E.G. Winslow's recent essay (1986) points to the important fact that the influence of John Maynard Keynes's early work in philosophy on his later work in economics is not clearly understood. Winslow's approach to this problem is to argue not only that the early work in philosophy is important to the later work in economics, but that Keynes's philosophical ideas continued to grow and change and that these changes are reflected in his economics. Using a reference to "human logic" in a 1931 review by Keynes, Winslow argues that Keynes changed from an atomist to an organismist view of the world and that the General Theory reflects this organic vision. Thus, Winslow argues that "Keynes's own use of human logic... led to his rejection of an 'atomistic' in favour of an 'organismic' metaphysical description." (p. 413)

The purpose of this comment is to point out that Winslow's argument is based on at least two incorrect interpretations and that without these there is no reason to suppose that Keynes was an organismist. There is clear evidence that Keynes's beliefs about probability changed later in his life, but these changes are more correctly explained without reference to organismism.¹

KEYNES AND RAMSEY

As the title of Winslow's essay indicates, his argument depends heavily on a comment that Keynes made in a book review concerning "human logic." But while this review of Frank Ramsey's *Foundations of Mathematics* is an important document in understanding the changes in Keynes's thinking about probability, the reference to "human logic" has different meaning than Winslow attaches to it when it is taken in its full context. For Winslow, this reference is a door into the question of "metaphysical premises" (Winslow [1986], p. 413) which leads him to his assertion that Keynes became an organismist later in his life. Taken in its full context, the reference to "human logic" does have philosophical implications, but these are subsidiary to the main point of Keynes's review.

The main point of the part of Keynes's review which contains this reference is to confute a fundamental point to Ramsey concerning the nature of probability. In *A Treatise on Probability* Keynes had argued that probabilities are objective relations which exist between propositions. The prevailing opinion when Keynes wrote *Probability* (as it is today) was that a probability is a relative frequency or the proportion of times that something occurs in repeated trials. Keynes's book was meant to refute this conception and replace it with a definition of probabilities as degrees of belief.

An example, which clearly differentiates Keynes's conception of probability from relative frequency, is a Presidential re-election. One could speak in 1980 of the probability that Jimmy Carter would be re-elected, but this clearly did not refer to the number of times that Carter

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would be re-elected in repeated re-elections. Whatever probability one attached to Carter's re-election referred to one's degree of belief in that event, and not to relative frequency.

The important thing to understand about Keynes's original assertion that probabilities were degrees of belief was that he did not think that these degrees of belief were subjective. He believed that there was a logical relationship between any set of evidence and any proposition about an event and he believed that anyone faced with this evidence who was asked the probability of the proposition would give an identical answer. All that was required was the proper perception of the logical relationship.

But in the sense important to logic, probability is not subjective. It is not, that is to say, subject to human caprice. A proposition is not probable because we think it so. When once the facts are given which determine our knowledge, what is probable or improbable in these circumstances has been fixed objectively, and is independent of our opinion. (JMK, Vol. 8, p. 4)

It is this belief which Keynes abandons in his review. One of the essays in Ramsey's book ("Truth and Probability") had dealt explicitly with Keynes's work and had asserted that it was wrong.

But let us now return to a more fundamental criticism of Mr. Keynes's views, which is the obvious one that there really do not seem to be any such things as the probability relations he describes. He supposes that, at any rate in certain cases, they can be perceived; but speaking for myself I feel confident that this is not true. I do not perceive them, and if I am to be persuaded that they exist it must be by argument; moreover I strongly suspect that others do not perceive them either, because they are able to come to so very little agreement as to which of them relates any two given propositions. (Ramsey, 1931, p. 161)

Ramsey clearly agreed with Keynes that probabilities referred to degrees of belief, but he denied that these were objectively rooted in logical relationships.

It is in this context that Keynes makes his comment about "human logic."

Ramsey argues, against the view which I had put forward, that probability is concerned not with objective relations between propositions but (in some sense) with degrees of belief, and he succeeds in showing that the calculus of probability simply amounts to a set of rules for ensuring that the degree of belief which we hold shall be a consistent system. Thus the calculus of probabilities belongs to formal logic. But the basis of our degrees of belief—or the a priori probabilities, as they are to be called—is part of our human endowment, perhaps given us merely by natural selection, analogous to our perceptions and our memories rather than to formal logic. So far I yield to Ramsey—I think he is right. (JMK, Vol. 10, pp. 338-39)

What Keynes is accepting is that there are no logical relationships which serve as the basis for our degrees of belief. In contrast to his original position he now accepts that people employ subjective degrees of belief.

This idea that probabilities are just what we use in making assessments of the world and not some metaphysical entity which we intuit through our experience in the world is an aspect of the philosophical doctrine of pragmatism. Keynes is quite explicit about this and delineates Ramsey's contributions to the foundations of pragmatism in the paragraph previous to the one containing the last quote. In this context, the reference to "human logic" is seen not as a "metaphysical premise" to organismism, but rather as an acceptance of Ramsey's idea that probabilities are formed subjectively by individuals (human logic) rather than in contemplation of logical entities (formal logic).

ORGANIC UNITY AND ATOMISM

One of the keystones to Winfree's argument that Keynes converted from atomism to organismism is a quotation from Keynes's biographical essay on Edgeworth.

The atomic hypothesis which worked so splendidly in physics breaks down in psychics. We are faced at every turn with the problems of Organic Unity, of Discreteness, of Discontinuity—the whole is not equal to the sum of the parts, comparisons of quantity fail us, small changes produce large effects, the assumptions of a uniform and homogeneous continuum are not satisfied. (JMK, Vol. 10, p. 262)

Winfree uses the quotation twice (pp. 416, 423) to make his point and it does appear to be the one place in which Keynes juxtaposes an organic against an atomic vision of the world. But as in the previous example, a more careful reading reveals that the quotation has nothing to do with an organism as versus an atomic world. In his criticism, Keynes is actually criticizing the two parts of Edgeworth's utilitarianism, probability and utility, and the references to atomism and organic unity are referring to different problems with each analytical concept. Thus, the issue is very different than that of juxtaposing two world views.

The easiest way to begin to see that no juxtaposition is involved is to examine the phrase "organic unity" more carefully. Keynes takes this phrase directly from G. E. Moore who uses it to mean something very different from organismism. Rather than using the phrase to refer to an ever changing, evolving world as Hegel or Whitehead did, Moore invested the word with very specific analytical meaning: that a whole composed of several parts might have a value different that the simple sum of the parts' values. This was a part of his critique of utilitarianism in Principia Ethica. It was meant to show that the "good" of some complex situation was not simply the sum of the value of the parts. In other words, there is something which transcends the simple utility of the parts. Thus, organic unity is the extra value which arises when things are combined and not a reference to an ever changing, "organic" world.

Moore was aware, however, of the danger in using a term with organismic connections and provided an explicit disclaimer:

I have said that the peculiar relation between part and whole which I have just been trying to define is one which has received no separate name. It would, however, be useful if it should have one, and there is a name, which might well be appropriated to it, if only it could be divorced from its present unfortunate usage. Philosophers, especially those who profess to have derived great benefit from the writings of Hegel, have latterly made much use of the terms 'organic whole', 'organic unity', 'organic relation'. The reason why these terms might well be appropriated to the use suggested is that the peculiar relation of parts to whole, just defined, is one of the properties which distinguishes the wholes to which they are actually applied with the greatest frequency. And the reason why it is desirable that they should be directed from their present usage is that, as at present used, they have no distinct sense and, on the contrary, both imply and propagate errors of confusion. (Moore, 1903, pp. 30-31)

Unfortunately, the nuance of Moore's meaning is lost in Winfree's use of this phrase. Moore meant for organic unity to be an analytical tool in the deconstruction of utilitarianism and Keynes was using his mentor's tool for just that purpose.

Still, the question remains, "Even if Keynes's use of organic unity is not a reference of organismism, then what is one to make of the term atomic in the previous sentence?" The answer is quite straightforward. In Probability (p. 466), Keynes asserts that if the material of the world behaves as independent atoms, then a frequency theory of probability would be justified. "If the
contemporary doctrines of biology and physics remain tenable, we may have a remarkable, if undeserved, justification of some of the methods of the traditional calculus of probabilities.** Keynes's point in criticizing Edgeworth was that his use of stochastic relative frequencies in economic theory was incorrect; what he needed to use were degrees of belief instead of relative frequencies.

The meaning of this well-crafted quotation, then, is not to juxtapose an organic and an atomic world. The purpose is to criticize Edgeworth's utility calculus. He criticized Edgeworth's use of probabilities which were better suited for physical science and his neglect of the complexities of utility. Both levels of criticism are well grounded in his early work in philosophy.

CONCLUSION

The purpose of this comment has been to argue against Winslow's assertion that J. M. Keynes became an organicist after he published Probability. Upon a closer examination of the evidence, it seems that the major elements of Winslow's argument consist of questionable interpretations of Keynes's life and thought. Keynes's review of Frank Ramsey's Foundations of Mathematics involves a controversy over objective versus subjective degrees of belief, not atomism versus organicism. Likewise, a fuller understanding of G. E. Moore's thought and its influence on Keynes reveals that the latter's use of the phrase Organic Unity is not a statement of organicist beliefs.

Winslow's essay is important for pointing out our lack of understanding of the influence of Keynes's philosophical thinking on his work in economics. He has also directed our attention to several episodes in Keynes's life which could help us in understanding that influence. Unfortunately, his conclusion that these episodes point to an organic basis for Keynes's economics are not warranted on the evidence. Keynes's thought changed and matured through time, but there is no reason to suppose that he became an organicist.

NOTES

1. See Brinthaule (1975) and Bateman (1987) for explanations that do not rely on organicism. Although Winslow does not mention them, there are other organic explanations of Keynes's economics; see, for instance, Brown (1985) and Carabelli (1983).

2. For explanations of Moore's influence on Keynes see Bateman (1988) and O'Donnell (1988).

3. This point is a more troubling aspect of Winslow's argument. Since Keynes argues that an atomic world would warrant the use of a frequency theory of probability, but clearly argues against such a theory, how can one characterize his work in Probability as atomic? For an interpretation of Keynes's work which does not emphasize such problems see Bateman (1987).

BIBLIOGRAPHY


*Human Logic* and Keynes's Economics: A Reply to Bateman

E.G. Winslow

In reply to Professor Bateman I will argue that his first point misinterprets both my argument and Keynes's 1931 review of Ramsey's *Foundations of Mathematics*, and that his second misinterprets the passage from the Edgeworth essay and overlooks the other evidence supporting the thesis that Keynes abandoned an atomic for an organic metaphysical description.1

KEENY AND RAMSEY

Bateman takes me to be arguing that Keynes's review contains evidence directly supporting the thesis that Keynes abandoned an atomic for an organic metaphysical description. This is not what I argue.

Keynes's 1931 review contains an account of a new field of study, human logic, defined as the analysis of the "useful mental habits [we have] for handling the material with which we are supplied by our perceptions and by our memory and perhaps in other ways, and so arriving at or towards truth" (1972, p. 338). The relevance of this account to my argument is that human logic includes, as part of its subject matter, the analysis of metaphysical premises. My paper was an examination of the possibility that Keynes's own studies in human logic led to his rejection of atomic in favour of organic metaphysical premises in the social sciences. The 1931 review does not contain material directly relevant to this question. Even the evidence that the analysis of metaphysical premises belongs to human logic is found elsewhere, in Ramsey's own account of its context (Ramsey, 1965, p. 200) and in Keynes's review, in his discussions of Tinbergen's early work in econometrics (1973c, pp. 285–220), of the study of metaphysical habits of mind as part of logic. The evidence that Keynes abandoned atomism for organicism is also found elsewhere, specifically, but not exclusively, in the essay on Edgeworth, in the discussions of Tinbergen, and in the treatment of interconnectedness in the General Theory.

Bateman has also misinterpreted the review. He has Keynes abandoning both the belief

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