative to a viewpoint but is nevertheless real and reliably ascertained by the sense of sight. Indeed, in another paper, Van Cleve claims that visible figure is a relativized property of an object, a property that an object has in relation to the place where the eye is situated.¹⁴

¹³ Ibid.
Hence, in seeing the visible figure of an object, we directly perceive the very same object we touch, but only partially, that is, only insofar as its parts have position with regard to the eye. That direct realism is not compromised by visible figure is confirmed by Reid’s analysis of straight lines in the *Inquiry*. In the *Inquiry*, he compares the notion of a straight line that a purely visual observer has with our notion of a tangible straight line. In perceiving a line as straight, a purely visual observer excludes curvature to the right and left sides, but cannot exclude curvature backward and forward, since he is not aware of a third dimension. However, his perception of the line is correct as far as it reaches. This analysis is confirmed in the *Essays*, where Reid calls visible space a partial notion of tangible space, and is explicit in denying that visible and tangible space are two different things:

> When I use the names of tangible and visible space, I do not mean to adopt Bishop BERKELEY’s opinion, so far as to think they are really different things, and altogether unlike. I take them to be different conceptions of the same thing; the one very partial, and the other more complete; but both distinct and just, as far as they reach.

In order to appreciate Van Cleve’s point, one should go back to his original article. There, he argues that a genuine non-Euclidean geometry must be a geometry of entities that possess non-Euclidean properties intrinsically. But the objects we directly perceive by sight do not have non-Euclidean properties intrinsically, but merely in relation to the point where the eye is located. Therefore—as van Cleve argues—either (1) we give up the claim that Reid discovered a genuine non-Euclidean geometry, or (2) we give up direct realism and introduce non-Euclidean visible entities as proxies for the real object. I will not examine this further dilemma here: I only point out that it arises from Van Cleve’s notion of what constitutes a ‘genuine non-Euclidean geometry’. He claims that a genuine non-Euclidean geometry is a geometry of objects that have non-Euclidean properties intrinsically, but this is a highly debatable assumption. It is enough for the purpose of this paper to grant

17 See above, note 14.
18 On this question, see Giovanni B. Grandi, ‘Reid’s Direct Realism about Vision’, *History of Philosophy Quarterly* 23 (2006), 225 – 41.
that three-dimensional Euclidean objects have non-Euclidean features merely as relativized properties.

Visible Figure, Visible Position, and the Law of Visual Direction

According to Reid, visible figure consists in the position of the parts of an object with regard to the eye. By sight we do not directly perceive its distance, but we do directly perceive its visible figure. In different words, we directly perceive the position of the parts of an object with regard to the eye (with the added qualification that, in normal conditions, we only perceive the position of those parts that are facing our eye: these normally reflect light to the eye). That, by sight, in normal conditions, we directly perceive the position of the parts of an object with regard to the eye seems to be a consequence of a law of vision on the direction we see points of the facing surface of an object: ‘[E]very point of the object is seen in the direction of a right line passing from the picture of that point on the retina through the centre of the eye’. In normal conditions, the rays of light sent to the eye from a point of an object are collected by refraction of the crystalline in one point on the retina. Because of the abovementioned law, the point of an object will then be seen in the direction of a straight line passing from the picture of that point on the retina through the centre of the eye. Explaining the notion of position with regard to the eye, which is central to the notion of visible figure, Reid says that

Objects that lie in the same right line drawn from the centre of the eye, have the same position, however different their distances from the eye may be: but objects which lie in different right lines drawn from the eye’s centre have a different position.

We may want to speak of different points on the surface of the same object rather than of different objects. Thus, we can reformulate Reid’s thought: different points will have different positions with regard to the eye if and only if they lie on different right lines drawn from the centre of the eye. Reid must have thought that his account of visible figure given in Chapter 6, Section 7, of the Inquiry, is compatible with the law of visual direction given in Chapter

19 Reid, Inquiry, VI.12, 122/39–123/2.
20 Ibid., VI.7, 96/20–24.
6, Section 12. Hence, he must have assumed that the right line that determines the position of a point of an object with regard to the eye must be coincident with the direction in which we see this point. In other words, the line drawn from the centre of the eye to a point of an object must be coincident with the line passing from the image of this point on the retina through the centre of the eye.\(^{21}\)

The Problem: Is the Law of Visual Direction Compatible with the Law of Single and Double Vision?

The notion of visible figure depends on the notion of visible position of the parts of an object with regard to the eye. We can further assume that this notion of visible position must be compatible with the law of visual direction enunciated by Reid. If we see an object in the direction of a right line passing from the point on the retina where its image fall through the centre of the eye, we see the position of the object with regard to the eye.

Two questions emerge from this analysis of the relation between visible figure, visible position, and visual direction:

First, Reid must have thought that the law of single and double vision is compatible with the law of visual direction. We must then determine whether his account of single and double vision is really compatible with the

\(^{21}\) There is a certain degree of ambiguity in speaking of ‘the direction in which we see an object’. Among the possible meanings are the following ones: (1) In monocular vision, an object \(a\) is seen in the same visible direction (or has the same visible position) as another object \(b\), when both objects \(a\) and \(b\) are seen on the same right line passing from the point where their image fall (or would fall) on the retina through the centre of the eye (or, which is the same, when both objects are on the same right line drawn from the centre of the eye to them). Two objects \(a\) and \(b\) are seen in two different visible directions when they are seen on different lines passing from the point where their image falls on the retina through the centre of the eye (or, which is the same, when they are on different right lines drawn from the centre of the eye to them). (2) In binocular vision, we often speak of ‘an object to which both our eyes are directed’ or ‘an object on which the axes of both our eyes are directed’ (for example, the candle and the finger of Reid’s example). From this expression, we may perhaps go on to say that we see one object in the ‘same direction’ with (or by) both our eyes, when both our eyes are directed at the same object, that is, when the optic axes of both eyes converge on the object. If we accept this sense of ‘same direction’, an object on which both optic axes converge is seen in the same direction by both eyes. An object on which the two optic axes do not converge is not seen in the same direction.
law of visual direction. We will see that, according to William Charles Wells (1757–1817), Reid’s account of single and double vision is compatible with the law of visual direction, but only at the cost of being incompatible with another fundamental claim of Reid’s theory of vision, the claim that we do not immediately perceive distance by sight.\(^2\)

Secondly, the double appearance of a light-radiating point on the surface of the object can also be the result of this point projecting two images on the retina of the very same eye. Since this point projects two images on the retina, we see it in two different lines passing from its two images on the retina through the centre of the eye.\(^3\) But, clearly, double vision with one eye cannot explain double vision with two eyes. In the case of double vision with two eyes, we see one appearance with one eye, and another appearance with the other eye. One could then explain this double appearance by saying that we see the object from one point of view, and so in one line of visible direction, with one eye, and from another point of view, in another line of visible direction, with the other eye. But given that we see an object from two different points of view even when our eyes do converge on an object, that is, when we do perceive an object as single, then one may ask: why

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\(^3\) This is a point made by James J. S. Foster, ‘Reid’s Response to Hume on Double Vision’, *Journal of Scottish Philosophy* 6 (2008), 189–94.
does the object not appear as double even when, as a matter of fact, we do see it as single? We see an object in two lines of visible direction, drawn from the centres of the eyes to the object, when our eyes are misaligned and do not converge on the same object. But, in the same manner, we see the same object in two lines of visible direction drawn from the centres of the eyes to the object, when our eyes converge on the object: why are we not perceiving two visible figures even when our eyes are converging on an object?

Reid’s Theory of Single and Double Vision

Before I explain Wells’ criticism, it will be best to recall the detail of Reid’s theory of single and double vision.

Reid calls corresponding points those pairs of points of the two retinas that make us see an object single when images of the object are formed on these points. Those points of the two retinas that do not make us see an object as single do not correspond. He further determines that when we converge our eyes on an object, images fall on the two centres of the retinas, and we see the object as single. Hence, the two centres of the retinas are corresponding, that is, they make us see objects as single. According to Reid, we also perceive as single any object on the right or left side that is situated at the same distance from the eyes as the object to which the axes of our eyes are directed. The images of an object at the same distance as the object on which our eyes converge fall on points of the two retinas that are similarly situated with regard to the centres of the two retinas. Hence, these points are corresponding, they make us see objects as single.24

It is a consequence of Reid’s theory that objects that are further away or closer to our eyes than the object on which our eyes converge are seen as double, since they project images on points of the two retinas that are not similarly situated with regard to the centres of the retinas.25

Moreover, if we place an object in the axis of one eye, and another object in the axis of the other eye, each will project an image on the centre of the retina of the eye by which it is seen. But the centres of the retinas are corresponding points, and so, in this case, we will see the two objects as a single object. Reid reports an experiment where two coins are placed at the end of two long tubes

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24 See Reid, Inquiry, VI.13, 133/9 – 35.
through which we see with both our eyes. The two coins appear as single, overlapping each other.\(^{26}\)

According to Reid, this property of pairs of points of the retinas that allows us to see objects as single is an original property of the eyes.\(^{27}\)

### Wells’ Critique of Reid’s Theory of Single and Double Vision

Wells’ critique of Reid is rather complex, but I will try to isolate the main line of argument.\(^{28}\)

Wells presupposes that we can see an object as single with both our eyes, if and only if we see it in one visible place with both our eyes. The notion of visible place has two components: visible distance and visible direction. Hence, a theory of single vision will have to explain ‘in what manner the distance and direction, which are perceived by one eye, may coincide with those which are perceived by the other’.\(^{29}\)

\(^{26}\) See ibid., 136/15–27.

\(^{27}\) See ibid., 134/11–14. For Reid’s refutation of Robert Smith’s empirist view on single vision, see Reid, *Inquiry*, VI.17, 151–6.

\(^{28}\) Wells criticizes Reid’s theory of single and double vision in Part I of his *Essay upon Single Vision with Two Eyes* (see *Essay*, 79–84 [18–33]), but I will concentrate on the criticism that appears later in the book, in Part II, in the context of Wells’ presentation of his solution to the problem of single vision (see *Essay*, 85 [36–37] and 86–7 [40–4]). See Appendix I for a summary of Wells’ arguments in Part I of the *Essay*.

\(^{29}\) Wells, *Essay upon Single Vision with Two Eyes*, 84 [35]. In a short remark of his manuscript notes on Wells, Reid shows he had reservations on Wells’ account of what it means to see an object as single: “44 He [Wells] takes it for granted that when two objects are seen as one, they must be seen in a certain place, that is at a certain distance as well as in a certain direction” (Aberdeen University Library, Birkwood Collection, MS 2131/3/1/4). However, according to Wells, the perception of distance is not essential to an explanation of single vision with two eyes, as long as we agree that we see objects as single with both eyes by seeing them in one direction only: ‘[N]o person, I believe, has ever observed, that while an object seemed to one of his eyes at a certain distance, it has appeared to the other to be at a different distance, and from this circumstance alone has been seen double; or, to express the same thing in another way, that while the visible appearance of an object to one eye, covered the visible appearance of the same object to the other eye, the two appearances did not seem entirely to coincide, and make one, but were seen separate by the two eyes. I do not stop to give reason of this fact, which must be plain to those who are acquainted with Bishop Berkeley’s theory of visible distance; but proceed to mention that, the difficulty in finding a true and sufficient cause for the union of the two visible places of one or two objects to two eyes, must therefore consist altogether in showing, in what manner the two apparent directions may coincide, consistently with the attending phenomena’ (Wells, *Essay upon Single Vision with Two Eyes*, 84–85 [35–36]).
Wells then acknowledges that, according to Reid, we do not immediately perceive distance by sight. Wells also grants that the perception of distance is not essential to an explanation of single vision with two eyes, as long as we agree that we see objects as single with both eyes by seeing them in one direction only. According to Reid, it is by an original property of the points of the two retinas that we see objects as single. Hence, this original property must make us see objects as single by making us see them in one direction only.

Wells then points out facts that are confirmed by Reid’s theory of single and double vision: (1) an object that is at the point of intersection of the optic axes will be seen as single, and (2) two objects that are anywhere in the axes of the two eyes will be seen as single.

Let’s imagine a situation where two objects are in the axes of the two eyes. According to Reid’s theory, they will be seen as single, since they project points on the centres of the two retinas, which are corresponding points. Wells describes an analogous case, where we look at a distant object through two small holes in a card. One hole lets us see the object with the left eye, and the other hole lets us see the object with the right eye. While we see the distant object with both our eyes, the two holes appear as one: ‘Every person knows, that, if an object be viewed through two small holes, one applied to each eye, the two holes appear but as one’.30

Following the desiderata of Wells’ theory, we may now ask the following question: in what unique line of direction will this single appearance of the two holes be with regard to our eyes? Different alternatives may be conjured up as answers to this question.31 Will the appearance of a single hole be in

30 Wells, Essay upon Single Vision with Two Eyes, 86 [40].
31 In his theory of single and double vision, Wells argues that the apparently single hole neither appears to be situated along the axis of the right eye only, nor along the axis of the left eye only. It does not even appear along both axes at once, at their point of intersection. It rather appears along the ‘common axis’, a right line drawn from the point intersection of the optic axes to the midpoint of the line joining the two points of the corneas where the axes enter the eyes (he calls this line ‘the visual base’). This is a consequence of Wells’ first law of single vision: ‘Objects situated in the Optic Axis, do not appear to be in that Line, but in the Common Axis’. Wells’ second law states that, ‘Objects, situated in the Common Axis, do not appear to be in that Line, but in the Axis of the Eye, by which they are not seen’. Objects situated in the common axis will appear to the left eye as lying along the right eye’s axis. They will appear to the right eye as lying along the left eye’s axis. A third law encompasses the previous two propositions as particular cases: ‘Objects, situated in any Line drawn through the mutual Intersection of the Optic Axes to the Visual Base, do not appear to be in that Line, but in another, drawn through the same Intersection, to a Point
the axis of the right eye only? Or will it be in the axis of the left eye only? But since the two holes appear as one hole to both eyes at the same time, would it not be more plausible for this single appearance to be situated along the axes of both eyes? But if we accept this alternative, we cannot say that the two holes are perceived as single by the two eyes because they are perceived in one line of direction only. Indeed, according to this alternative, the two holes would have to be perceived along two distinct lines of visual direction: the left hole will appear in one line of direction drawn from the left eye, and the right hole in another line of direction drawn from the right eye. But we could still argue that the two holes appear as a single hole because they are seen by both eyes as if they were in the same place in space—as if they were ‘projected’ along the two lines of direction in one particular spot at a distance, the spot where these lines cross each other. Thus, if the two holes are seen in the axes of both eyes at the same time, it seems they can be perceived as a single hole, only if they are perceived as being located at the point of intersection of the two optic axes, where the object seen through the two holes is situated.

However—as Wells points out—this solution is contrary to fact, since the united hole does not appear to be located at the intersection of the optic axes but closer to viewer. Although Wells does not raise this objection at this point, this solution also seems to presuppose that we originally perceive distance by sight, since in order to perceive the point of intersection of the two optic axes, we would have to perceive at which distance from each eye the axes cross each other.

According to Wells, Reid’s theory tells us that the two objects in the axes of the eyes will be seen as single, but not in what unique line of direction this single appearance will be with regard to the eyes:

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in the Visual Base distant half this Base from the similar Extremity of the former Line, towards the left, if the Object be seen by the Right Eye, but towards the right, if seen by the Left Eye’. For Wells’ explanation of the three propositions, see Wells, Essay upon Single Vision with Two Eyes, 86–91 [40–55]. For an account of Wells’ laws of visual direction, see Wade, Destined for Distinguished Oblivion, 127–30; Wade, Ono, Mapp, Lillakas, ‘The Singular Vision of William Charles Wells (1757–1817)’, 3–7; Hiroshi Ono, ‘On Wells’ (1792) law of visual direction’, Perception & Psychophysics 30 (1981), 403–6. See also, below, Appendix III.

32 Wells, Essay upon Single Vision with Two Eyes, 86 [41]: ‘But whoever makes this experiment will distinctly perceive, that the united hole is much nearer to him than the object […]’. 
The other explanation is that furnished by the theory of Dr. Reid. According to it, the centres of the retinas, which in this experiment receive the pictures of the holes, will, by an original property, represent but one. This theory, however, though it makes the two holes to appear one, does not determine where this one is to be seen. It cannot be seen in only one of the perpendiculars to the images upon the retinas, for no reason can be given why this law of visible direction, which Dr. Reid thinks established beyond dispute, if it operates at all, should not operate upon both eyes at the same time; and if it be seen by both eyes in such lines, it must appear where those lines cross each other, that is, in the same place with the object viewed through the holes, which, as I have already mentioned, is contrary to experience.33

Reid’s theory of visual direction informs us that an object will be seen in the direction of a right line passing from the point of the retina where its image falls through the centre of the eye. Hence, the two objects in the axes of the eyes will be seen in two lines of visual direction: the object in the left axis will be seen in one line of visual direction drawn from the left eye, and the object in the right axis will be seen another line of visual direction drawn from the right eye. The single appearance of the two objects will not be seen in one line of direction only. But if we accept Wells’ claim that we see an object as single with two eyes if we see it in one line of direction only, it seems to follow that, in this case, we will have to see double. But we do see the two objects as single when they are placed in the axes of our eyes.

Hence, we end up with this choice of alternatives: (1) either we give up the standard law of visual direction whenever we see objects single with two eyes, or (2) or we do not give up the standard law of visual direction when we see objects as single with two eyes.

The first alternative seems to make sense. One could say that the law of visual direction applies only to monocular vision, but not to single vision with two eyes. But a consequence of this claim would be that an object is seen in one direction with one eye, and in another direction with both our eyes, and this is contrary to experience.

Nor is [the apparently single hole] seen in any direction, the consequence of a law affecting both eyes considered as one organ, but suspended

33 Ibid., 86 [41–42].
when each eye is used separately. For when the two holes appear one, if we pay attention to its situation and then close one eye, the truly single hole will be seen by the eye remaining open, in exactly the same direction as the apparently single hole was by both eyes.\textsuperscript{34}

If we do not give up the standard law of visual direction, then we see the two objects placed in the optic axes in two lines of visual direction from the two eyes. As Wells argues, whatever original property of the eyes makes us see the two objects as single must also make us see this single appearance in both these directions at the same time. Hence, we must see them as united at the point of intersection of these lines of direction, where the optic axes meet. But if we see them at the point of intersection of the optic axes, we must be able to perceive immediately distance from each eye. This consequence, however, is contrary to a fundamental claim of Reid’s theory of vision. Following in the footsteps of Berkeley and Robert Smith, Reid holds that the visual perception of distance is not original but acquired. We do not originally perceive distance by sight, but learn to associate certain clues that accompany vision with the original perception of distance given by the sense of feeling.\textsuperscript{35} In a previous passage of the \textit{Essay}, Wells neatly summarizes this objection to Reid’s theory of single vision:

\begin{quote}
Since visible place […] includes in it visible distance, it is evident that, if both eyes, by virtue of an original property, see an object in the same place, distance must also be originally perceivable by sight. Dr. Reid however, has himself so ably shown, that we should never have acquired by means of our eyes, any knowledge of distance, unless they had been assisted by the sense of feeling, that I forbear to say anything more upon this head, than the existence of no property can be admitted, which leads to the conclusion I have stated.\textsuperscript{36}
\end{quote}

\textsuperscript{34} Ibid., 86–7 [42].

\textsuperscript{35} On Reid’s theory about the visual perception of distance, see Reid, \textit{Inquiry}, VI.22, 178–87. In his Aberdeen lectures on natural philosophy given in the session beginning in 1757 (Aberdeen University Library, MS K160, proposition XXXIV, 300 et seq.), Reid subscribed to William Porterfield’s theory of single and double vision. This theory does indeed presuppose that we originally perceive distance by sight. In the \textit{Inquiry}, Reid rejected Porterfield’s theory (see Reid, \textit{Inquiry} VI.18, 156–9).

\textsuperscript{36} Wells, \textit{Essay upon Single Vision with Two Eyes}, 82 [27].
Conclusion

What is the upshot of our discussion of Wells’ critique of Reid? First, according to Wells, Reid’s theory of single vision, by itself, is incomplete, because it fails to specify one unique line of direction with regard to our eyes in which we see an object as single. If Reid does not specify one single direction in which we see the object, then we would have to see two fingery objects even when, as a matter of fact, we see our finger as single using our eyes. We should see two fingery objects because we see the same object from two points of view in two lines of visual direction.

Secondly, if Reid wants to maintain that the law of single and double vision is compatible with his law of visual direction, he must give up the claim that we do not originally perceive distance by sight.

As was shown in the first part of this paper, appearances in double vision could be understood as visible figures of an object. It has also been suggested, against Van Cleve’s thesis, that the notion of visible figure does not threaten Reid’s direct realism. Reid’s law of monocular visual direction states that we see an object in a particular direction, and this direction, in normal circumstances, coincides with the position of an object with regard to the eye. As we have seen, this notion of position with regard to the eye is part of Reid’s definition of visible figure. However, Wells’ critique shows that Reid has failed to explain how the law of visual direction is compatible with the law of single and double vision.37

APPENDIX I

Wells’ Arguments in Part I of the Essay upon Single Vision with Two Eyes

In Part I of the Essay upon Single Vision with Two Eyes, Wells’ criticism of Reid comes after the critique of two theories. Firstly, Wells addresses the theory he ascribes to Aguilonious, Dechales and William Porterfield. According to Wells, these authors assert that all objects (whatever their distances from the eyes may be) appear in the plane of the horopter and that an object is seen as single if it is actually situated on this plane (the horopter is a plane parallel to

37 I would like to thank John P. Wright for comments on the paper, and Hiroshi Ono for bibliographic references. Quotations from Reid’s manuscripts are printed with permission of Special Collections, Aberdeen University Library.
our eyes and passing through the object on which our eyes converge). Wells also criticizes Robert Smith’s account, according to which we see objects as single by learning to associate the two appearances originally given by the eyes with the information given by feeling that the object is single. Wells then presents a series of remarks on Reid. He firstly objects to Reid on anatomical grounds: according to Wells, Reid was wrong on the anatomy of the eye, and so his notions of optic axis and centre of the retina are not based on fact (see Appendix II, for Reid’s remarks on this part of Wells’ critique). Secondly, Reid’s law of single and double vision goes against ‘the analogy of nature’: whenever we find symmetrical organs or parts in our body (organs or parts placed in a symmetrical position with regard to an axis dividing our body into a left half and a right half), the right external part corresponds in its function to the left external part, and the right internal part corresponds in its function to the left internal part. But Reid’s law of single vision holds that points of the right eye’s retina that are on the left side of the centre of the retina (and so on the internal side of the right eye’s retina) must correspond to points of left eye’s retina that are on the left side of the centre (points that are on the external side of the left eye’s retina). To these ‘apriori’ criticisms, Wells adds three objections. The first objection states that since visible place includes visible distance in its notion, and objects are seen single if they are seen in the same visible place, the original property that makes us see objects as single should also make us see the distance at which objects are located. However, according to Reid, distance is not originally perceived by sight. The second objection cryptically alludes to the incompatibility between the law of visual direction and the law of single and double vision. According to the law of visual direction, we see every point of an object in the direction of a line passing from its picture on the retina through the centre of the eye. It seems to follow from this law that we see an object to which we direct our eyes as double, since we see it in one line of direction from one eye, and in another line of direction from the other eye. On its part, the law of single and double vision specifies on which occasions we see an object as single and on which occasions we see it as double. If the two laws are different, and work together, a paradoxical result follows: ‘… should the two laws exist together [without being the same identical law], objects seen with both eyes might sometimes appear quadruple, sometimes, triple, but never single’. The third objection points out that two objects—one placed in the axis of

— Wells, Essay upon Single Vision with Two Eyes, 82 [28].
the right eye of a squinting person, the other in the axis of the left eye of the same person—are not seen as single (contra what Reid’s theory of single vision predicts in normal cases).

APPENDIX II

Disagreements between Wells and Reid on the Anatomy of the Eye (MS 2131/3/1/4, June 1792).

Wells first objected to Reid’s theory of single and double vision on anatomical grounds. Interestingly, Reid, in his brief manuscript remarks on Wells’ book, devotes most space to correct Wells’ anatomical descriptions.39

According to Wells, the corresponding points of the two retinas, that

39 See Aberdeen University Library, Birkwood Collection, MS 2131/3/1/4. The manuscript is dated: “June 1792 Read an Essay upon Single Vision with two Eyes by Will. Ch. Wells M.D. 1792.” In his notes on Wells, Reid first reports Aguilonius’ and Porterfield’s accounts of the horopter (see Wells, Essay upon Single Vision with Two Eyes, 75 [4]). Reid also incidentally chastises Wells for having said that Porterfield merely copied Aguilonius: ‘Dr. Porterfield (who this Author without good reason says has done little more than copy Aguilonius) I think makes what he calls the Horopter to be everywhere at the same distance from the Eyes, as the intersection of the optic axes’. After briefly mentioning Wells’ account of Robert Smith’s observations on the location where single and double appearances are seen (the original edition of Wells’ Essay, 14), Reid concentrates on Wells’ anatomical remarks (Wells, Essay, 80–81 [22–23]). These observations are followed by an important but undeveloped short remark on Wells’ theory: ‘44: He takes it for granted that when two objects are seen as one, they must be seen in a certain place, that is at a certain distance as well as in a certain direction’. Reid then reports Wells’ first two laws of single and double vision: ‘43 His first Prop. is that Objects situated in the optic Axis do not appear to be in that line but in the common Axis. 2 Prop. Objects situated in the Common Axis do not appear to be in that line, but in the Axis of the Eye by which they are not seen’. At the end of the manuscript, Reid reports the observations made by Wells on the appearance of a line perpendicular to the horizon and on the single appearance of an afterimage (Wells, Essay, 92 [61] and 94 [66]). Reid’s manuscript notes on Wells amount to no more than one page and a half. They are overall disappointing, since they concentrate on anatomical matters and fail to address Wells’ main criticism. That Reid did not realize the importance of Wells’ contribution is further confirmed by a passing comment he made in a letter to Dugald Stewart (21 January 1793): ‘I return with this Wells’ book on Vision, which has much learning on the subject, and therefore may be fit to answer the purpose of one who sets up as a physician in London; but I do not see that it makes any addition to human knowledge’ (The Correspondence of Thomas Reid, edited by Paul Wood [Edinburgh, 2002], letter 122, 231).
is, the points of the two retinas that make objects appear single cannot be the centres (middle points) of the retinas, and points similarly situated with respect to them. Indeed, the pupil and crystalline are situated towards the nose in relation to the centre of the globe of the eye, which includes the cornea, the iris, and the retina. Hence, the optic axis of an eye—the right line that passes through the centre of the globe of the eye, the middle point of the cornea and the middle point of the retina—will be situated on the outer side of the straight line passing through the middle point of the pupil and the centre of crystalline. As a consequence of this fact, the central ray of light that enters the pupil does not lie in a right line that coincides with the optic axis of the eye. Contrary to what Reid said, the two images of a point will never fall on the anatomical centres (or middle points) of the retinas.

According to Reid, Wells erroneously took for granted that optic writers called ‘axis of the eye’ the line that passes through the middle of the cornea and the centre of the globe of the eye rather than the line that passes through the centre of crystalline. Moreover, according to Reid, Wells erroneously took for granted that what other optics writers called centre (or middle point) of the retina was the point of the retina cut by a right line drawn through the middle of the cornea and the centre of the eye.

Wells also remarked that the curvature of the cornea does not have the centre of the crystalline as its centre: as a consequence, no rays of light pass unbent from the atmosphere to the retina. Reid replied that ‘the curvature of the cornea seems to have the centre of the crystalline for its centre’ (although the ‘middle of the cornea […] must pass on the outer side of the centre of the crystalline’). Hence, contrary to what Wells claims, the central ray of light coming from the object passes unbent from the atmosphere to the retina.

It is clear that Reid ascribed some importance to the anatomic description of the structure of the eye. It is also possible that his remarks might require a slight reformulation of the law of visual direction: we should say that we see an object in the direction of a right line passing through the centre of the crystalline instead of one passing through the centre of the eye.
APPENDIX III

Wells’ Three Propositions on Single Vision.

1. Objects situated in the optic axis, do not appear to be in that line, but in the common axis.

2. Objects, situated in the common axis, do not appear to be in that line, but in the axis of the eye, by which they are not seen.

3. Objects, situated in any line drawn through the mutual intersection of the optic axes to the visual base, do not appear to be in that line, but in another, drawn through the same intersection, to a point in the visual base distant half this base from the similar extremity of the former line, towards the left, if the objects be seen by the right eye, but towards the right, if seen by the left eye.

I include two figures, taken from Hiroshi Ono’s article, which will facilitate the understanding of Wells’ propositions.40 The first figure clarifies the terminology used by Wells, and illustrates the first proposition. Objects situated in the optic axes do not appear on those lines, but in the common axis. Thus, the tree, situated on the axis of the right eye, and the house, situated on the axis of the left eye, both appear to the eyes as lying on the common axis.

The second figure well illustrates Wells’ propositions 1 and 2. According to proposition 1, the two round holes, situated in the axes of the two eyes, will appear as a round single hole in the common axis. According to proposition 2, the square hole, situated in the common axis, will appear as two square holes situated along the axes of both eyes. As Ono says, the two outside circular holes are predicted by proposition 3.

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40 See Ono, ‘On Wells’s (1792) law of visual direction’, 403 – 4. Figures are reprinted with permission of the publisher, Springer Science+Business Media.
Fig. 1

Fig. 2

*University of British Columbia Okanagan*
‘An Open Revolt against the Authority of Reid’: Thomas Brown and the Developments of Common-Sense Philosophy

Cristina Paoletti

Defined as ‘the last of common sense philosophers’ in the Routledge Encyclopaedia of Philosophy, Thomas Brown’s collocation within the common sense school is quite problematical and his role in the tradition of Scottish philosophy appears puzzling.¹

Born in Edinburgh in 1778, Brown studied medicine under the supervision of James Gregory, Reid’s relative and author of an essay on moral causes, and graduated in 1804.² His first contribution to the philosophical debate was a lengthy review of Erasmus Darwin’s Zoonomia, published in 1798.³ In the following years, Brown joined the Academy of Physics, a learned society established by a few of Dugald Stewart’s pupils who were especially fond of chemistry and eager to discuss the latest discoveries in natural philosophy.⁴ The same group—which included Henry Brougham, William Erskine, John Leyden, James Reddie, Francis Horner, Francis Jeffrey—also founded the Edinburgh Review in 1802. As Dugald Stewart’s pupil and protégé, Brown taught moral philosophy at the University of Edinburgh from 1810 to 1820.⁵ He supported a non-materialistic view of the mind and endorsed the existence of original beliefs; for these reasons he is usually affiliated to the common sense school.

Although Brown is nowadays a neglected figure, he was a widely read author in the nineteenth century. His Lectures on the Philosophy of the Human Mind were republished more than thirty times between 1820 and 1860 and were used as a textbook in British and American universities. Brown’s philosophy was admired for its lively and insightful description of human sentiments and

² James Gregory, Philosophical and Literary Essays (Edinburgh, 1792).
³ Thomas Brown, Observations on the Zoonomia of Erasmus Darwin (Edinburgh, 1798).
⁵ Brown’s lectures were published in 1820 as Lectures on the Philosophy of the Human Mind; quotations are from the second edition (Edinburgh, 1828).
its positive influence on the young. Thomas Chalmers, minister of the Free Church of Scotland, edited an abridged edition of Brown’s *Lectures* as they afforded an important description of mental powers and were conducive to the elevation of the soul. As Samuel Butler had written more than a century earlier, introspection was the faculty by which humans discover virtue, and Brown, Chalmers thought, gave a palatable and helpful description of the human mind.

Chalmers’ edition of Brown contributed to the spread of common sense philosophy among non-philosophers: popular in Evangelical and Unitarian communities, Brown’s physiology of mind was the standard view on the intellectual powers and their proper education. Unconcerned about the possible strictures in psychology and epistemology, these readers were captured by Brown’s flowing prose, rhetorical talent and impressive efficacy in picturing the treasures of the human mind. Religious readers seemed not to be interested in deciding whether Brown was a worthy member of the common sense school and enjoyed Brown’s books as attractive didactic works.

**Brown and Scottish philosophy**

Brown was the first to suggest the Positivist interpretation of the Humean account of causality as uniform temporal relation. In a set of papers written between 1805 and 1818, Brown defended Hume’s correct understanding of causality as temporal connection. He summarised Hume’s doctrine in three works:

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6 ‘There is no author who has not expressly treated of revelation, whose mental philosophy suggests so many accordances between the science of mind and the subject-matter of Christianity. From the wide territory of thought over which he expatiates, there is no enlightened student, enlightened we mean both in philosophy and holy writ, who might not gather from it fresh proofs and illustrations on the side of the Christian argument’ (Thomas Chalmers, ‘Preface’, in Thomas Chalmers (ed.), *Thomas Brown, Lectures on Ethics* (Edinburgh 1846), XXII–XXIII). On the reception of Brown’s philosophy among Evangelicals see Thomas Dixon, *From Passions to Emotions. The Creation of a Secular Psychological Category* (Cambridge, 2003).

7 Thomas Brown, *Observations on the Nature and Tendency of the Doctrine of Mr. Hume, concerning the Relation of Cause and Effect* (Edinburgh, 1805 and 1806, 2nd edn); *Inquiry into the Relation of Cause and Effect* (Edinburgh, 1818). The first two papers were occasioned by the ‘Leslie affair’, the election of John Leslie to the chair of natural philosophy against the wishes of the Church of Scotland. Leslie was accused of atheism for quoting Hume in his book on heat, *An Experimental Inquiry into the Nature and Propagation of Heat* (London, 1804), and was defended by Dugald Stewart (see Dugald Stewart, *A Short Statement of Some Important Facts, relative to the Late Election of a Mathematical Professor in the University of Edinburgh*, Edinburgh, 1805).
the first proposition of Mr. Hume’s theory, [is] that the relation of cause and effect cannot be discovered a priori […] [The second proposition] is, that, even after experience, the relation of cause and effect cannot be discovered by reason […] the third proposition of Mr Hume’s theory is, that, the relation of cause and effect is an object of belief alone.8

Brown’s goal was to show that Hume was correct in denying that we can perceive active powers and efficient causes and that the only intelligible definition of cause is a uniform and invariable antecedent. Unlike Reid, who thought that Hume’s account is correct only if restricted to natural philosophy, Brown maintained that it should be extended to moral causes. John Stuart Mill explicitly placed the origin of British Positivism in Brown’s restatement of Hume’s theory of causality and the definition of cause as uniform antecedent was deemed its only scientific description. Modern readers have several reasons to be suspicious about Brown’s interpretation of Hume, but it is worth noting that Brown praised Hume, an attitude quite uncommon among common sense philosophers.

Moreover, Brown accepted an associationistic explanation of the complex operations of the mind. Brown complained that the Scottish school—that is common sense philosophy—had unreasonably increased the faculties or powers of the mind:

The great defect of [this] System of Philosophy […] seems to me to be a redundancy of division, arising partly indeed from imperfect analyses of the complex phenomena of thought which a nicer observation might have shewn to be in their elements the same, but still more from indistinct notions attached to the words Faculty or Power of the Mind, and to the processes that are termed Operations or Acts of those Powers; by which, a sort of mystery has been thrown over the simple sequences of the Phenomena of the Mind, the relations of which to each other or to certain bodily changes, are all which those words can be justly employed to denote.9


9 Thomas Brown, Sketch of a System of the Philosophy of the Human Mind (Edinburgh, 1820), X.
Brown substantially supported an associationistic philosophy of mind when he employed ‘suggestion’ to describe mental activity. The term was borrowed from Reid, who used it to express the immediate relation arising in the mind between a sensation and the object producing it. Brown adopted the term to replace the old-fashioned word association and reject two aspects commonly related to associationism. Firstly, mental association is not deemed the result of a convergence of cerebral traces or the combination of nervous vibrations and ‘implied too gross an analogy with corporeal things’. The material origin of mental association was also affirmed by Reid, who used it to prove that association of ideas cannot account for the whole of mental activity. Brown more broadly rejected that mental life might be explained in terms of cerebral or nervous activity; he thought of materialism as a misinterpretation of the interaction between mind and body. Moreover, the phrase association of ideas ‘seem[s] to confine the tendency of suggestion to our ideas alone’, or, in Humean words, to the faint representations of external objects. On the contrary, Brown also considered passions and emotions: his philosophy of mind stressed the connections among ideas—that is mental states which afford new knowledge about the material world, such as perception, memory, judgement—and feelings, sentiments and emotions. Brown allowed suggestion a wider range of reference than association usually referred to, included non-cognitive mental states and stressed the function of emotions in mental life.

By considering just these few elements, we can well understand why James Mackintosh defined Brown’s philosophy as ‘an open revolt against the authority of Reid’: Reid’s efforts to disprove Hume’s account of perception seemed unsuccessful insofar as Brown revitalised association and considered fruitless Reid’s polemic against the way of ideas. Brown could agree with Reid that we do not need representations in order to have an adequate knowledge of the world, but, unlike Reid, Brown affirmed that no philosopher had truly claimed the ‘theory of ideas’. Descartes, for example, endeavoured to prove that there are three elements in perception:

The presence of the external body, the organic change [...] and the affections of the mind, which he expressly asserts to have no

10 Brown, Lectures, 257.
12 Brown, Lectures, 254.
13 James Macintosh, Dissertations and Progress of Ethical Philosophy (Edinburgh, 1836), 345.
resemblance whatever to the motion that gave occasion to it,—these are all which he conceives to constitute the process of perception, without any idea, as a thing distinct,—a fourth thing intervening between the organic and the mental change.\textsuperscript{14}

In stressing a ‘Cartesian’ non-idealistic account of perception, Brown was actually proposing his own interpretation of mental states as mental objects not representing or resembling the external world. Warmed by passions and emotions, Brown’s mental states were a large class of mental phenomena among which mental images were an irrelevant group. Brown thought of Reid’s historical account of philosophy as an overestimation of the role of ideas and in doing so he dismissed Reid’s attempts as a sort of chasing after shadows. Brown repeated that Reid had interpreted literally phrases and examples that were to be better understood metaphorically and minimised the differences between Reid and Hume, maintaining that both were interested in a naturalistic account of the human mind. Their creed, Brown affirmed,

was composed of two propositions and of the same two propositions, the first of which is, that the existence of a system of things, such as we understand when we speak of an external world, cannot be proved by argument; and the second that the belief of it is of a force which is […] absolutely irresistible. The difference, and the only difference is that, in asserting the two propositions, the sceptic pronounces the first in a loud tone of voice, and the second in a whisper, while his supposed antagonist passes rapidly over the first, and dwells on the second with a tone of confidence.\textsuperscript{15}

\textbf{Brown and the ‘Common Sense School’}

Brown’s idiosyncratic reading of common sense philosophy was bitterly criticised by William Hamilton in his lectures and in a famous essay which appeared in the \textit{Edinburgh Review} in the 1830.\textsuperscript{16}

\textsuperscript{14} Brown, \textit{Lectures}, 172.
\textsuperscript{15} Brown, \textit{Lectures}, 177.
Hamilton did not share Brown’s aim to afford a mental physiology, a naturalistic account of the spontaneous tendencies of the human mind and its obscure or unnoticed episodes. As Brown wrote,

as by observation and experiment, we endeavour to trace those series of changes which are constantly taking place in our material part, from the first moment of animation to the moment of death; so, by observation, and in some measure also by experiment, we endeavour to trace the series of changes that take place in the mind, fugitive as these successions are, and rendered doubly perplexing by the reciprocal combination into which they flow.\(^{17}\)

Brown afforded a naturalistic account of the operations of the mind, observed in different occasions and circumstances. As a matter of fact observation and experiment were praised by Reid as the mark of a ‘Newtonian’ science of mind,\(^ {18}\) but were actually rejected by Hamilton, who preferred to develop a philosophy of mind, or psychology, and to stress the several differences between the study of the mind and the investigation of nature:

the words Physiology and Physics have been specially limited to denote sciences conversant about these laws as regulating the organic and inorganic bodies. The empire of nature is the empire of a mechanical necessity; the necessity of nature, in philosophy, stands opposed to the liberty of intelligence. Those, accordingly, who do not allow that mind is matter […] must regard the application of the terms Physiology and Physics to the doctrine of the mind as singularly inappropriate, or as significant as a false hypothesis in regard to the character of the thinking principle.\(^ {19}\)

As a consequence, Hamilton undervalued the observation and description of the mental phenomena, aiming rather at their assessment and evaluation. Eager to pursue the Kantian critique of mental faculties, he focused on the necessary conditions of human knowledge and thought of ‘necessity’ in terms of logical contradiction. The result was an unfortunate attempt to justify the

\(^{17}\) Brown, *Lectures*, 3.


\(^{19}\) Hamilton, *Lectures on Metaphysics*, 133.
principles of common sense through Kantian philosophy: mental states were investigated in order to point out those necessary and essential conditions whose negation would imply a logical contradiction. According to Hamilton, the science of mind was no longer empirical and experimental, but truly theoretical and metaphysical; Brown’s physiology of mind became therefore a disappointing and misleading attempt to account for intellectual powers.

Hamilton’s polemic against Brown reveals different attitudes towards the science of mind: Brown was the heir of the British tradition aiming, like Locke in his *Essay*, to give a naturalistic description of human nature. On the contrary, Hamilton tried to reconcile Reid’s common sense and German philosophy and actually reshaped the definition of common sense, excluding the natural history of the mind. Hamilton was also annoyed by Brown’s attempts to mitigate Reid’s polemic against the way of ideas and accused Brown of being one of the ‘ideal philosophers’. In fact, according to Hamilton, Brown’s emphasis on mental states was an unsolicited restoration of the ideas, since the direct object of knowledge was not the material world, but a particular modification of the mind. Although not a mental image, the mental state was however a mental medium and Hamilton supposed it to be akin to Cartesian ideas. As a matter of fact, Brown carefully contrasted his account of perception with Reid’s description of the theory of ideas. By the words ‘idea’ and ‘perception’, nothing more were meant to be expressed than [the] two parts of the [perceptive] process—the organic change, whatever it might be, and the subsequent mental change—without the necessary intervention of something distinct from both.

Brown’s philosophy was praised by John Stuart Mill, who defended Brown from Hamilton’s charges. Mill shared Brown’s interest in a naturalistic analysis of the mind and struggled to prove that Brown’s account of perception was not part of the *theory of ideas*. On the contrary, Mill found it a correct

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20 ‘On the supposition, that Reid views in the immediate object of perception a mental modification, and not a material quality, Brown is fully warranted in asserting, that he left the foundations of idealism, precisely as he found them. Let it once be granted, that the object known in perception, is not convertible with the reality existing; idealism reposes in equal security on the hypothesis of a representative perception,—whether the representative image be a modification of consciousness itself,—or whether it have an existence independent either of mind or of the act of thought (Hamilton, *Philosophy of Perception*, 91).

consequence of Reid’s statement that mental representations are not essential to human knowledge. In fact, Reid and Brown

thought that certain sensations, irresistibly, and by a law of our nature, suggest, without any process of reasoning, and without the intervention of any tertium quid, the notion of something external, and an invincible belief in its real existence.\(^\text{22}\)

Mill noted that Reid’s criticism of mental representations or images also proposed a sort of twofold account of knowledge in which there is no medium between the mind and the material world. Brown actually described mental activity, but did not imply that mental states separate the mind and the object. He clearly stated that mental states are not images and emphasised the role played by emotions, phenomena that could hardly be represented through an image. Therefore, Mill concluded that Brown was one of Reid’s accurate readers and Hamilton was misunderstanding Brown when accusing him of restoring the way of ideas.

It is striking that Mill is here praising Brown for adhering to Reid’s philosophy. Despite his ‘classical’ criticism of common sense philosophy, Mill agreed with Reid on the naturalistic outlook on the mental faculties and the descriptive style of the philosophy of mind. Mill was especially concerned about the Kantian turn of the European philosophy and thought of Reid as an opponent to critical philosophy.

Brown and John Stuart Mill

Though accepting a ‘Reidian’ method in psychology, Mill was still critical of the role of experience and Mill’s source was again Brown. Both Brown and Mill were eager to challenge Reid’s theory according to which matter is a relative notion, bringing together its several sensible qualities.\(^\text{23}\) Brown borrowed from the French Ideologue Destutt de Tracy the theory of the origin of the notion of matter through muscular sense, by which we perceive the resistance of bodies to our actions. Matter, Brown wrote, can be simply defined as ‘that which


Thomas Brown and the Developments of Common-Sense Philosophy

has parts, and that which resists to our effort to grasp it’. Brown explained that newborn children gain the first notion of external bodies as something that resists, limits or impedes their voluntary motion. Children firstly think of matter as an obstacle to their will and, out of matter’s opposition to muscular efforts, children think that something exists out of them. The muscular sensations of resistance, Brown admits, are not as clear and informative as visual or tactile sensations, but are weak and easily obscured. For this reason, muscular sensations can be easily mingled with other sensations and often become unnoticed and no longer perceived.

Brown’s revolt against the authority of Reid is in this case clear: according to Reid, matter is the unknown substratum of sensations, insofar as sensations point out qualities or properties of matter and its independent existence is an original belief provided by common sense. On the contrary, Brown maintained that the notion of matter has an empirical origin and is afforded by a particular, though overlooked, class of sensations. Brown was proposing an original interpretation of realism, which circumvented both Berkeley’s criticism of the common notion of matter as derived from touch and sight and Reid’s appeal to common sense principles. Moreover Brown was rejecting the Reidian definition of primary and secondary qualities, a topic which Hamilton failed to note properly. Brown in fact denied that we can have an immediate and distinct knowledge of primary qualities, as any mental state suggests a quality of objects, but none truly asserts that the quality exists as we perceive it. Mental states, therefore, do not allow us to believe in the existence of primary and secondary qualities, but just in feelings produced by external objects. Brown was not rejecting realism, but he was founding it on original evidence: as S.A. Grave noted, according to Brown the existence of the world is not proved by its independent reality, but by our own perceptions, coming from material objects. Brown’s new challenge was to explain how the presence of the external world can be inferred from mental states, that is how the ‘outsideness’ of the world can be derived from mental phenomena. This point was emphasised by Mill, who in a note to his System of Logic, affirmed that Brown reacted to Reid’s appeal to a supposed original belief in the existence of matter and applying greater powers of analysis than had previously been applied to the notions of extension and figure, pointed out that the sensations

from which those notions are derived, are sensations of touch combined with sensations of a class previously too little adverted to by metaphysicians, those which have their seat in our muscular frame.26

In the same chapter, Mill stressed that any possible account of matter must be grounded on experience and alluded to the definition of matter as the permanent possibility of sensations as a consequence of Brown’s views. Unlike all other sensations, muscular sensations afford the notion of a permanent ‘something’ outside the mind: as the sensation of resistance is unexpected, unwelcome and unpleasant, it is also the most suitable for supporting the idea that objects exist independently of our minds.

Conclusion

Brown’s case seems to generate an apparent incongruity in the tradition of common sense: attacked by Hamilton, universally recognised as the most important and influential defender of Scottish philosophy in the nineteenth century, he was read and praised by non common sense philosophers and Mill’s definition of matter is a bizarre consequence of Brown’s philosophy. An adversary of any intuitionist psychology, Mill felt that his philosophy was closely connected with a common sense philosopher like Brown, by whom he was influenced in one of his most famous discoveries. Mill was here receiving that part of Reid’s philosophy which was neglected by Hamilton, that is naturalism. Mill’s conclusions were remarkably different from Reid’s ones, but like Reid he encouraged philosophers to observe human the mind and describe it through general laws.

The question that may be raised is, which kind of common sense was popularised by Brown’s heterodox interpretation and how could it be so influential for the radical philosopher John Stuart Mill.

One possible answer is that Brown, unlike Hamilton, did not intend common sense as a philosophical school, but rather as an ‘open question’ or a set of open questions. Familiar with authors whom Reid could not know, Brown actually broadened the field of inquiry of common sense philosophy, examining the cognitive value of emotions or the sophisticated merging of expectation and belief. Brown provided his numerous and variegated readers

with a fruitful view of the philosophy of mind, in which he included relevant non-cognitive mental phenomena, also recognising their function in mental life. Brown stimulated a curiosity and a sensitiveness for the philosophy of mind, which was later to become a matter of discussion for the general public. Moreover, Brown thought of the philosophy of mind as an inductive science, grounded on the observation of psychic phenomena and aiming to establish general laws. His physiology of mind was akin to the developments which psychology was to undergo later in the nineteenth century through the application of the scientific method. Brown’s common sense was therefore neither a doctrine nor a creed, but more generally a series of issues on the philosophy of mind.

Moreover, although he was a rebel disciple of the Scottish school, Brown popularised and kept alive those elements of Reid’s philosophy that Hamilton rejected or overlooked. Brown’s philosophy was of help to all those who interpreted mental phenomena as part of the natural world. Therefore Dissenters used to read Brown, as he provided an updated image of the gifted human mind, its possible developments and its harmony with Nature. On the other hand, Brown was of interest for those philosophers who encouraged a scientific approach to the study of the mind. Mill is again an exemplary figure: he borrowed from Brown a naturalistic and non-materialistic approach to the mind. Mill was indeed reluctant to admit the existence of original beliefs or principles of common sense, even though he thought that the bias of Scottish philosophy was not to support innate, original principles, but rather to infer from them a supernatural and non-empirical knowledge. Mill’s targets were Hamilton and the Frenchman Victor Cousin, who discussed how consciousness could suggest the notions of God and infinite. Among Scottish philosophers, Brown was the least susceptible to this criticism: he emphasised the processes of acquisition of beliefs and he appealed to the principles of common sense in order to avoid fruitless controversies.

The benefit Brown brought to the philosophical community was not the forcible defence of the identity of the Scottish school or the exploration of its possible connections with the new German philosophy, a mission which Hamilton undertook. On the contrary, Brown was influenced by philosophers

27 ‘[The Common Sense philosophers] hold, that some knowledge, more or less, of objective existences and their laws, is attainable by man, and that it is obtained by way of inference from the constitution of the human mind […] when they inculcate this doctrine, do not so as psychologists, but as ontologists’ (John Stuart Mill, Bain’s Psychology, in J.M. Robson (ed.), The Collected Works of John Stuart Mill (Toronto 1978), XI, 343).
who were unsympathetic to Reid’s disciples, so that his idiosyncratic and heterodox version of Scottish philosophy could also be appreciated by its critics.

Finally, Brown’s reinvention of common sense contributed to widen the audience, if not the supporters, of the Scottish philosophy and to popularise in a broader context one of the most important Scottish discoveries, the science of mind.

*University of Bologna*
Reid as a pre-Kantian critical philosopher
(from the continental point of view)

Bogusław Henryk Wójcik

From the continental point of view, Thomas Reid is a minor Scottish philosopher associated with the concept of common sense.1 Usually during a basic course of early modern philosophy in continental Europe there is no position ‘Reid’. He is definitely not mentioned amongst such classics as Descartes, Pascal, Spinoza, Locke, Malebranche, Leibniz, Berkeley and Hume. Reid is usually briefly portrayed as a common sense philosopher, without specifying what this ‘common sense’ is, and which is even more important, without mentioning that in his philosophy ‘common sense’ works as a technical term that has different connotations than those of the ordinary language. This obviously leads to many misunderstandings. For ‘an ordinary continental historian of philosophy’ a statement that Reid’s common sense epistemology, which predates German criticism, is similar to Kant’s transcendental idealism, is absurd or implausible at best. This paper brings up several testimonies about similarities between Kant and Reid, and aims to show that in key elements constituting German criticism, both philosophers were unanimous.

However, before we can proceed further, we must devote a moment

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1 To back up thesis that the continental Europe is quite ignorant when it comes to Thomas Reid’s philosophy, I have conducted small statistical comparison. I have compared the numbers of monographs about Thomas Reid’s philosophy published in native languages of the six most populated countries of central and western Europe that could be found in general catalogues of the best non-technical and non-medical universities, according to Webometrics Ranking of World Universities maintained by Consejo Superior de Investigaciones Científicas in Spain. Universities of Bologna, Paris and Warsaw had each two positions matching my criteria. Universities of Berlin and Madrid had each three positions matching my criteria. A search in the general catalogue of Cambridge University returned 20 positions. The comparison was conducted on 15 March 2010. Of course this does not mean that these numbers are fully adequate. Some rare positions might not have been stored in the listed libraries or have been inadequately catalogued. Other important and influential interpretations of Reid’s philosophy might have appeared as a chapter in a general philosophy book or paper in a forgotten journal. The huge disproportion can be also explained by the fact of English being the second most spoken language after Chinese. Despite all of this, however, it is safe to assume that acknowledgment of Reid in the continental Europe is extremely limited.
to establishing what the German criticism is. Like every commonly used technical term, ‘criticism’ has many definitions, none of which is generally accepted. In the meaning that interests us most it usually refers to Kant’s philosophy after the first Critique, neo-Kantianism and sometimes also to Edmund Husserl’s phenomenology. Therefore, in this paper by ‘criticism’ I will refer to the tradition of philosophy that questions the cognitive powers of man and analyses conditions, prerequisites, and limitations of cognition in general, and acknowledges their role in the process of the creation of the object of cognition. To decide whether in his epistemological beliefs Reid is a pre-Kantian criticist, we will need to compare \textit{a priori} principles of both philosophies and analyse their role in the overall process of perception and cognition. If it turns out that the major \textit{a priori} principles of Kant and Reid are convergent and have similar roles in the overall process of cognition and, most importantly, in the creation of perceived objects, then we will have positive argument for the main thesis of this paper.

Sir William Hamilton, last notable member of the Scottish school of common sense, was probably the greatest advocate of the conciliation between the philosophy of common sense and Kantian criticism. In an editorial footnote to Reid’s \textit{Essay on Quantity}, Hamilton wrote about their similarities.

The doctrines of both, however different in external character and in particular opinions, were of a kindred spirit: they had a common origin, as recoils against the scepticism of Hume; the same dominant result, in the establishment of certain ultimate laws of speculation and practice; and the same tendency, in restraining the intellectual pride, and elevating the moral dignity of man. Each, in a different sphere, was at the head of a great scientific determination; both were distinguished rather for philosophical originality and independence, than for the extent of their philosophical learning; and, finally, (may I add?) both were Scotchmen – Reid by birth, Kant (Cant) by proximate descent.\(^2\)

Hamilton’s assertion about Kant’s Scottish ancestry may raise suspicions of bias, even though Kant, according to Manfred Kuehn, occasionally boasted about it.\(^3\) Nevertheless, Hamilton was enthusiastic about Kant and Reid.


\(^3\) Manfred Kuehn, \textit{Scottish Common Sense in Germany, 1768–1800: A Contribution to the
Both these philosophers were mentally close to him, and thus it might be better to hear testimony of someone more critical or even judgmental about them. German philosopher Franz Brentano, teacher of Alexius Meinong and Edmund Husserl, is ideal for this task.

Famous Kantian criticism, which, as many people think, has made philosophy strictly scientific, in fact did much less. It resulted only in philosophy of superstitions instead of scientific philosophy, or even aiming to be such. Kant is so characteristic, and in his terminology he is so different than Reid, that for many people it is impossible to see similarity of these two thinkers.4

Brentano brings up a very important point here. It is not easy to compare a philosopher who uses terms such as ‘transcendental unity of apperception’ to refer to consciousness with a common sense philosopher, who stick to ordinary language. It is even harder to see that transcendental Formen der Anschauung and categories are entailed in Reidian principles of common sense. Nonetheless, Brentano and Hamilton weren’t the only nineteenth century scholars who saw similarity between Kant and Reid.

One of the most curious testimonies is the conspiracy theory of Russian positivist Matvei Troitsky, who was professor at University of Moscow. In his book, *German psychology* published in 1867, he argued that Kant built his theory completely upon Reid’s epistemology and that German historians, because of their chauvinism, had kept this secret.5 Let us consider this radical hypothesis. Reid, born in 1710, was fourteen years older than Kant. He started his philosophical career slightly earlier and published his first major work containing the core of his epistemology, *An Inquiry into the Human Mind on the Principles of Common Sense*, in 1764. By comparison, Kant published his first major critical work *Kritik der reinen Vernunft* in 1781. This leaves around seventeen years in which Kant could have read Reid and could have been influenced by him, providing that he knew English at all. German historian of philosophy Karl Groos, in his paper *Hat Kant Hume’s Treatise gelesen?*, elaborates on this problem.6

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5 T. Gościcki, ‘Kant a Tomasz Reid’, *Kwartalnik Filozoficzny*, VII (1930), 275–95, at 278.
6 In this passage Groos mentions Reinhold Bernhard Jachmann (1767–1843) and Benno Erdmann (1851–1921).
It is doubtful that Kant knew English at all…. Erdmann takes for granted Kant’s ignorance of English and writes about it in Kant und Hume um 1762…. After 1755, Kant’s writings reveal his unquestionable acquaintance with English literature. However, except works written in Latin, Kant quoted only those, which he had had translated…. Another important note is of Jachmann: ‘from modern languages Kant knew only French’.7

Groos also quotes the opposing opinion of nineteenth century neo-Kantian philosopher Hans Vaihinger that ‘Kant’s English was quite good’. This obviously leaves our question unanswered, but it is safer to assume that Kant did not read the English original of Reid’s Inquiry before he wrote his first Critique. Still we cannot rule out that Kant read one of the Inquiry’s translations. Although the German translation Untersuchungen über den menschlichen Geist was published in 1782, too late to influence Kant, the French translation Recherches sur l’entendement humain was published in 1768. This shrinks the gap between the Inquiry and the first Critique from seventeen to thirteen years, which is certainly enough for successful inspiration. Let us not forget that inspiration can also be passed through others. Let us listen to the testimony of the contemporary German historian of philosophy Heiner F. Klemme, who describes the reception of Scottish philosophy in Germany in the 1770s and 1780s:

Scottish Common Sense in general and Reid’s philosophy in particular were widely known in Germany. Especially at Gottingen, Berlin, Erlangen and Konigsberg, Reid was already a known quantity even before the Untersuchungen über den menschlichen Geist was published. One might speculate whether it would have made an even greater impact in Germany if the translation had been released a few years before the publication of Immanuel Kant’s Critique of Pure Reason in 1781. Because Kant’s Critical philosophy displaced the empiricist approach in philosophy, the Scottish philosophy of Common Sense lost its foothold and eventually disappeared in the 1790s.8

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7 K. Groos, ‘Hat Kant Hume’s Treatise gelesen?’ Kantstudien V (1901), 177–81.
8 H. F. Klemme, Reception of the Scottish Enlightenment in Germany: Six Significant Translations, 1755–1782, Volume 7 (Bristol, 2000).
Reid as a pre-Kantian critical philosopher

The previously mentioned German historian of philosophy, Manfred Kuehn, also notes that Scottish philosophy and Reid in particular influenced such German philosophers as Johann Eberhard, Johann Feder, Christoph Meiners and Johannes Tetens. All of them were Kant’s contemporaries and were influential in German philosophy before the 1790s. In the light of this, the influence of Reid’s writings on Kant’s philosophy is highly possible. However, Kant himself in his *Prolegomena* gives away his attitude towards the Scottish school of common sense, when he asserts that ‘one cannot, without feeling a certain pain, behold how utterly and completely his [Hume’s] opponents, Reid, Oswald, Beattie, and finally Priestley, missed the point of his problem, and misjudged his hints for improvement’. It is not without significance, that Kant counts Joseph Priestley, who was the first major critic of Beattie’s, Reid’s and Oswald’s works, as a member of Scottish school of common sense. Further on in the *Prolegomena* Kant states that ‘it is a common excuse, which these false friends of ordinary common sense (which they extol on occasion, but usually despise) are accustomed to using, that they say: There must in the end be some propositions that are immediately certain, and for which not only no proof, but indeed no account at all need be given, since otherwise there would never come an end to the grounds for one’s judgments’. It is not certain to whom Kant refers as the ‘false friends’, but it is possible that he had in mind Beattie, Reid and Oswald. Contexts in which Kant is usually referring to these philosophers suggests that he thought of ‘Scottish common sense’ as some form of *vox populi* or *opinio vulgaris*. This oversimplification is especially unfair to Reid, but can be easily explained. James Beattie’s *An Essay on the Nature and Immutability of Truth*, published in 1770 was, due to its popularity, very quickly translated into German in 1772. In this work Beattie vulgarizes and dogmatizes Reidian common sense, as he is trying to prove that faith is superior to reason. It is highly possible, that Kant read the popular *Versuch über die Natur und Unveränderlichkeit der Wahrheit* and took measure of whole Scottish school through it. Also we cannot forget that in *Inquiry* Reid himself portrays common sense as superior to reason. Reid reconciled common sense and reason in his *Essays on the Intellectual Powers of Man*, which were published in 1882, but which again was too late to influence Kant. Thus, we can safely

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9 Kuehn, *Scottish Common Sense in Germany, 1768–1800*, 70–85.
11 Ibid., 121.
assume that it is most likely that Kant did not read the English original of Reid’s inquiry and that the German translation was published too late to have any impact. Even if Kant read the French translation, it is clear that he did not fully understand Reid, as he vulgarized his philosophy. 

_Ergo_, Kant and Reid were just two original philosophers who worked independently.

Now let us explore the similarities between Kant and Reid. Probably the first one who noted them was Arthur Schopenhauer. In the second volume of _Die Welt als Wille und Vorstellung_ he wrote:

Thomas Reid’s excellent book, _Inquiry into the Human Mind_, as a corroboration of the Kantian truths in the negative way, affords us a very thorough conviction of the inadequacy of the senses for producing the objective perception of things, and also of the non-empirical origin of the intuition of space and time. Reid refutes Locke’s teaching that perception is a product of the senses. This he does by a thorough and acute demonstration that the collective sensations of the senses do not bear the least resemblance to the world known through perception, and in particular by showing that Locke’s five primary qualities cannot possibly be supplied to us by any sensation of the senses. Accordingly, he abandons the question of the mode of origination and the source of perception as completely insoluble. Thus, although wholly unacquainted with Kant, he furnishes, so to speak, according to the _regula falsi_, a thorough proof of the intellectual nature of perception (which I was really the first to expound in consequence of the Kantian doctrine), and of the a priori source, discovered by Kant, of the constituent elements of perception, namely space, time, and causality.13

Schopenhauer noted that in Reid’s epistemology space, time and causality have the same _a priori_ character as in Kant’s critical writings and, in general, the typology of judgements of Kant and Reid have considerable similarities. As we know, Kant distinguishes _a priori_ from _a posteriori_ judgments. _A posteriori_ judgments are always synthetic, while _a priori_ can be either analytic or synthetic.14 Piotr Łaciak suggested that Kant divides synthetic _a priori_ judgements even further into pure and not-pure.15 Not-pure judgments are

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15 Piotr Łaciak, _Struktura i rodzaje poznania a priori w rozumieniu Kanta i Husserla_ (Katowice,
the ones that entail some empirical content. For example, the synthetic *a priori* judgment, ‘Every change has its cause’, is not-pure because the term ‘change’ has empirical origins. Although Reid does not specify a concrete typology of judgments, he obviously distinguishes *a priori* and *a posteriori* judgments. Further, he makes a distinction between intuitive and discursive judgments, which might correspond to analytic and synthetic judgments. But what is most interesting, Reid distinguishes even judgments of nature, that are ‘immediately inspired by our constitution’ from pure judgments that are achieved ‘by comparing ideas’. This typology of judgments, although not exactly identical to Kant’s, bears enough similarity to justify further investigation into Reid’s first principles of common sense. As we know, in the *Essays on the Intellectual Powers of Man* Reid divides the principles of common sense into first principles of contingent truths and first principles of necessary truths. It is plausible to say that the first group would be judgments of nature, while the second would be pure judgments. As we know third, fourth and fifth contingent truths on Reid’s list presuppose Kantian forms of sensibility, namely Space and Time. These principles are ‘That those things did really happen which I distinctly remember’, ‘Our own personal identity and continued existence, [goes] as far back as we remember anything distinctly’, ‘That those things do really exist which we distinctly perceive by our senses, and are what we perceive them to be’. Presupposition of space and time is even more clear in conjunction with Reid’s chapters on memory and perception. There Reid asserts that ‘extension of bodies which we perceive by our senses, leads us necessarily to the conception and belief of a space which remains immovable when the body is removed’ and that ‘the duration of events which we remember leads us necessarily to the conception and belief of a duration which would have gone on uniformly though the event had never happened’. Another list of principles, first principles of necessary truths consist of groups of grammatical, logical and mathematical principles, that although were only briefly enumerated by Reid, bear resemblance to Kantian categories. But the most staggering similarity

2003), 62–82.


17 Ibid., 416, 489.

18 Ibid., 444–6.

19 Ibid., 343.

20 Ibid., 452–8. It is hard to point out direct resemblance between Kant’s twelve categories and Reidian grammatical, logical and mathematical first principles of
is between the previously mentioned Kantian not-clean synthetic \textit{a priori} judgment ‘Every change has its cause’, and the Reidian metaphysical first principle of necessary truths, ‘That whatever begins to exist, must have cause which produced it’.\footnote{Ibid., 455. Maybe even more astounding is Reid’s moral first principle of necessary truths, ‘That we ought not to do to others what we would think unjust or unfair to be done to us in like circumstances’, which predates by three years the nearly identical Kantian categorical imperative.} The only difference is that for Kant this principle was not-clean while putatively for Reid it was a pure judgment. This should be enough to establish that major \textit{a priori} elements of Reid’s epistemology are correspondent to and convergent with Kantian forms of sensibility and his twelve categories.

Our next step is to analyse the role of the \textit{a priori} in the general process of cognition and perception in Reid’s epistemology. T. J. Sutton in his paper, meaningfully titled \textit{The Scottish Kant?}, tries to reassess Reid’s epistemology as a form of transcendentalism.

To sum up, it is tempting to regard Reid’s insistence on the necessity of belief according to common sense as a form of transcendental argument, defending a set of preconditions or foundations not on the ground that without them there could be no meaningful experience, but on the ground that without them there could be no knowledge or rational activity. Although this argument is not the same as Kant’s it is similar.\footnote{T. J. Sutton, ‘The Scottish Kant?’ in M. Dalgarno, E. Matthews (eds), \textit{The Philosophy of Thomas Reid} (Dordrecht, 1989), 151–192 at 180–181.}

Sutton is completely right. For Reid, the principles of common sense are necessary requirements for any cognition or rational action.\footnote{M. Hempoliński, \textit{U źródeł filozofii zdrowego rozsądk} (Warszawa, 1975), 334.} According to Reid these principles are ‘immediately inspired’ by the structure of our cognitive constitution.\footnote{Reid, \textit{An Inquiry into the Human Mind on the Principles of Common Sense}, 110.} And this cognitive constitution determines how we perceive necessary truths, because he is just briefly enumerating these groups, thinking that they are self-explanatory. For Kant, twelve categories are generalisations of every perceivable and comprehensible quality and the rules of our reasoning and thinking. For Reid, grammatical, logical and mathematical necessary truths are rules governing our speech and reasoning. But from the analytical point of view, both philosophers were in fact referring to the structure of language and its active role in perception and reasoning.
the world. Principles of common sense also partially determine our actions. Reid writes of the sceptic who rejects principles of common sense, that ‘If he has common understanding, he will find that he cannot converse half an hour without saying things which imply the contrary of what he professes to believe’. He also says that he ‘never heard that any sceptic run his head against a post’ only because he had doubts in testimony of his senses. The only major difference between Kant and Reid is that Reid, when speaking about role of the principles of common sense and our constitution in cognition and actions generally does not distinguish between theoretic and pragmatic levels. However, this is not enough to prevent us from acknowledging that the *a priori* of Kant and Reid play similar, although not identical, roles in the general process of cognition.

Our last step is to show that in Reid’s epistemology our cognitive constitution, and thus also the principles of common sense, play a major role in the ‘creation’ of perceived objects and in setting the limits of our cognition. According to most commentators, there is something that is a key element in Kant’s epistemology, that is lacking in Reid’s philosophy. This element is Kantian distinction between noumenon and phenomenon, that results in setting strict limits for our cognitive powers. Now I will argue, that although Reid does not literally introduce the distinction between noumenon and phenomenon, he had in mind its clear intuition. First of all, Reid acknowledges the limits of our cognition when he asserts that ‘individual things which really exist, being the creatures of God, (though some of them may receive their outward form from man), he only who made them knows their whole nature; we know them but in part, and therefore our conceptions of them must in all cases be imperfect and inadequate; yet they may be true and just, as far as they reach’. This is even better exemplified by Franz Brentano, who says about Reid, that …

…” space is not for him a thing, neither substance nor accident. The fact that according to Reid the visual sense reveals of spatial things only their extension in two dimensions, and that only the sense of touch leads us to the presentation and knowledge of the third dimension, does not seem to him to be a contradiction, since it points only

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26 For example, T. Gościcki, ‘Kant a Tomasz Reid’, *Kwartalnik Filozoficzny* VII (1930), 275–95, at 283–4.
to a more incomplete apprehension of space in the visual sense. This however leads him to the idea that even the three-dimensional presentation of space might still be incomplete in the sense that, taken in itself, it could possess even a fourth and, who knows, perhaps further dimensions.\textsuperscript{28}

But the most staggering thing is Reid’s intuition of \textit{ding an sich}, clearly identifiable when he says of individual things that…

…our conception of them is always inadequate and lame. They are the creatures of God, and there are many things belonging to them which we know not, and which cannot be deduced by reasoning from what we know. They have a real essence, or constitution of nature, from which all their qualities flow; but this essence our faculties do not comprehend. They are therefore incapable of definition; for a definition ought to comprehend the whole nature or essence of the thing defined.\textsuperscript{29}

This point is so important that it is worth making one further quotation from \textit{Essays on the Intellectual Powers of Man}:

We know the essence of a triangle, and from that essence can deduce its properties. It is an universal, and might have been conceived by the human mind though no individual triangle had ever existed. It has only what Mr Locke calls a nominal essence, which is expressed in its definition. But everything that exists has a real essence, which is above our comprehension; and, therefore, we cannot deduce its properties or attributes from its nature, as we do in the triangle. We must take a contrary road in the knowledge of God’s works, and satisfy ourselves with their attributes as facts, and with the general conviction that there is a subject to which those attributes belong.\textsuperscript{30}

As we have just seen, not only has Reid acknowledged unknowability of thing in itself, but he also recognized that we have no other proof of its existence.

\textsuperscript{28} F. Brentano, \textit{Philosophical Investigations on Space, Time and the Continuum} (New York, 2010), 114.
\textsuperscript{30} Ibid., 392.
Reid as a pre-Kantian critical philosopher

than ‘general conviction’. This alone should be enough to refute accusations of Reid’s being a dogmatic naive realist.

In the beginning we have defined criticism as a philosophy that questions cognitive powers of man and analyses conditions, prerequisites, and limitations of cognition in general, and acknowledges their role in the process of creation of the object of cognition. I believe that I have shown that Reid’s epistemology in all of these elements is similar to Kant’s. Reid acknowledges similar limits of our cognition and lists similar *a priori* principles governing our perceptions and actions as does Kant. Thus, his epistemology fulfils the criteria of our definition. I also believe that this justifies, or at least makes plausible, the thesis that Reid was pre-Kantian criticist. To take the argument further, however, I need to address two objections often raised against any comparison between Kant’s and Reid’s epistemologies. The first one concerns the fact that Reid stood on the position of natural realism, while Kant called his philosophy a transcendental idealism. As a reply to this objection I must stress that Kant published two editions of his *Critique of Pure Reason* that could be counted as two different books. The first edition from 1781 has stronger idealistic implications, while the second from 1788 is more realistic. Since *The Critique of Pure Reason* is usually published as a conjunction of these two editions, this fact often escapes our attention. It also doesn’t help that Johann Gottlieb Fichte in his interpretation—or to be more precise, in his variation on Kantian criticism—was ultra-idealistic, which resulted in a half century of German Idealism. But we can’t forget that idealistic and realistic interpretations of Kant’s philosophy are equally plausible. By contrast, German philosopher Erich Adickes in his book *Kant und das Ding an sich* provided an ultra-realistic interpretation of Kantian criticism, acknowledging that we know noumenon through phenomenon. The second objection concerns the tremendous difference between the methods employed by both philosophers. While Kant utilises ‘transcendental logic’, Reid conducts his research into the human mind through reflection. Different methods result in such different terminology ‘that for many people it is impossible to see the similarity of these two thinkers’. However, if we distinguish the context of discovery from the context of justification, we will see, that a method of discovery is irrelevant for the validity of a result. And because both Kant and Reid did not do enough to justify their epistemologies, Brentano and others have coined the term ‘philosophy of

superstitions’ to refer to them. But we must remember, that, according to Reid, first principles are not first principles because they are common, but they are common because they are first principles, included in our constitution and reachable through reflection. No matter how different Kant’s and Reid’s methods were, their results are convergent enough to justify the plausibility of our thesis.

Despite Reid’s influence on classical American pragmatism and even on British analytic philosophy, his influence in Europe was minor at best. Tadeusz Gościcki, Polish historian of philosophy of the interwar period, while speaking very kindly of Reid, hinted at this important fact.

Comparison of Kant and Reid raises the question whether history was fair in its assessment of these two thinkers, and whether it rightly lifted the first one so high, while removing the second into the shadows. In my opinion, there is no doubt, that it was a great injustice. Reid, because of his position in the history of epistemology, should be recognized as a profound and original philosopher of the same class as Kant. Modern philosophy, oriented towards realism, despite the fact that it rarely mentions the name of our Scottish philosopher, is very often repeating his views.32

However, whether the history was fair or not is not a primary concern for a historian of philosophy. In the course of past two millennia we have seen many such situations, when a work was not fully understood by contemporaries, while similar work by someone else erected a new paradigm in better times. Even if our thesis, that Reid’s epistemology of common sense is a form of pre-Kantian criticism, is true—or, to make it less extreme, is at least a plausible interpretation—in the end it doesn’t matter. Reid lost his battle for continental Europe to Kant. Vulgarized and misunderstood by many of his contemporaries, Reid failed to contribute to the European epistemological debate of the nineteenth century and reinforced a long list of underestimated philosophers. But we should not be too harsh in condemning nineteenth century philosophers for not recognizing the value of Reid’s epistemology, that it unravels a priori principles of reason, perception, understanding and action. It is considerably easier to ‘reverse-engineer’ a critical conceptual scheme onto Reid’s epistemology now. But it

32 Gościcki, ‘Kant a Tomasz Reid’, 295.
had proved incomparably more difficult to read this conceptual scheme from Reid’s works themselves.33

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Notes on Contributors

David E. Alexander  M.A. And Ph.D in philosophy from Baylor University. Has taught at Calvin College and is currently at Huntington University. He has published articles in philosophy of religion and metaethics, and has a book coming out in May of 2012 in the Continuum Philosophy of Religion series, titled *Goodness, God, and Evil*.

Stephen Cowley is completing a doctorate on the life, philosophy, political economy and influence of James Mylne at New College, University of Edinburgh.

Claire Etchegaray is Assistant Professor in British Philosophy at the University of Paris X (France). Her article was written during a postdoctoral research hosted at the University of Neuchâtel (Switzerland) and supported by a grant from the Fonds National Suisse de la Recherche - Project 100011-117839, supervised by Daniel Schulthess.

Renia Gasparatou received her BS in Philosophy from the University of Athens, Greece (1992-1996) and her PhD in contemporary Epistemology from the University of Crete, Greece (1999-2005). Part of her PhD research was undertaken in the Department of History and Philosophy of Science of the University of Pittsburgh, where she was a visiting scholar (2002-2003). She has been a fellow of the State Scholarship Foundation (IKY) twice, once for her PhD dissertation (1999-2005) and once for a post-doc research regarding the use of intuitions in epistemology (2009-10). She has been teaching philosophy in the University of Patras, Greece since 2005 (Department of Philosophy and ESECE) and in the Hellenic Open University since 2006. She is now a Lecturer of Philosophy in DESECE, University of Patras and teaches courses on Epistemology, Philosophy of Education, etc.
Giovanni Gellera graduated from Università Cattolica del Sacro Cuore, in 2008, Laurea magistrale, on Aristotelianism and Cartesianism in Aberdeen in the second half of the seventeenth century. He has since then completed a Ph.D. thesis on Natural philosophy in the graduation theses of the Scottish universities in the first half of the seventeenth century. Since September 2010 he has been facilitator and member of the Leverhulme funded research project on Scottish philosophers in the seventeenth-century Scotland and France.

Giovanni Grandi is Assistant Professor of Philosophy at the University of British Columbia, Okanagan. He has published articles on Reid’s theory of vision and edited a catalogue of Reid’s manuscripts for the Aberdeen University Library.

Jamie Hellewell is a PhD candidate in the philosophy department at the University of British Columbia, Vancouver, Canada. His dissertation project articulates and defends John Locke’s conception of political liberty, which he interprets as a kind of ‘natural law republican’ ideal. This brings together his two main research interests, which are 17th and 18th Century Philosophy and contemporary views on the concept of political liberty.

Cristina Paoletti (PhD, University of Bologna) has devoted her research to the history of Scottish philosophy and science in the eighteenth and nineteenth centuries. She has authored articles on the common-sense philosophy and a monography on Thomas Brown (La difesa dell’errore. Senso comune e filosofia positiva in Thomas Brown, Bologna, CLUEB, 2006).

Udo Thiel studied Philosophy at the Universities of Marburg, Bonn, and Oxford. He began as a Lecturer in Philosophy at the University of Sydney, later moving to the Australian National University in Canberra where he became a Senior Lecturer and then Associate Professor. In 2009 he moved to Austria where he is now Professor of the History of Philosophy in the Department of Philosophy at the University of Graz. His research focuses on early modern epistemology, metaphysics, and philosophy of mind. He is author of The Early Modern Subject. Self-consciousness and Personal Identity from Descartes to Hume, Oxford University Press 2011.

David Vender has a PhD and extensive research experience in applied plasma physics. He has also recently completed a PhD in epistemology, examining
the senses with a particular emphasis on Thomas Reid’s philosophical views. Currently he is an honorary research associate and tutor in the School of Philosophy at the University of Tasmania.

**Boguslaw Wójcik** graduated (philosophy) in 2009 from University of Silesia; defended MA thesis ‘Common Sense in philosophy of Reid and Moore’. Currently a graduate student of Catholic University in Ruzomberok working on a dissertation titled “Common Sense in Ordinary Language Philosophy” exploring common sense aspects of Austin’s, Ryle’s and Malcolm’s writings. Philosophical interests revolve around epistemology, realism and early analytic philosophy.