

David Hume and Modern Economics

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Abstract

Hume's contribution to modern economics is normally thought of in terms of his early statement of the quantity theory of money, and to a lesser extent his views on trade and development. At a methodological level the influence from his empiricism is commonly traced to the development of econometrics. But if we explore his philosophy more fully, we find a much richer set of ideas which can illuminate the way we approach issues in modern economics. Here therefore we explore Hume's theory of human nature and his theory of knowledge in order to understand how he viewed economic behaviour as inherently bound up in other aspects of life. From this follows a perspective on the relations between economics and other disciplines (notably history, sociology and psychology) which may inform current explorations of these relations. This reading of Hume's approach to economics is illustrated by revisiting his theories of money and growth, and his approach to empiricism. Hume holds the potential for a much richer contribution to modern economics than is normally understood.

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Introduction

Modern economics focuses on a range of questions. Of these, one of the more important at the micro level is how to develop a fuller account of behaviour than the traditional account of rational economic man. A particular issue is how far what is required is a more sophisticated notion of rationality, and how far the scope for a rational account of behaviour is limited. Further, should economics draw more on other disciplines in order to understand behaviour more fully?

At the macro level there is a concern to understand differences in economic performance between countries when the traditional account had predicted convergence. There is also concern to predict the outcome of the emergence of different modes of organisation, notably state capitalism. Here there is an increasing interest in culture and institutions as underpinning differences in performance, again opening up further potential for input from other disciplines. Some of these differences have persisted between market economies in spite of globalisation. So what is to be expected from persistent differences between market economies and the new state-sponsored capitalist economies? And how far can conventions and institutions themselves be understood as being the outcome of rational choice?

Both of these developments have encouraged dialogue with other disciplines, such as psychology and sociology, which have traditionally been thought of as separate from economics. These developments have also posed more general methodological questions about how we should build, and appraise, knowledge in economics, and thus a renewed interest in philosophy. Indeed there is greater awareness of the uncertainty with which knowledge is held, both by individual agents, but also by policy-makers and economists. There is also increasing awareness of the role of institutions, and more widely of habits and conventions, for individual behaviour and for the economy as a whole. Which methodological approach would best embrace this awareness? In particular, questions have been posed about the scope for abstract formal modelling as the exclusive method for addressing these developments.

In considering the role for input from philosophy, there is the potential to learn by looking back, before the emergence of this trend for economics to be defined by its formalist method, to a train of thought stemming from the Enlightenment period. The specific purpose here is to consider the work of David Hume for its relevance to modern economics. David Hume was a great philosopher and historian during the Enlightenment period when the discipline of modern economics saw its beginnings.¹ He is particularly associated with the emergence of modern economics through his friendship with, and influence on, his fellow Scot, Adam Smith. As such he merits particular attention when considering the influence of philosophy on modern economics.

But Hume is probably more widely recognised for his direct contributions to economics, in a series of essays (Hume 1752) which are cited as the inspiration for modern theories in the areas of money, international trade and growth. Thus for example Friedman (1975)

¹ Economics of course has a much longer history. But it is widely accepted that modern economics took much of its character from this period (see eg Gordon 1991, Screpanti and Zemagni 1993).

discusses modern monetarism in terms of a 'rediscovery' of ideas stemming from Hume. Frenkel and Johnson (1976) repeatedly cite his theory of money and trade (notably the role of the price-specie-flow mechanism) as an original expression of a key element of global monetarism. Rostow () cites Hume as the first in the development of theories of economic growth, through free trade and the money flows associated with trade. North?

Hume is also known in economics for his philosophy of science, as an empiricist who inspired the subsequent development of positivism. While this influence arguably has indeed been great, much of the literature on Hume's philosophy itself suggests that it is based on a misinterpretation of Hume's philosophy. Indeed some key figures in economics, such as Keynes and Hayek, have interpreted Hume's philosophy quite differently, and have thus drawn on his influence to develop economics using methodological approaches very different to positivism. Further, by considering Hume's economics in terms of his philosophy, the 'quantity theorist' interpretation of Hume has also been questioned.

In discussing Hume's relevance for modern economics here, the case will be made for a particular interpretation of Hume's philosophy and economics. Inevitably we look back at Hume through the spectacles of the twenty-first century. All anyone can offer is interpretation from this or that perspective. The best we can do therefore, in trying to understand Hume, is to try to understand his own perspective.² We therefore begin with a brief account of this context. In the third section an account of Hume's philosophy and economics is set out, followed by a discussion of the different interpretations subsequently applied. We conclude by considering the potential for Hume's philosophy to inform modern economics, including a reflection on how economics can and should relate to other disciplines.

Hume in his Context

Hume has often been treated, along with Smith, as a major figure within a broad, European Enlightenment. Indeed he lived for considerable periods of his life in France, and was influenced by the various currents of enlightenment philosophy on the continent. However, more recent scholarship has built up a picture of the Scottish Enlightenment as having a particular character, distinguishing it from the Enlightenment elsewhere (Allan 1993, Broadie 1989, 2003a).³ Indeed we will find that it is crucial, for the interpretation of Hume, which Enlightenment approach is employed. We therefore need to consider Hume's background in Scotland, and the origins of the Scottish Enlightenment in order fully to understand his philosophy, and his economics as applications of his moral philosophy.

²Our approach here is therefore in line with the historiographical approach most associated with Quentin Skinner (1969), and most prevalent in the modern literature on the history of economic thought. Accordingly it is therefore judged to be important for our understanding of Hume to have some understanding of the context in which he was writing and his motivation. See further Dow (2001).

³ Norman Kemp Smith (1905a, 1905b, 1928, 1941) had been an early lone voice maintaining this argument.

Scotland's prior political history was as an independent nation, often with continental European alliances and in conflict with England, until the Union of the Crowns in 1603 and the union of the parliaments in 1707. But the move to England, first of the court and then the parliament, brought to the fore questions of jurisdiction and authority, and the associated questions of virtue, and the relationship between church and state, which set the agenda for Scottish moral philosophy in the eighteenth century, out of which grew what we would now recognise as the social sciences. At the same time, Scotland was a poor country relative to its richer neighbour, England. Encouraging analysis of differences in economic performance.⁴ Further, Scotland was undergoing significant change with the emerging commercialisation of economic activity, and facing such practical questions as those concerning agricultural improvement, trade policy and the emergence of banking. The protestant church had encouraged widespread literacy (at least in terms of reading ability), and education adopted a historical approach to subjects which served a problem-oriented search for knowledge which drew on whichever approach best addressed the problem (rather than some notion of the demonstrably 'best' or 'true' approach more typical of the Oxford approach to education; see Davie 1961, 1986). Arguably, the inevitable continuing awareness in a small nation of alternative approaches to knowledge and organisation in other countries further fostered a somewhat sceptical approach to knowledge (ie scepticism that one approach from outside could be imposed on Scotland as being demonstrably superior).

There was a long tradition in Scottish philosophy which presaged the Scottish Enlightenment. Common sense philosophy encouraged the idea that the mind was able to generate ideas over and above the experience of the individual senses.⁵ Evidence, or experience, is mediated through the mind. Another tradition, of natural law philosophy, encouraged the idea that there was some natural order to physical reality. As society underwent the changes associated with commercialisation, population movements into urban areas and political change, the application of natural law to society was a natural development in Scottish philosophy, putting the focus on human nature. Much of Scottish moral philosophy therefore was devoted to building up a science of man.⁶

The character of the Scottish Enlightenment was distinct from the French and English Enlightenments.⁷ The former, exemplified by Descartes, was rationalist, in the sense that reason, employed in deductive logic, was given primacy, and was sufficient for demonstrating the truth of arguments. The latter, exemplified by Bacon, was empiricist, giving primacy to observation and inductive logic. While Bacon did influence Scottish

⁴ This was expressed in the 'rich country – poor country debate' (Hont 1983, 2008).

⁵ Thomas Reid, the leader of the school of common sense philosophy, was a noted critic of Hume. But, as Sutherland (1982) argues, their common background meant that their philosophies had much in common.

⁶ Questions about social order and human nature had pressing importance, not only at a time of the engagement of Scots with the New World and its indigenous people, but also closer to home at a time when questions of 'civilising' Scottish Highlanders was a matter of public policy and debate. Following the second Rebellion in 1745 there was a policy of suppression of Highland culture, as well as economic improvement of the Highlands, although the 1715 and 1745 Rebellions and their putting-down did not strictly follow Highland-Lowland lines.

⁷ Inevitably, any national characterisation of enlightenment involves simplification; nevertheless, in broad terms, there were significant national differences.

thought, it was the particular Scottish interpretation of Newton's experimental philosophy (highlighting the emphasis on forming theoretical principles on the basis of observation, and then checked against further observation) which was more representative of Scottish philosophy of science (see Montes 2006, Cremaschi 2008).

While Hume's intellectual and experiential background were Scottish,⁸ the initial development of his own philosophical contributions occurred when he was in France, where he wrote the *Treatise of Human Nature* (Hume 1739-40); this work can be interpreted as his early grappling with the rationalism of the French Enlightenment. He sought to establish how far reason could take us in establishing a theory of human nature. Given his conclusion that reason was inadequate for the purpose, the Scottish character of Hume's philosophy developed as he turned to seek an alternative approach to moral philosophy which would provide a foundation for practical reason. He further developed this approach in the *Enquiry Concerning Human Understanding* (Hume 1748) and then in his subsequent essays (Hume 1752) as he increasingly addressed practical questions, including his essays on economic subjects (Rotwein 1955). He also became a noted historian, with publication of his *History of England*. Indeed Hume adopted the Scottish historical approach more generally to all his work, in addressing practical questions as well as questions at a philosophical level, drawing particularly on examples from ancient history. In summary, it was the need to provide a philosophical foundation for new developments in scientific knowledge applied to society as well as the physical world which shaped the character of Scottish Enlightenment philosophy.

David Hume's Philosophy

Hume's philosophy is the subject of an enormous, and complex, literature. The aim here is to provide an account which gives sufficient flavour of Hume's philosophy to indicate the rich seam available to economists. In the spirit of the French Enlightenment, Hume had set out to explore how far reason could take a theory of human nature. But his conclusion was that it was impossible to establish general principles which could be demonstrated to be true purely on the basis of reason. He puts this most clearly in the Introduction to the *Treatise of Human Nature*, where he suggests that 'any hypothesis, that pretends to discover the ultimate original qualities of human nature, ought at first to be rejected as presumptuous and chimerical' (Hume 1739-40: xvii). Reason alone could not establish existence of reality, without which foundation knowledge in the natural or moral sciences was impossible. Even in mathematics, such concepts as equality could only derive meaning from experience (Hume 1740: 26-7). He argued that this scepticism about the scope of reason should apply to all knowledge, whether scientific or everyday knowledge, which instead must rely on 'experience' (ie evidence) and 'authority' (ie conventional knowledge):

⁸ David Hume absorbed much of the Scottish philosophical background as a student at the University of Edinburgh in the 1730s, although the greater influence was Frances Hutcheson, Professor of Moral Philosophy at the University of Glasgow. Hutcheson was identified by Scott (1900: 265) as the 'prototype of the Scottish Enlightenment'; it was Scott himself who first coined that expression.

[w]hen we see, that we have arrived at the utmost extent of human reason, we sit down contented; ... But if this impossibility of explaining ultimate principles should be deemed a defect in the science of man, I will venture to affirm, that 'tis a defect common to it with all the sciences, and all the arts, in which we can employ ourselves, whether they be such as are cultivated in the schools of the philosophers, or practised in the shops of the meanest artizans. None of them go beyond experience, or establish any principles which are not founded on that authority.

(ibid.: xviii)

Hume follows Newton in discussing evidence in terms of 'experiments'; indeed the subtitle of the *Treatise* is '*Being an Attempt to introduce the experimental Method of Reasoning into Moral Subjects*'. He draws the distinction between the constructed experiments of the natural sciences and the observation of natural instances in moral philosophy (encompassing what we would now call the social sciences), as the source of 'experience'. In the latter case, constructed experiments would be unreliable because they would 'disturb the operation of my natural principles' (ibid: xix). Rather experiments in moral philosophy should draw on

a cautious observation of human life, and take them as they appear in the common course of the world. ... Where experiments of this kind are judiciously collected and compared, we may hope to establish on them a science, which will not be inferior in certainty, and will be much superior in utility to any other of human comprehension.

(ibid.)

For Hume, history provided a vast array of accounts of human life, from which provisional principles might be drawn. Hume also noted the role of introspection in providing a distinctive source of evidence for the theory of human nature, and indeed he is identified as influential in the subsequent emergence of the science of the mind (Loasby 2008). However, he regarded third party observation as being more reliable, since the mind alters what it tries to recall through introspection (Broadie 2003b).

But observation too was inadequate for establishing the truth of general principles, given the complexity of the subject matter and the difficulty in identifying underlying causal mechanisms from the observation of constant conjunctions of events. It was not that there was no order (in nature or society) – indeed belief that there was order was necessary for science. Rather for Hume the problem of induction was that we could never be certain of having identified underlying causal mechanisms. All we had to go on was observation of the effects of causal mechanisms, and the *idea* of causation (derived from experience, mediated by the mind); we do not have direct access to the mechanisms themselves. Using the example of anatomy, Hume explains the hidden nature of the deep structural causal forces connecting volition and movement:

. . . the immediate object of power in voluntary motion, is not the member itself which is moved, but certain muscles, and nerves, and

animal spirits, and, perhaps, something still more minute and more unknown, through which the motion is successively propagated, ere it reach the member itself whose motion is the immediate object of volition. Can there be a more certain proof, that the power, by which this whole operation is performed, so far from being directly and fully known by an inward sentiment or consciousness, is, to the last degree, mysterious and unintelligible?

(Hume 1748, VII.I.52, 66)

How then are we to regard knowledge in the absence of demonstration of truth through either deductive or inductive logic? In an earlier passage in the Introduction, Hume had argued that the science of human nature was primary: ‘Tis evident that all the sciences have a relation, greater or less, to human nature; ... since they lie under the cognizance of men, and are judged of by their powers and faculties’ (ibid.: xv). It was through understanding these faculties that we could understand the nature of, and scope for, knowledge. In addition to the faculty of reason, men crucially have the faculty of imagination. It is imagination which allows us to generate ideas – even the idea of causation itself. More specifically, it is imagination which allows us to infer (provisional) general principles from experience; this includes the principle of existence, which we infer from habitual belief built up in society from generations of experience. ‘We may well ask, *What causes induce us to believe in the existence of body?* But ‘tis vain to ask, *Whether there be body or not?* That is a point, which we must take for granted in all our reasonings’ (Hume 1739-40, I.IV.II: 187, emphasis in original).

Imagination allows us to identify some order in experience. By intuiting similarities we may apply reasoning from one instance to another by analogy.

All kinds of reasoning from causes or effects are founded on two particulars, viz. the constant conjunction of any two objects in all past experience, and the resemblance of a present object to any one of them. Without some degree of resemblance, as well as union, ‘tis impossible there can be any reasoning.

(ibid. I.III.XII: 142)⁹

Since such reasoning is conjectural, or constitutes ‘belief’, it can be challenged, on the basis of experience – Hume notably challenged the certainties of religious belief, and ‘superstition’ more generally. Indeed, since belief is based on past experience, and this does not constitute proof, conventional belief may be misguided (Hume 1740). But as the only reasonable basis for human behaviour, beliefs form part of the subject matter of the science of man, and thus the role of the imagination is central. Adam Smith notably developed this notion of the faculty of imagination in his *Theory of Moral Sentiments*, where sympathy formed the basis for the social nature of human behaviour.¹⁰

⁹ Hume (1748, IV.II.31, 36) famously used the example of eggs, each of which is unique, but recognisable as bearing a fundamental resemblance to other eggs.

¹⁰ Both Hume and Smith, recognising that true knowledge was not available in everyday life, as in science, and thus the importance of the faculty of imagination, emphasised the resulting scope for fiction and self-deception. For Hume fictions could have a positive social role, as in the case of money, where metallic

Indeed we see in Hume's Introduction, as quoted above, further indication of the role he gave what we now know as psychology in his philosophy of science (something again which Adam Smith developed, in his *Essay on the History of Astronomy*). He refers to 'contentment' with the outcome of enquiry, rather than 'truth', and his role in persuading his readers. 'There is nothing which is not the subject of debate, and in which men of learning are not of contrary opinions. ... amidst all this bustle 'tis not reason, which carries the prize, but eloquence' (Hume 1739-40: xiv). In the absence of demonstrable truth, persuasion is decisive, as Smith, again, developed more fully in his *Lectures on Rhetoric*. Psychology, then, is not just part of the subject matter of a science of human nature, but also determines how science develops in the scientific community.

The Faculties of imagination and reason, however, are not enough to explain behaviour (in terms of action or persuasion). It is at the level of sentiments, or passions, virtue and vice, that we find the motive for action (or the prevention of action): 'I shall endeavour to prove first, that reason alone can never be a motive to any action of the will; and secondly, that it can never oppose passion in the direction of the will (Hume 1739-40: 413). A theory of moral distinctions grounded in the passions was fundamental to Hume's approach to economics, such that behaviour could not be explained by self-interest alone, but also by the exercise of virtue (or vice) as defined by the moral principles embodied in a society's customs and habits. For Hume, there are 'natural' virtues which are inherent to human nature, such as generosity and clemency, which always attract approval (through sympathy). These virtues are as fundamental to human nature as self-interest (implying that they cannot be explained by self-interest). There are also 'artificial' virtues, such as justice, which evolve as conventions over time through social interaction. It is through the historical evolution of the concept and practice of justice that Hume saw the emergence of the concepts of property and property rights. Thus government has its origins in moral sentiments, and develops a role in implementing systems of justice. Government more generally is required to encourage moral sentiments where informal social conventions are weakened (as in the emerging commercialisation of activity). We turn now to focus specifically on Hume's thinking on economic subjects, as an exercise in moral science.

Hume's economics in light of his philosophy

Hume published a long series of *Essays*, following publication of the *Treatise*, and some of these were devoted explicitly to economic issues. Eugene Rotwein gathered these in a volume entitled Hume's *Writings in Economics*. His introduction (Rotwein 1955) not only elaborates on the economic context in which Hume was writing (summarised in the second section above), but also draws attention to key features which carry forward from his philosophy: an emphasis both on psychology and on history (ibid.: xvi ff.). By exploring Hume's theory of money and the related theories of trade and development, in

money was a sign of value. This sign was supported by convention and long experience. But Hume feared that the same was not true of bank credit money, where the fiction did not necessarily have substance, and there was scope for loss of confidence and panic (Caffentzis 2008).

which Hume draws on his theory of human nature, we can see the significance of these emphases.

In the essay 'On Money', Hume set out a monetary theory of the price level which was 'rediscovered' in twentieth-century monetarist theory. For Hume, the general price level was the outcome of the ratio of circulating money (ie excluding any money which is hoarded) to commodities. Hume drew attention to the constant conjunction of events, observed in history, of an inflow of specie and, after a lag, a rise in the general price level. Where this inflow was the result of increased exports, the inflation would reduce the competitiveness of exports, so that competing nations would be able to regain some of their advantage.

But Hume argued that this correlation between money and prices was not a direct causal relation; the inflow of specie itself was simply the symptom of an increase in exports. It was this increase in economic activity which drove up wages and thus prices, not the inflow of money itself. Rather, he drew on his detailed observation of human behaviour in a wide variety of societies in order to explore both the psychological implications of an increase in trade, and also the role of custom and habit in the outcome.

Accordingly we find, that, in every kingdom, into which money begins to flow in greater abundance than formerly, every thing takes a new face: labour and industry gain life; the merchant becomes more enterprising, the manufacturer more diligent and skilful, and even the farmer follows his plough with greater alacrity and attention (Hume 1752: 286)

From the whole of this reasoning we may conclude, that it is of no matter of consequence, with regards to the domestic happiness of a state, whether money be in a greater or less quantity. The good policy of the magistrate consists only in keeping it, if possible, still encreasing; because, by that means, he keeps alive the spirit of industry in the nation, and encreases the stock of labour, in which consists all real power and riches (ibid.: 288).

These circumstances are contrasted with the experience of nations with a net outflow of money: 'The poverty, and beggary, and sloth, which must ensue, are easily foreseen' (ibid.). But it is not the shortage of money as such which is the problem:

[T]he effect, here supposed to follow from scarcity of money, really arises from the manners and customs of the people; and that we mistake, as is too usual, a collateral effect for a cause. The contradiction is only apparent; but it requires some thought and reflection to discover the principles, by which we can reconcile *reason to experience* (ibid.: 290, emphasis in original).

The urging of the magistrate to promote growth by ensuring a rising money stock has been the subject of much discussion, as it seems to be at odds with the interpretation of Hume as a quantity theorist. However, Wennerlind (2008) draws attention to the fact that Hume refers to the 'magistrate' (not the private banks whose credit issue caused the

money supply to change), ie to the legislator, who had no involvement in the credit process. He concludes that what Hume was advocating was that the economic conditions, and associated institutions and practices, be promoted which would encourage the kind of increase in industry which would lead to a rise in money.

Thus we see that Hume's monetary theory focused on the response of individuals and societies to the changing economic circumstances which happen to be accompanied by money flows. His interest was more in the processes set in train by these circumstances (with the effect of changing productivity levels) than the eventual outcome of rising wage and price levels (Wennerlind 2008, Caffentzis 2008). He clearly did not think of money as being neutral in the short run (in the sense of correlation between money and output and employment); nor could it be seen as necessarily neutral in the long run to the extent that productivity changes, albeit offset by changes in export prices, engendered further structural change. (He refers for example to an increase in enterprise, which is not a short-run phenomenon.) Indeed, Schabas (2008) argues that the modern short-run/long-run distinction is not appropriate for Hume, in that the changes set in train by initial increases in productivity could continue for generations.¹¹ While monetarist theory absorbed some of Hume's theory, therefore, it ignored (particularly in its formalist expression and associated econometric estimation) the structural changes, with their origins in psychology and changes in habits and customs, on which Hume placed such emphasis (Wennerlind 2005).¹²

The existence of money as a social relation was for Hume an essential element of commercial society. Hume paid particular attention to the change in manners and customs which accompanied commercialisation, and the associated development of both property and money. Like others in the Scottish Enlightenment, he had a particular interest in differences between 'rude' societies and commercial society.¹³ Society played different roles in economic development. First, social interaction was fundamental to the formation and observing of conventions. Second, the imagination served not only to encourage moral behaviour, but also to spark envy and the desire to acquire goods being enjoyed by others. Indeed, trade introduced new luxury goods to different societies, creating new wants previously undreamt of (Hume 1752: 300). The aspiration to acquire these goods was a great spur to economic activity. Hume thus argued that trade itself would encourage economic activity by expanding the desire for imported goods.

However trade also created the risk that domestic producers would seek to produce elsewhere, where labour costs were lower. The first advantage of the exporting country would then be eroded, leading to higher rates of growth in the low-wage economy, until

¹¹ Schabas (2008) similarly argues that Samuelson (1980) was misguided in his criticism of Hume for ignoring the law of one price, another solution to modern equilibrium models which might never be reached.

¹² Friedman himself devoted considerable attention to monetary history, see eg Friedman and Schwartz (1963).

¹³ It is claimed (see eg Caffentzis 2001) that this interest, and indeed the content of his economic essays, reflected a veiled concern with the 'civilising' of the Scottish Highlands. This now comes across as patronising, but the tenor of explicit discussions of other societies (eg Hume's friend William Robertson on India, see Meek 1976) was of respect for different modes of organisation and behaviour.

these wages were driven up such as to eliminate the initial wage differential. For Hume, therefore, economic growth was a process of catch-up. There was much debate as to how long this process would take, and indeed whether low wage countries would ever erode the first-mover's advantage. But, having seen that satisfying new needs for luxury goods was a major spur for trade and thus industry, Hume argued that rich countries needed to develop the 'capacity for flexible specialisation and technological innovation' in order to maintain a competitive advantage (Hont 2008: 313). Hume thus put the emphasis on human faculties and sentiments as the key to economic performance, rather than labour-saving machinery. Indeed, since high wages provide an incentive to industry and thus further development of human capabilities, Hume argued for ample remuneration and an absence of coercion (Hume 1752: 253-67).

Another factor inhibiting the erosion of first-mover advantage (and thus perpetuating growth differentials) was the time necessary for developing conventions and institutions suited to this higher level of economic activity, although international trade facilitated this process. In particular, as we have seen, Hume was concerned with the major changes required by commercialisation itself. Hume (1752) argued that this transformation would have economic benefits, but also benefits which were more widely moral, social and political (see further Wennerlind 2006). He argued that increased commercial activity encouraged social interaction, and expanded experience, combating ignorance and discouraging hostility, and promoting the development of, and support for, conventions which promoted justice and virtue. Industry and commerce also created the conditions for the flourishing of the mechanical and creative arts among what Hume referred to as the 'middling sorts', which encouraged innovation. Hume was here drawing on his epistemology, with its emphasis on the limitations of human knowledge, the role of the imagination in addressing these limitations, and the basis of knowledge in social convention.

While self interest in the form of material gain was a powerful passion behind industry, Hume (1739-40: 492) saw its potential for being 'destructive of society' if it was not tempered by moral conventions, and in particular a system of justice. Material gain itself was not independent of morals; its very meaning rested on the concept of property, which in turn rested on a moral system. Further, Hume identified the importance of the search for happiness, as distinct from material gain or any other hedonistic sense. Thus:

[T]he antipathy to treachery and roguery is too strong to be counter-balanced by any views of profit or pecuniary advantage. Inward peace of mind, consciousness of integrity, a satisfactory review of our own conduct; these are the circumstances, very requisite to happiness.

Hume (1748: IX.II.233)

Hume (1752: 270) saw labour itself as a source of happiness: 'the mind acquires new vigour; enlarges its powers and faculties; and by an assiduity in honest industry, both satisfies its natural appetites, and prevents the growth of unnatural ones, which commonly spring up, when nourished by ease and idleness'. Hume was concerned about the risk of social alienation of workers (ibid. 198), rather than the 'middling types' who

had more chance of happiness through labour, but drew attention to the social benefits from paid employment in encouraging personal discipline. However, in expressing concern about the social consequences of the search for material gain being given free rein, Hume reflected the concerns of other Enlightenment figures, notably Adam Ferguson, that the increasing division of labour might lead to social isolation, eroding the social conventions on which industry and commerce relied (see McNally 1990). Commercialisation thus brought costs as well as benefits; in particular, government was required to promote the conventions of justice and virtue, and embed them in institutions.

Overall, however, Hume is generally interpreted as emphasising the benefits of commercialisation, with supportive government. For example, Wennerlind (2006: 55) summarises Hume's perspective on the economic process as follows:

[W]hen industry, commerce, and the arts come together and flourish in a mutually reinforcing manner, society embarks on a self-sustaining process of economic, political, and cultural improvement. A set of incentives is established that propels the middling sorts to act in ways that solidify and reinforce the basic institutions of a commercial society, resulting in a prosperous economy.

We have seen some of the scope for different interpretations of Hume, for example with respect to his monetary theory. But from the very beginning Hume's philosophy was the subject of widely diverging interpretations, which led in turn to diverging interpretations of his economics. We consider some of the range of interpretations in the following section.

Interpretation of Hume

Hume's philosophy was challenged, even by some of his Scottish contemporaries as being destructive of science, in that he argued that neither deductive nor inductive logic could demonstrate the truth of arguments (Dow 2002a). It was from these interpreters that Kant first learned of Hume (see Kemp Smith 1918, xxviii-xxix), and Kant accepted the destructive-sceptic interpretation of Hume, which Kemp Smith traces to the influence on Kant of German rationalism.¹⁴ This interpretation gained influence from T H Green's Introduction to the 1874 edition of the *Treatise*, which posited 'that Hume has no set of positive beliefs, and merely develops to a sceptical conclusion the principles which he inherits from Locke and Berkeley'. Russell (1961: 634-47) added further authority to this interpretation, seeing Hume's scepticism as leading to a 'dead end'. Russell's interpretation of Hume in turn influenced Popper's (1975: 1) view of Hume as having encouraged irrationalism through his 'destruction of empiricism'.

The Austrian logical positivists, however, regarded logical and mathematical knowledge as exempt from this interpretation of Hume's scepticism (see Luthe, 1984). The logical positivist project was to construct a system of logic on the basis of empirical testing. They took on board the negative rationalist interpretation of Hume, which emphasised his scepticism about the truth-value of *a priori* argument. But they saw positive possibilities

¹⁴ Arguably it was through the mistranslation into German of the English word belief that Kant misunderstood Hume's reliance on belief as a foundation for reason (see Luthe 1984).

in his emphasis instead on experience, or empirical evidence. Hume's argument that all knowledge requires support from experience became the logical positivist maxim that only testable statements are meaningful, without addressing Hume's problem of induction.

This interpretation of Hume as the father of logical positivism has been perpetuated in modern discussion in economic methodology which draws on the philosopher Bhaskar (1975). Critical realists for example introduced their project of developing a critique of the reliance on econometric evidence by associating the latter with Hume (see Lawson 1997: 19). Reference is made to what is seen as Hume's particular version of empiricism, which involves associating causation with constant conjunction of events (rather than underlying causal mechanisms). This is contrasted with a realist approach to economics, which does not require the presumption of known structure (within stochastic variation), but rather focuses on causal mechanisms which underlie changing structure – necessarily eschewing sole reliance on econometric evidence. In fact there is a longstanding literature, both in philosophy and in the history of economic thought, which interprets Hume as himself a realist, avoiding the interpretations of him as a nihilist with respect to rationalism (in the form of either deductive or inductive logic) or a pure empiricist (see for example Wright 1983, Strawson 1989). Rather, Hume is seen as providing a practical philosophical foundation for science, which did not aim for (inaccessible) certainty, but rather for usefulness as the basis for action. It was this literature which provided the basis for the account of Hume's philosophy offered in the previous section.¹⁵

But in modern economics, when Hume's philosophy of science is referenced, it is the pure empiricist interpretation that has been more evident. Although rationalism is a powerful force in economics, and there is a strong deductivist pure theory tradition, rationalist economists do not tend to address Hume's argument that knowledge cannot be demonstrated to be true on the basis of deductive logic. Indeed Hume's argument has resurface, for example in pure mathematics, where attempts to construct complete mathematical systems independent of empirical reality have failed (Weintraub 2002). Nevertheless there is a subjectivist strain in modern economics which substitutes knowledge held subjectively to be true for knowledge held objectively to be true. This is the case for the Subjective Expected Utility approach which allows for a rational basis for action without certain knowledge. The Rational Expectations Hypothesis literature turns rather to inductive logic by representing subjective knowledge by stochastic empirical models where predictive success is the guide for truth (Lawson 1988). This follows in the long positivist tradition in economics, whereby theory choice is determined by empirical confirmation.

Nevertheless, the interpretation of Hume as being *neither* pure rational sceptic *nor* pure empiricist does have a strong tradition elsewhere in economics, typically among those who have made a detailed study of Hume's work. Among these economists perhaps the most notable are Keynes and Hayek, and it is to their interpretations that we now turn. These interpretations are of particular interest because, while they have much in common

¹⁵ Dow (2002b) sets out a critique of the critical realist portrayal of Hume by critical realists as a positivist. Criticising Hume now assumes less prominence in critical realism, eg Lawson (2003).

in terms of philosophy of science, they yielded different conclusions in terms of economic policy.

Keynes was a noted scholar of Hume,¹⁶ and, as Meeks (2003) argues, was strongly influenced by him. Keynes's *Treatise on Probability*, which pre-dated his economics, addressed the same question that Hume raised with his problem of induction: how to establish reasonable belief in a proposition, as a basis for action, in the absence of certain knowledge. When he applied this philosophy in his economics, he echoed Hume in arguing that, in the absence of certain knowledge of the future, we have to rely unduly on past experience (Keynes 1937). In line with our contrast above between Hume's philosophy and continental rationalism, Keynes explicitly contrasted Hume's challenge to systems of certain knowledge, on the one hand, with Kant's attempt to reintroduce certainty (Keynes 1921: 266; see also 302-3). Keynes's *Treatise* is concerned almost exclusively with uncertain knowledge, which he argued was the predominant case for social systems. Nevertheless Keynes's interpretation of Hume is at times somewhat Kantian, emphasising the negative sceptical argument at the expense of what Hume proposed in place of pure deduction or pure induction.¹⁷ 'Such scepticism goes too far' Keynes (op. cit.: 56) (see further Carabelli 1988: 85-7). He goes on to argue that we are not limited to Hume's 'lively imaginations' for judgements of probability: 'we may believe that our judgments can penetrate into the real world, even though their credentials are subjective' (ibid.).¹⁸ Probability is a matter of logic rather than mere observation or sentiment, and Keynes's philosophy arguably allows more scope than Hume's for deductive reasoning. O'Donnell (1989: 342) goes so far as to argue that, 'on probability ..., Hume and Keynes were poles apart'.

But the logic to which Keynes refers is 'human logic' rather than the classical logic of rationalism (which requires certainty in the truth-value of premises) (see eg Keynes, 1972: 338-9). This logic draws on the same interpretation of Newton (Keynes 1972: 363-74; Carabelli 2003) as was employed in the Scottish Enlightenment. Thus, contra O'Donnell, Keynes (1921: 468) in fact notes that he would expect Hume to have sympathy with his approach to probability. Indeed Keynes's recourse to considering inductive argument in practise is in fact very much in line with the broader interpretation of Hume we have offered here, which sees Hume too progressing beyond the argument against rationalism, and enquiring into how beliefs are established in practise. Hume's applications to economic questions provide case studies for the methodology implied by his philosophy.

For Keynes, action based on reasonable belief, albeit under uncertainty, notably included government action. Like Hume, 'Keynes's prescription was that the state should act as the guardian, supervisor and promoter of civilised society' (O'Donnell 1989: 299), and

¹⁶ Indeed, along with Piero Sraffa, he reissued Hume's *Abstract* in 1938.

¹⁷ It would not be surprising for Keynes to follow Kant's interpretation of Hume, even if not Kant's solution to Hume's scepticism, given the influence on him of the Kantian G E Moore, as well as Russell.

¹⁸ There has been much discussion of the relation between Keynes's epistemology and that of Frank Ramsay, which is relevant for modern discussions of subjective expected utility theory. That Keynes (1972: 339) identified Ramsay with Hume may be significant for the interpretation of Keynes's interpretation of Hume as a sceptic.

thus ‘protector of individualism and personal freedoms’ (ibid.: 303). Like Hume in his approach to Highland Improvement, Keynes advocated that ‘moderation ... govern the pace of state-induced change’ (ibid.: 306). In the *General Theory*, Keynes argued specifically, in the context of the Depression, that, without government intervention in the form of a fiscal stimulus, market forces alone could generate a persistent unemployment equilibrium. Keynes was fully aware that the consequences of such action could not be predicted with certainty (O’Donnell 1989). Nevertheless the justification lay in knowledge held with lower degrees of uncertainty. His *Treatise* had spelt out a pluralist approach to knowledge, whereby, if arguments using different methods and different types of evidence supported a proposition, this added weight, and increased confidence in the proposition. High degrees of uncertainty, where evidence was lacking and/or arguments were contradictory, justified inaction (as in high liquidity preference) (Runde 1990, 1994). Keynes’s approach to politics, more generally, was that its essence consisted of ‘persuasive appeals to reason’, where persuasion required weight of argument (O’Donnell op. cit.: 274).

Hayek (1967: chapters 5 and 7) made much more extensive use of Hume’s work, and expanded at length on the contrast with the views of Hume, and other figures of the Scottish Enlightenment, with continental rationalism. He drew on Hume both for his theory of knowledge, and also for his theory of social organisation. Like Hume, he was interested in the science of mind, distinguishing in *The Sensory Order* between the life of the mind and the world of physical objects. There is a limit to the extent to which the mind can establish a rational basis for action, and much action is therefore determined by habit and convention built up from generations of experience. Hume had argued further that, as commercial activity evolves, society develops conventions which curb the self-interested activities which would otherwise reduce the benefits to be derived from commerce. For Hume it was through imagination rather than reason (applied to moral sentiments) that conventions become established (Hume 1739-40: 3.2.1-3).

Since for Hayek (1960, 1970-9) social order arose, not through deliberate action, but through the unintended consequences of habitual action on the part of individuals, this spontaneous order could not be subjected to abstract rational justification or analysis, nor could rational argument be sufficient to justify government intervention. Hayek (1967: 121) recognised that Hume did see a role for government in promoting a sound basis, in institutional and physical infrastructure). But Hayek did not see a role for the kind of policy activism advocated by Keynes a subject for debate between them. Both shared the interpretation of Hume as being critical of the scope for certain knowledge. Hayek accepted the limitations of knowledge, based on Hume’s critique, as limiting the scope for reason to provide a foundation for policy action. This stance drew further justification from the sense he drew from Hume and the other figures of the Scottish Enlightenment that commercial society itself developed the conventions which ensured that individual behaviour had the unintended consequence of order.¹⁹

¹⁹ It is significant that Hayek (see eg Hayek 1978 chapter 15) places such an emphasis on Mandeville (1732), whose *Fable of the Bees* was a pioneering argument along these lines, which was highly influential in the Scottish Enlightenment.

Hayek differed from Hume in privileging subjective knowledge, gained through introspection and experience, as being much more reliable than third-party knowledge. It was this view of knowledge which particularly inclined Hayek against the notion of government action, which would be based on third-party knowledge of experience. Given Hume's emphasis on historical knowledge, he clearly gave an important role to the outside observer (Broadie 2003b). Nevertheless, Hayek's related focus, in the Austrian tradition, on the central role of the entrepreneur, his drives and his creativity through imagination, hold much in common with Hume's theory of economic development as a process (see eg Hayek 1978).

There remains tremendous scope for debate about this interpretation of Hume, which is reflected in the difference of view between Hayek and Keynes as to the extent of order which spontaneously emerges in society, and the scope for knowledge beyond individual experience, in spite of their common understanding of much else of Hume's work. Hume arguably was less sanguine than others about social order being the assured outcome of individual behaviour. For Hume, government has a role where social conventions and their observance fall short (Wennerlind 2006: 49-50). This role included intervention in order to promote commercialisation itself; a view supported by Hume's active role in the Highland 'improvement' movement of the time (Caffentzis 2001). Hume more generally saw considerable scope for advice to the legislator. As Wennerlind (2006: 46) puts it:

David Hume wrote about political economy in order to encourage debate about the best way to secure virtue and prosperity in a rapidly modernising commercial world. From the time of his first publication, *A Treatise of Human Nature*, in which he articulated his thoughts on how a society and its polity should be organised to reap the greatest benefits from commerce, he engaged in a lifelong effort to advise citizens and legislators on how to respond to political and economic concerns.

But in considering the relevance of Hume's ideas for the twenty-first century, we need to remember that he was writing at an early stage of commercialisation. Smith (1776: I.VIII.13, 84) for example forewarned about the tendency for competition to be eroded as producers sought to increase their market power, reducing the benefits from market activity. How far does Hume's philosophy provide a justification for belief in spontaneous order in the twenty-first century? In the spirit of Hume, our assessment of the justification must rest on experience more than reason; for both Hayek and Keynes, their own belief systems, drawn on experience and the conventional beliefs they had absorbed, determined whether they perceived order or absence of order.

We turn now to consider the relevance of Hume's thought more generally for economics in the twentieth century.

Implications of Hume's Philosophy for Modern Economics

The issues raised above regarding the interpretation of Hume by Keynes and Hayek are of interest in their own right, but also because current theoretical developments make active use of Keynes and Hayek, including their interpretations of Hume. Thus for

example modern theory of uncertainty in the Keynesian tradition makes explicit use of his epistemology and his understanding of the nature of social systems (see eg Runde and Mizuhara, eds, 2003), and applies them to such areas as monetary policy (see eg Dow 2004). Similarly, Hume and Hayek's analysis of conventions and social order has recently been brought to a discussion of convention in evolutionary game theory by Sugden (1989) as a counterpoint to classical rational choice theory, and to discussions of economic performance.

In considering Hume's philosophy more generally, the implications for modern economics fall into two broad and inter-related categories. First there is Hume's foundation in a theory of human nature, and the consequent evolution of forms of social and economic organisation. Second there is his theory of the nature of human knowledge, which has direct application both to human behaviour in the economy and to the discipline of economics itself. His theory of knowledge therefore is relevant to how we consider applications of his ideas on behaviour and conventions.

There has in recent years been increasing reference in what we might call the 'new' behavioural economics (Sent 2004) to Smith's *Theory of Moral Sentiments*. The aim has been to try to explain experimental behaviour which does not conform to the predictions of the conventional rational choice framework. Much of this work has been sparked off by psychological experiments (notably in the pioneering work of Khanemann and Tversky, eg 1979). Reference is made in this literature to social conventions which moderate self-interested behaviour. (Given the close connection between Smith's ideas and those of Hume, this is relevant for our purposes.)

The main issue for rational choice theory is how far following social conventions, and indeed the evolution of the conventions themselves, can be explained as the outcome of rational choice. We have seen that Hume saw these conventions as an expression of moral sentiments *alongside* self-interest, and indeed he saw self-interest in terms of material gain as *requiring* moral conventions (notably property rights). Rather than analysis in terms of rational choice, therefore, analysing such conventions requires historical study of the relevant society, its approach to morals and its institutional framework. But it is clear that behavioural economics is concerned to proceed along rationalist lines. Ashraf, Camerer and Lowenstein (2005) for example present an interpretation of Smith's 'impartial spectator' as the voice of reason which, in the long-run, overcomes the short-term, irrational passions. But Hume had explicitly argued that it made no sense for reason and passion to be opposed, since reason itself could not motivate action. In any case, the consensus interpretation in the Smith literature makes it clear that the impartial spectator is the imagined observer of our actions through whom we make moral, not rational, judgements.

Moral judgements are inherently relational. Bruni and Sugden (2000) explore the work of Hume and Smith, along with their Italian contemporary Genovesi, for ideas on analysing a particular relation which is fundamental to market activity: trust. They argue, in sympathy with Hume, that social relations can be fostered by the institutions and conventions which evolve with commercial society, although they rely on networks

which have the capability of collapsing. While Bruni and Sugden interpret Hume as emphasising self-interest, they point out the barriers within the modern rational choice framework to developing relational theories of behaviour.

These barriers are primarily methodological. It is the rationalist requirement to express theory in a deterministic, formalist way that makes relational theory so difficult. The 'old' behavioural approach takes a different methodological approach and is therefore not so constrained (egs; see further Dow forthcoming). This approach, which in its neo-Austrian form owes much to Hayek, explicitly draws on other disciplines, such as psychology or management science, to analyse case study evidence. This type of evidence is much closer to Hume's notion of experience than the more abstract aggregated data series. It also gets round Hume's concern that experimental evidence in human science was unsatisfactory since he argued that it inevitably distorted behaviour. This argument is addressed in the experimental literature where experimental design aims to minimise distortion, and efforts are made to understand the nature of distortion which cannot be removed (Levitt and List 2007).

Hume's ideas have also been shown to be relevant to debates within game theory about the nature of games. Cubitt and Sugden (2003) highlight the Humean foundations of Lewis's idea of the common knowledge which may be said to underpin experimental game playing. Hume's and Lewis's work can assist in analysing the nature and origins of the conventions which players bring to games. By considering conventions as evolving, Cubitt and Sugden (*ibid.*: 204) offer an alternative to the 'hyper-rational agents' of classical game theory on the one hand and the 'blind processes of selection' of evolutionary game theory, with adaptation to deviant behaviour, on the other. Conventions cannot therefore be analysed as the outcome of rational choice (see further Sugden 1989). Conventions arise and become established through repetition and the absence of surprise, rather than moral judgement, though arguably for Hume conventions were a guide to moral behaviour for those who chose virtue, but also a guide to judgement in the case of those who chose vice.

Similar issues of interpretation of the role of individual rationality have arisen in the field of public choice economics, where there has in fact been a move explicitly away from referring to historical ideas, such as those of Hume. Marciano (2005) argues that this move is founded on a misinterpretation of Hume as seeing all individual behaviour as self-interested 'knavery', and therefore providing a foundation for rational choice theory. Rather, as he puts it, Hume argued that government could only function at all, not only if politicians privilege customs but also the virtues of human nature. Without some agreed moral principles, there would be no basis for deciding what were good actions by government. As a corollary, public choice theory needs to pay explicit attention to the conventions of the society in question. Marciano concludes by advocating that, even among those who acknowledge Hume as an influence, much more serious attention needs to be paid to his ideas.

The role of international differences in social convention is another area where Hume's ideas have relevance to modern economics. Phelps (2006) draws inspiration from an

explicitly non-rationalist interpretation of Hume for a study of the role of cultural difference in economic performance. In order to understand these cultural differences, Hume's work can be illuminating. But Guiso, Sapienza and Zingales (2006: 46), for example, conclude as follows, without reference to Hume, who had addressed these questions:

As this research on culture and economic outcomes expands, it raises an exciting set of questions. How does culture emerge and how does it persist? What roles are played by production technology, political power, efficiency concerns, and even factors like hygienic considerations? What determines the persistence of the cultural traits? What is the interaction between culture and formal institutions? Importing cultural elements will make economic discourse richer, better able to capture the nuances of the real world, and ultimately more useful.

Understanding human behaviour at the micro level, if going beyond the rationalist approach, requires reference to psychology. Following Hume, we would be concerned to understand further the sentiments which motivate behaviour. The happiness literature for example is exploring the significance of motivation other than mere avidity, for example. Meanwhile the capabilities approach is moving the analysis in a Humean direction, away from a hedonistic notion of happiness towards such notions as self-fulfilment and dignity. Further we would want to understand better the role of human faculties other than reason (in the sense of classical logic) in the context of uncertainty. Thus, for example, psychology is brought to analysis of financial market behaviour in the form of the 'emotional finance' approach. As is already evident in behavioural economics, the field of psychology has much to offer.

Understanding social behaviour, including the nature and role of conventions and institutions, requires reference to sociology. Here too a literature is building up in economic sociology which no longer sees market activity as the sole preserve of economics, but rather enquires into the social nature of markets (see eg Biggart and Beamish 2003). There is also a large literature in economics (institutional economics) which focuses on the nature and role of custom, habits, conventions and institutions more generally, drawing on economic sociology.

But incorporating other disciplinary knowledge into economics is not straightforward. In particular, the requirements of conventional mainstream economics for mathematical modelling as a *complete* account of theory (Goodwin 2000, Colander 2000) are a major factor determining how this input can be expressed.²⁰ Thus for example rational choice theory cannot incorporate other motives or faculties than rational optimisation with respect to fully-specified goals. Evolutionary game theory has been unable to formalise the conventions which underpin behaviour. The source and character of entrepreneurship is notoriously difficult to analyse formally, since it is by its nature non-deterministic. New forms of evidence, such as experiments and surveys, and attention to new variables such as culture, are encouraging exciting new developments in economics. But there is

²⁰ Mathematical expression is not neutral with respect to content (Chick and Dow 2001).

the potential for a growing divide between theory and empirical work unless methodological issues are addressed (Dow 2007).

Here too Hume has much to offer. Hume's theory of knowledge, as well as his economics, predated disciplinary segmentation, so that his work on economic subjects provides an exemplar. He argued against a rationalist reliance on pure reason as being unworkable, but also against an empiricist reliance only on evidence. Rather he argued for detailed historical study of the way in which human nature is manifested in different cultural and organisational environments in order to tease out provisional general principles, but then continual checking back against experience as these principles are applied. Further, human behaviour itself is governed by a similar approach to knowledge, in the absence of availability in general of certainty. Keynes and Hayek drew on this theory of knowledge in the twentieth century to underpin their economics. There is much that we can still learn from Hume in considering the particular challenges of the twenty-first century.

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