

Publisher policy allows this work to be made available in this repository. Published in *Incommensurability and Translation* (ed.by RR Favretti, G Sandri, and R Scazzieri), copyright Edward Elgar Publishing. The original publication is available at: http://www.elgar.com/bookentry_main.lasso?currency=US&id=1606

The only uses of this work permitted are private study or research.

RATIONALITY AND RHETORIC IN SMITH AND KEYNES

SHEILA C DOW

INTRODUCTION

The study of rhetoric in economics has blossomed in recent years under the leadership of McCloskey (1983, 1986, 1994). She has encouraged a consciousness of the language used to persuade, and of the difference between official and unofficial discourse. Thus, in their official discourse, economists use a particular formal language to express ideas. But, McCloskey argues, ideas are formed and conveyed through an unofficial discourse which is informal. This puts in a different light the difference which Blaug (1980; 1992) had identified between the methodology which economists profess and that which they practise. While Blaug chastises economists for not living up to their professed methodology, McCloskey notes the difference and encourages economists to explore their unofficial discourse.

The significance of McCloskey's work is that it demonstrates the positive role of rhetoric. In English, the term 'rhetoric' conventionally implies the descriptor 'empty'. The official discourse is conventionally regarded as the only admissible discourse, with anything else falling short of the prescribed formalist standards; the logic of the official discourse is sufficient to convey an argument, which can be judged on its own terms. But McCloskey shows that the formal discourse is only one type of rhetoric, and that economists routinely employ other forms (often in the guise of formal rhetoric, for example appeal to authority). This implies that, far from being a supplement to formal discourse, rhetoric is inherent in any discourse and is thus at the heart of economics.

For a subject which is built on the concept of economic man, a being who is capable of full rationality based on full information, the idea that rhetoric is inherent to economic argument is uncomfortable. If economists do not, or, worse, cannot, conduct arguments in formally-rational terms, what does this imply about their subject matter? The question of the role of rhetoric gets to the heart of the subject and our capacity to develop knowledge about it.

It is the purpose of this chapter to consider the relationship between rationality and rhetoric. We will focus on two of the greatest economists, Smith and Keynes, both of whom addressed epistemological questions and both of whom recognised the significance of rhetoric. We start by considering their epistemology and what that implied for the role of rhetoric. We then proceed to consider what they had to say about the appropriate style of rhetoric. Two particular issues are then addressed: the role of analogy, and the role of rationalisation, as opposed to rationality, in economics.

THE SIGNIFICANCE OF RHETORIC

Both Smith and Keynes were greatly influenced in their epistemology by David Hume. While it was Smith (1762-63) who was the better-versed in the principles of rhetoric, it was Hume's (1739-40, 1748) philosophy which first demonstrated the significance of rhetoric. We therefore start by considering Hume.

In France and England, Descartes, Locke and Berkeley had developed the sceptical view that existence could not be demonstrated on the basis of observation. This scepticism underpinned the development of rationalism, whereby deductive systems of thought were built on axioms. Thus the deductivism of the Church founded on dogma was replaced by deductivism based on axioms. Hume picked up the sceptical argument, and took it furthest by demonstrating the limitations on rational argument other than within closed formal systems. But, rather than destroying the basis for empirical science, Hume saw himself as clearing the way for science (see Luthe, 1984). The context in which Hume formed his ideas was the Scottish Enlightenment. The political, cultural, religious and economic changes in Scotland since the sixteenth century had encouraged a metaphysical habit of thought when addressing the many pressing practical questions (see Sutherland, 1982). The philosophical tradition included the Scottish common sense approach, which allowed for belief in existence as a starting-point of argument.

While many saw Hume as being in opposition to common sense philosophy, in fact he intertwined it with his rational scepticism to provide a workable system of thought. This can only be understood by referring to Hume's ontology. In common with other figures of the Scottish Enlightenment, Hume saw the development of a science of human nature as being central, and prior to all other sciences and mathematics. He understood human nature as operating according to common principles which reflected the social nature of human nature, but manifesting itself in different behaviour in different contexts. The importance of context required that human nature be analysed by means of historical analysis.

Because Hume's scepticism had suggested that reason did not provide an adequate basis for science (since it could not demonstrate existence), nor could it provide an adequate basis for action. The deficiency was made up by other human faculties which were necessary to human society. These faculties he variously termed imagination, passion, sentiment, convention and judgement. It was these faculties which generated the belief in existence which underpinned reason and thus science.

Hume's system of thought thus implies a role for rhetoric as a means of conveying sentiment along with reason. Hume's system further suggests that reason is secondary, since it cannot alone provide a basis for science; it cannot demonstrate causal forces. It is sensations, combined with the belief in existence, which generate the idea of cause. But since we cannot identify true causal processes, the idea of cause itself is insufficient; this was Hume's problem of induction. Knowledge should thus be understood as an open system, since the true causal processes were always capable of generating surprising events.

This was the set of ideas which influenced Smith (1795, 1759) in his philosophy of science and theory of human nature (see Raphael, 1977). Smith developed a psychological theory of the development of science as being motivated by the sense of wonder, and by the aesthetic pleasure achieved by incorporating new observations within a system of familiar, connecting principles. Science developed when surprising events required a change in the theoretical system to explain them. But there was no presumption that any theory was true because, as Hume had argued, there is no mechanism for demonstrating the truth of a theory. A major element in the success or otherwise of a new theoretical development was the rhetoric by which the new development was communicated.

Before Smith developed these theories, he presented a set of lectures on rhetoric, in Edinburgh, and then at the University of Glasgow, which were subsequently published from student notes (Smith, 1762-63). In these lectures, Smith developed a system of rhetoric as a means of communication, of which persuasion was a part. This represented a departure from

the study of rhetoric as artificial systems of logic or in terms of literary style, as was conventional at the time. Smith's theory can thus be understood as an adjunct to his theory of knowledge. As Howell (1975, 21) puts it, Smith saw rhetoric 'not only as the theoretical instrument for the communication of ideas ... but also as the study of the structure and function of all discourses which ideas produce as they seek passage from person to person and from age to age'.

Smith drew on his view of human nature as being social, which reinforced the importance of discourse. In his *Theory of Moral Sentiments*, Smith developed Hume's notion of sympathy to capture the application of the imagination to social relations. Individuals use their imagination to try to understand a situation or an argument from the point of view of different participants, including an imaginary impartial observer. The notion of sympathy is central to rhetoric, in that successful communication, including persuasion, requires some understanding of the person or persons to whom an argument is addressed. Rational argument itself is insufficient to demonstrate the worth of an argument; the persuader needs to appeal to sentiment.

Keynes was an avid reader and collector of Hume's writings, and indeed was responsible, with Sraffa, for publishing Hume's *Abstract of A Treatise of Human Nature* from one of the few remaining original copies (Hume, 1740). Before he came to economics, Keynes had been grappling with the problem of induction as posed by Hume (Keynes, 1973a) in order to work out a satisfactory theory of rational belief as the basis for action. Keynes early on put to one side areas where rationality alone provided demonstrative proof, and attempted to take Hume's project further by exploring the basis for judgment in the absence of demonstrative proof. By positing an organicist ontology, particularly for social systems, Keynes implied that the domain of demonstrative proof, even in quantified probabilistic terms, was very limited (see Carabelli, 1995). Most knowledge is held with uncertainty, as reflected in the inverse of the degree of confidence held in any degree of belief. Keynes used the concept of weight to capture confidence in any degree of belief, where weight reflected the relative availability of relevant evidence. Of course, what constitutes relevant evidence itself is a matter of belief; as Hume argued, we have no way of demonstrably pinning down real causal powers (see Dow, 1995).

The limited scope of rational argument, and a Humean theory of human nature, are most clearly expressed by Keynes in his essay 'My Early Beliefs' (Keynes, 1972b). Here Keynes provided an account of how he realised the 'thinness and superficiality, as well as the falsity' of the theory of human nature embedded in Russell and Moore's emphasis on rationality (Keynes, 1972b, 449). 'The attribution of rationality to human nature, instead of enriching it, now seems to me to have impoverished it. It ignored certain powerful and valuable springs of feeling.' (Keynes, 1972b, 448). Since rational argument is insufficient, it follows that the rhetoric by which an argument is presented is important. Keynes discusses the use of rhetoric to appeal to intuition:

'It is, I think, a further illustration of the appalling state of scholasticism into which the minds of so many economists have got which allows them to take leave of their intuitions altogether. Yet in writing economics one is not writing either a mathematical proof or a legal document. One is trying to arouse and appeal to the reader's intuitions, and if he has worked himself into a state when he has none, one is helpless!' (Keynes, 1979 XXIX, 150-1)

Keynes, unlike Smith, did not focus in a sustained way on rhetoric. Yet there are many passages in his writing in economics where he reveals the view that rhetoric is important (see Dow, 1988). For example:

‘In economics you cannot *convict* your opponent of error; you can only *convince* him of it. And even if you are right, you cannot convince him, if there is a defect in your own powers of persuasion and exposition or if his head is already so filled with contrary notions that he cannot catch the clues to your thought which you are trying to throw to him.’ (Keynes, 1973, XIII, 470)

In this section, the argument has been developed that both Smith and Keynes saw rhetoric as inherent to theorising and its communication because of their Humean theory of human nature which, along with reason, provides the basis for science. Formal language is only one means of communication and is in general insufficient for persuasion. In the next section we proceed to consider what Smith and Keynes had to say about the form of rhetoric.

FORM OF RHETORIC

Smith (1762-63) outlined four types of rhetoric, although there is some dispute about how separable they are in practice (see Howell, 1975). McCloskey’s work for example explores the different elements of economist’s rhetoric, which draw on all four forms. The narrative form describes facts with a view to instruction; by connecting facts by time and place, the narrator can convey the idea of causal connection to aid understanding of the subject-matter. Poetic rhetoric seeks to entertain. Didactic rhetoric seeks conviction through instruction, while oratorical rhetoric aims to persuade.

Didactic rhetoric is put forward as the means of communicating scientific results to a learned audience. Conviction is sought by means of presenting both sides of an argument fairly, in the hope that the audience will share the presenter’s side of the argument. Smith expounds two methods of didactic rhetoric: the Cartesian, or Newtonian, method and the Aristotelian method. The former entails argument from first principles, while the latter entails a separate chain of reasoning for each argument without developing connecting principles. Smith argues that the former method is the more convincing. This follows from his theory of human nature, which seeks aesthetic pleasure from theories:

‘It gives us a pleasure to see the phaenomena which we reckoned the most unaccountable as deduced from some principle (commonly a wellknown one) and all united in one chain.....We need not be surprised then that the Cartesian Philosophy....tho it does not perhaps contain a word of truth....should nevertheless have been so universally received by all the Learned in Europe at that time. The Great Superiority of the method over that of Aristotle....made them greedily receive a work which we justly esteem one of the most entertaining Romances that has ever been wrote.’ (Smith, 1783; 1983, 146)

Thus, while Smith himself rejected Cartesian philosophy, he could understand its psychological appeal. He himself also sought to present a system when he turned to economic questions, seeking to identify some first principles (such as the division of labour) on which to base his analysis. But this system differed from the Cartesian in that it had an empirical foundation, and was open (see Skinner, 1972). Smith’s historical method emphasised the variety of ways in which societies evolved, and the impossibility of pinning down true causal forces, both of which required open-system analysis.

Oratorical rhetoric seeks to persuade by magnifying the preferred side of the argument and concealing the alternative. The particular form of persuasion depends on the nature of the audience, in particular the degree of sympathy between speaker and audience, and the general context of the presentation, such as current economic conditions. Smith points to two traditions in style of oratorical argument: the Socratic and the Aristotelian. The former method involves attempting to win over the audience by means of indirect argument, so that the audience is brought round to share the speaker's conclusions in an unexpected manner. Smith favoured the Aristotelian method, which involved a direct statement of the argument and the use of a plain style. This approach accorded better with Smith's theory of human nature (and common sense philosophy) which emphasised the appeal of familiarity:

‘...we observe, in general, that no system, how well soever in other respects supported, has ever been able to gain any general credit in the world, whose connecting principles were not such as were familiar to all mankind.’ (Smith, 1795; 1980, 46)

Keynes did not develop a theory of rhetoric as such. But he developed a theory of logic which differed from the Classical logic of formal analysis. This has been called variously ‘ordinary logic’ (see Carabelli, 1988) and ‘human logic’ (see Winslow, 1986). This logic refers to argument in situations where classical logic is inadequate, notably situations where knowledge is held with uncertainty. Here appeal is made to sentiment, to convention, and to imagination (or intuition). As to the particular form in which ordinary logic is expressed, Keynes showed himself continually aware of the importance of sympathy, or its lack. In the Preface to his *Essays in Persuasion*, for example, Keynes (1972b, xvii) notes ‘I was constantly on my guard - as I well remember looking back - to be as moderate as my convictions and the argument would permit’. Carabelli (1988, 163) refers to Keynes's ‘latent rhetorical bent’ based on his view that beliefs could be changed. Keynes shared the Scottish Enlightenment view of the purpose of knowledge as being to effect change.

Keynes, like Smith, attempted to build up a theoretical system, but one which was open and thus not amenable to capture in a system of simultaneous equations. He sought historical empirical regularities, like the relation between consumption and income, and a theory of human nature under uncertainty, on which to build his system. The formal system itself was simple, and was presented in direct fashion with reference to real entities (such as the beauty contest example). But in many ways Keynes failed to persuade. This may be explained partly by his unwillingness to close his system (thus violating the principle of aesthetic appeal) and partly by the oratorical form of rhetoric he employed both in the academic and policy arenas which came to be regarded (see Lucas, 1980) as falling short of scientific rationality as conventionally understood.

We turn now to consider to particular features of Smith and Keynes's views on rationality and rhetoric: the role of analogy, and the role of rationalisation.

THE ROLE OF ANALOGY

A common rhetorical device is the use of analogy. This device potentially has particular force, given Smith's view that arguments are most persuasive when they can be couched in terms of familiar principles; the implication is that arguments are persuasive when presented along with analogues familiar to the audience. But we need to distinguish between positive analogy and negative analogy.

Again we start with Hume. Sutherland (1982) has suggested that an objection to the inappropriate use of positive analogy was common to Scottish Enlightenment thought and was central to Hume's philosophy. The objection was to the use of analogy between different realms. In Hume's case, he objected to arguments about the nature and existence of God couched in terms of an analogy with the human realm. According to Hume, then, God's existence was a matter for belief, not for rational demonstration. Similarly, Hume argued against the analogy between sensation and reality; again, according to Hume, the connection could only be made by belief or sentiment, not rational demonstration. While persuasive, therefore, the use of positive analogy was potentially dangerous.

Hume did however use the notion of negative analogy, again in a way which stemmed from his epistemology. Reality is complex, but for science to proceed we need to categorise. These categories can be established by negative analogy. Hume used the example of eggs. No two eggs are the same. But repeated observation of eggs reveals sufficient sameness to allow us to form the category 'eggs'. In spite of our inability by reason to identify true causal forces, we can use categorisation to form working hypotheses. This approach underpinned Hume's theory of human nature, his working hypothesis being that there is a common element of humanity. But these hypotheses carry the potential for surprising counter-examples in the future.

Smith (1776) similarly employed negative analogy in his historical analysis, arguing for example that the division of labour operated in a wide variety of circumstances and taking a wide variety of forms. The motivation was the one he outlined in the *History of Astronomy*, namely the search for connecting principles in a simple chain of reasoning. But Smith also employed positive analogy, particularly to convey the meaning of his economic system. Thus the Invisible Hand is an analogy to convey the meaning of a system with unintended consequences which are socially beneficial. Similarly, Smith used the analogy of a machine:

'Systems in many respects resemble machines. A machine is a little system, created to perform, as well as to connect together, in reality, those different movements and effects which the artist has occasion for. A system is an imaginary machine invented to connect together in the fancy those different movements and effects which are already in reality performed.' (Smith, 1795; 1980, 66)

These are positive analogies within the realm of ideas. But Smith also used positive analogy in his construction of the theory of human nature implying that individuals themselves employ positive analogy. The very notion of sympathy itself may be thought of as entailing analogy. The imagination is employed to construct an analogy between the observer, the actor, the person acted against, and the impartial observer.

Keynes too employed both negative and positive analogy. As with Hume, Keynes saw a solution to the problem of induction as lying in negative analogy. While the positive relationship between consumption and income, for example, could not be proved demonstratively, nevertheless, observed regularity between consumption and income in spite of observed structural changes added weight to the hypothesised relationship. Keynes employed positive analogy as a rhetorical device in order to convey meaning to, and persuade, readers. The success of this device is evident from the continued familiarity of economists with the analogy of the widow's cruse, or the beauty contest. But Keynes was careful not to employ positive analogy between theory and reality. He was conscious of the epistemological gulf between ideas and reality, as exemplified in his description of economics:

Economics is a science of thinking in terms of models joined to the art of choosing models which are relevant to the contemporary world. It is compelled to be this,

because, unlike the typical natural science, the material to which it is applied is, in too many respects, not homogeneous through time. (Keynes, 1973c, 296-97)

Rather than thinking of theorising in Smith and Keynes in terms of analogy, since this would involve inadmissible analogy between ideas and the real, it is perhaps better to think in terms of rationalisation. We explore this concept in the next section.

RATIONALISATION IN ECONOMICS

The word rationalisation implies the notion of rational reconstruction of something which is not itself rational (otherwise the rational account is identical to the rationalisation). It is therefore a useful concept to employ for Smith and Keynes, who both saw reality as founded in human nature which is governed by both sentiment and reason, and who saw knowledge likewise as combining sentiment and reason. Both therefore saw individuals in the economy, and also theorists about their behaviour, as engaged in rationalisation.

Taking first actual human behaviour, there are circumstances where social pressure requires action to be justified by reason (although both Smith and Keynes saw such justification as being in general impossible). Thus Smith's learned audience requires a didactic form of rhetoric. Similarly, Keynes's boardrooms require a formalist presentation of the justification to invest, even though rationality alone could never justify long-term investment. Thus, in chapter 11 of the *General Theory*, Keynes sets out the official discourse for the investment decision in terms of a comparison between the marginal efficiency of investment and the rate of interest, while in chapter 12 he provides the actual account of decision-making under uncertainty (see Dow, 1991).

Nor need we presume that such rationalisation is consciously recognised as a means of handling the inadequacy of reason. Both Smith and Keynes explicitly pointed to the human capacity for self-deception. Smith (1759, 181) for example remarked on the self-deception that riches bring happiness which drives the entrepreneurial spirit. Self-deception in this case is welcome as an engine for growth. Keynes, like Marx, noted a similar tendency in the particular form of the illusion that the accumulation of monetary wealth creates happiness. Winslow (1995) focuses on this observation of Keynes and his analysis of it as irrational behaviour.

Theory can also be understood as rationalisation, given the limited scope for pure reason. Theory abstracts from observation of a complex reality in order to identify regularities which suggest connecting principles. If, as we have argued, the economic system itself cannot be purely rational (because behaviour requires additional guides for action), then any abstraction which suggests connecting principles must necessarily entail rationalisation. Only if theory abstracts by representing a separable aspect of reality can it be more than a rationalisation, and this is only possible if economic behaviour is purely rational. The role of theory thus rests on our access or otherwise to evidence of causal processes, and on our theory of human nature. The same applies at all levels of ideas. Thus methodologists, in studying economists' theorising, are rationalising that process (unless it too is fully rational).

The question then arises as to the application of theory-as-rationalisation. If theory is directly applied to policy questions, an analogy has been implied between the rationalisation and the reality. The purist position would be to abstain from policy prescription. Yet this is clearly unacceptable at the level of human action. If a manager cannot rationally justify an investment, or an entrepreneur cannot rationally justify the expectation of wealth and happiness, then should they abstain from action? As both Hume and Keynes explicitly

pointed out, rationality is an insufficient guide to action, the gap being taken up by judgement, sentiment, convention etc. The same would seem to apply to economists.

But is that the last word, that economists should rely on judgement, sentiment and convention? This seems to imply the conclusion of McCloskey's work, that she who persuades wins the argument. But, if we approach the question from a Humean perspective, we give primacy to other bases for action than pure reason, and devote them to particular study. The first step, which most economists avoid, is to specify the sentiments underpinning their theories. Only once these are known can a meaningful discourse proceed on the relative merits of theories and their applicability to particular circumstances. One thing the rhetoric approach has brought to the surface has been the tremendous interest in interviews with economists which reveal their sentiments (as sparked off by Klammer, 1983).

CONCLUSION

The purpose of this chapter has been to discuss the centrality of rhetoric to economics which follows directly from the limitations on rationality. Because of the nature of social systems, and of human nature, as outlined by Smith and Keynes (under the influence of Hume), economic theory as a rational system cannot represent reality. By abstracting connecting principles within an open theoretical system, theory can at best only achieve a rationalisation of reality. Further, if reality itself is understood as an open system, then decision-making in the economy itself must often be based on rationalisation, when it is not explicitly based on sentiment.

The language in which economic theory is expressed therefore is important, since rationality is insufficient for economists just as for economic agents. If, as Smith and Keynes argued, sentiment, judgement and convention are necessary adjuncts to pure reason, then it is important how these are conveyed rhetorically. Most significant for economics is that its official discourse denies a role for these factors, so that there is a disjunction between that discourse and the unofficial discourse which actually persuades.

For Smith and Keynes, the purpose of the study of economics was to provide a good basis for policy action. The success of the ideas they put forward depended on their persuasiveness. In other words, the purpose of rhetoric itself was to effect change, in the minds of other economists and among policy makers.

REFERENCES

- Blaug, M (1980) *The Methodology of Economics*. Cambridge: Cambridge University Press, second edition 1992.
- Carabelli, A (1988) *On Keynes's Method*. London: Macmillan.
- Carabelli, A (1995) in S C Dow and J Hillard (eds), *Keynes, Knowledge and Uncertainty*. Aldershot: Elgar, 137-60.
- Dow, S C (1988) What Happened to Keynes's Economics? in O Hamouda and J Smithin (eds), *Keynes and Public Policy After Fifty Years, Vol I: Economics and Policy*. Aldershot: Elgar, 101-110.
- Dow, S C (1991) Keynes's Epistemology and Economic Methodology, in R O'Donnell (ed.), *Keynes as Philosopher-Economist*. London: Macmillan, 144-67.
- Dow, S C (1995) Uncertainty about Uncertainty, in S C Dow and J Hillard (eds), *Keynes, Knowledge and Uncertainty*. Aldershot: Elgar, 117-27.
- Howell, W S (1975) Adam Smith's Lectures on Rhetoric: An Historical Assessment, in A Skinner and T Wilson (eds), *Essays on Adam Smith*. Oxford: Clarendon, 11-43.
- Hume, D (1739-40; 1978) *A Treatise of Human Nature*, edited by K A Selby-Bigge and P H Niddich, second edition. Oxford: Clarendon.
- Hume, D (1740; 1938) *An Abstract of A Treatise of Human Nature*, edited by J M Keynes and P Sraffa. Cambridge: Cambridge University Press.
- Hume, D (1748; 1975) An Enquiry concerning Human Understanding, in *Enquiries Concerning Human Understanding and concerning the Principles of Morals*, edited by K A Selby-Bigge and P H Niddich, third edition. Oxford: Clarendon.
- Keynes, J M (1972a) *Essays in Persuasion. Collected Writings vol. IX*. London: Macmillan for the Royal Economic Society.
- Keynes, J M (1972b) *Essays in Biography. Collected Writings vol. IX*. London: Macmillan for the Royal Economic Society.
- Keynes, J M (1973a) *Treatise on Probability. Collected Writings vol. VIII*. London: Macmillan for the Royal Economic Society.
- Keynes, J M (1973b) *The General Theory and After. Part I: Preparation. Collected Writings vol. XIII*. London: Macmillan for the Royal Economic Society.
- Keynes, J M (1973c) *The General Theory and After. Part II: Defence and Development. Collected Writings vol. XIV*. London: Macmillan for the Royal Economic Society.
- Keynes, J M (1979) *The General Theory and After: A Supplement. Collected Writings vol. XXIX*. London: Macmillan for the Royal Economic Society.
- Klamer, A (1983) *Conversations with Economists*. Totowa: Rowman and Allanheld.
- Lucas, R E Jr (1980) Methods and Problems in Business Cycle Theory, *Journal of Money, Credit and Banking*, 12 (November).
- Luthe, Rudolf (1984) Misunderstanding Hume: Remarks on German ways of Interpreting his Philosophy, in V Hope (ed.), *Philosophers of the Scottish Enlightenment*. Edinburgh: Edinburgh University Press, 105-15.
- McCloskey, D N (1983) The Rhetoric of Economics, *Journal of Economic Literature*, 21(2), 482-517.

- McCloskey, D N (1986) *The Rhetoric of Economics*. Brighton: Wheatsheaf.
- McCloskey, D N (1994) *Knowledge and Persuasion in Economics*. Cambridge: Cambridge University Press.
- Raphael, D D (1977) The True Old Humean Philosophy and its Influence on Adam Smith, in S P Morice (ed.) *David Hume: Bicentenary Papers*. Edinburgh. 25-38.
- Skinner, A S (1972) Adam Smith: Philosophy and Science, *Scottish Journal of Political Economy*, 29(3)
- Smith, A (1759; 1976a) *The Theory of Moral Sentiments*, ed. by A L Macfie and D D Raphael. Oxford: Oxford University Press.
- Smith, A (1762-63; 1983) *Lectures on Rhetoric and Belles Lettres*, ed. by J C Bryce. Oxford: Oxford University Press.
- Smith, A (1776; 1976b) *An Inquiry into the Nature and Causes of the Wealth of Nations*, vols. I and II, ed. by R H Campbell, A S Skinner and W B Todd. Oxford: Oxford University Press.
- Smith, A (1795; 1980) The History of Astronomy, in W L D Wightman (ed.), *Essays on Philosophical Subjects*. Oxford: Oxford University Press.
- Sutherland, S R (1982) The Presbyterian Inheritance of Hume and Reid, in R H Campbell and A S Skinner (eds) (1982) *The Origins and Nature of the Scottish Enlightenment*. Edinburgh: John Donald, 131-149.
- Winslow, E G (1986) 'Human Logic' and Keynes's Economics, *Eastern Economic Journal*, 12(4), 413-30.
- Winslow, E G (1995) Uncertainty and Liquidity-Preference, in S C Dow and J Hillard (eds), *Keynes, Knowledge and Uncertainty*. Aldershot: Elgar, 221-43.