

THE SOCIOLOGY OF UNCERTAIN KNOWLEDGE**Richard Startup, University of Wales, Swansea**

The sociology of knowledge concerns the relation between human thought and the social and material context in which it arises (Mannheim 1936 237; Coser 1968 428; Merton 1973 7). However, there is a systematic neglect of a key area of investigation which needs to be remedied. Social constructions surrounding uncertain issues must be placed at the heart of the sociology of knowledge. Philosophers recognize that all knowledge is uncertain, but inductive inferences necessarily inhere in human praxis. In any culture, a line must be drawn between reasonable and unreasonable doubts. The sociologist can proceed by determining how the boundary is drawn, and how it changes, and by analyzing types of uncertainty. On this basis the action frame of reference may be used to isolate the core elements in the way people conceptualize their situation. A consideration of uncertainty enables one to interpret the prominence of power and the function of theory in human life.

The term knowledge means an awareness of facts and possession of information. Thus, the term implies the validity of what is known, or that the belief is well grounded. There is a familiar contrast between knowledge and conjecture at just this point. Hence the use of the phrase sociology of knowledge draws attention to the nature of what is known, rather than to the systematic variations which exist in the degrees of confidence by which beliefs are held, and the social constructions which surround social issues. The neglect of this latter area pervades the body of the sociology of knowledge, and is not evident on the surface.

A moment's thought suggests that matters of doubt form a core element in the human situation. Uncertainty surrounds the future of our own communities and nation, just as it permeates our individual lives. The past too, though conceptualized as being fixed and definite, is shrouded in obscurity. Since time immemorial, humans have been plagued by the vagaries of natural forces. Western humanity continues to depend on them. As regards the social environment, other people, including close friends, are in many respects distanced

from us because we are uncertain how they think and feel, and how they will react to us. We are often in doubt about how to act, and we may be surprised by our own reactions and behavior. So much in life is uncertain that it seems safer to place this element at the heart of a sociology of knowledge rather than to assign it peripheral status. How can the sociologist begin to grasp the phenomenon of human uncertainty? Perhaps philosophers can help us.

THE PROBLEM OF INDUCTION

Analytical philosophers generally agree that the truth of any empirical proposition which goes at all beyond the immediate evidence is uncertain (Ayer 1973 137; Brown 1978a 521). Empirical propositions underlie inductive inferences, and it is a feature of any inductive inference that its conclusion has less certainty than its premise. Philosophers tend to push to an extreme what many would view as the more reasonable doubts of daily life. In connection with the problem of induction, Russell remarks on the fallibility of crude expectations of uniformity, such as those of the chicken which expects the person who has fed it every day to go on feeding it, whereas he at last wrings the chicken's neck instead (Russell 1946 63).

The chicken had no alternative. The behavior of animals is predicated on certain assumptions. Should those assumptions be violated, the consequences may be fatal, but this does not alter the fact that the animal's activity which sustains its life must be dependent on assumptions of this sort. In this respect, the human animal is in the same situation, for inductive inferences necessarily inhere in human praxis (Wittgenstein 1969 par 103). The new element in the human situation is that some of the inductive inferences are on occasion selected out for special scrutiny. For this they must be explicitly formulated.

Although in the conduct of human life, certain inductive inferences are indeed isolated and scrutinized, there are always a vast number of assumptions which remain unchallenged. These assumptions correspond to all the empirical propositions which could be for-

mulated relating to human praxis. But how can human life cope with so many unchallenged assumptions? The explanation is that in human praxis a distinction is made between a reasonable and an unreasonable doubt (Wittgenstein 1969 par 323; Phillips 1977 204). One could speculate that one's finger might take wing, or that pigs might fly, but these are unreasonable inferences.

TYPES OF UNCERTAINTY

If there are two classes of doubt associated with every theory of knowledge, can any interchange occur between them? Can the reasonable doubt become unreasonable, and vice versa? The answer must be affirmative. The process by which the interchange occurs relates closely to the character of human praxis. First, consider the case of a reasonable doubt which becomes unreasonable. For human life to be maintained, sexual intercourse must occur, and children must be born, but it is not necessary for people to operate with any particular concept of the link between intercourse and childbirth. A primitive people may judge that the child is wholly created by the mother, with the father's duty being merely to open the passage from the womb (Fox 1967 34). Even where there is widespread belief that there is some connection between the two phenomena, there may also be the opportunity to doubt the validity of the statement, "Childbirth is always preceded by intercourse." The frequency of tales of virgin births shows that this situation has long prevailed. More recently, in Western societies, there have been changes in human praxis as to childbearing. It is not just that biological understanding has advanced, but common sense has been scientized. In the world of the rhythm method and the pill, it has become unreasonable to doubt that childbirth is always preceded by intercourse.

Now consider the example of a change in the reverse direction where an unreasonable doubt becomes reasonable. A desert people remote from open water may reasonably assume that one can walk as far as one likes. This notion is challenged when members of the tribe encounter the sea. At this point, unreasonable doubts are shown to be reasonable, and if life is to continue, there must be changes in concepts and behavior.

We have noted that the line between the

reasonable and the *unreasonable* doubt is drawn in differing ways in different cultures. We have also seen that this line can be redrawn within a particular culture. Our two examples illustrate that the redrawing of the line is intimately associated with incorporating modifications in concepts. It therefore forms an important part of the program of the sociology of knowledge to plot the limits of the reasonable doubt within each cultural context and relate this to the form of life.

Of course these examples are not of the same type. The first involves establishing a necessary condition for an occurrence to take place. The second constitutes imposing a restriction on hitherto unrestricted generality. This draws attention to the need in the analysis to distinguish between differing types of practical knowledge. There is the familiar distinction between knowing *how* and knowing *that*, to consider which crosscuts the difference between general and particular. There may be knowledge or doubt about the conditions in which certain principles operate. Given an understanding of conditions, there may also be knowledge or doubt regarding whether those conditions are met. Constructing a large building will be done according to sound building principles with appropriate knowledge of the site, the available materials, and the intended functions of the building. The building cannot be infinitely strong, or infinitely secure on its foundations. The aim is to make it *strong enough*, and *secure enough*. Essentially, the project involves the specifications of what counts as knowing what is *good enough* in terms of the relevant principles. The theory of knowledge expressed in the project concerns the information which must be acquired and the appropriate means by which it is obtained.

SUBSTANTIVE UNCERTAINTY

About what issues does substantive uncertainty center? The answer resides partly in our animal nature and partly in our social nature. Observation makes it clear that animal behavior is oriented towards certain ends, which may be uncertain of attainment, such as obtaining food. In this, humans are in the same situation as any other animal, for material life is similarly precarious. However, it is vital to observe that since material life at the human level is sustained by culturally regulated coopera-

tion or social praxis, the uncertainty in relation to end achievement must be acknowledged at the cultural level. One can locate real uncertainty by examining the situation of the human actor seeking to achieve defined ends (Parsons 1949 79, 732, 750). From our cultural context it is frequently tempting to alter the vantage point and explore the way in which change events impinge from outside, analyzing what we see as the conditions of action. Other people might also conceptualize their situation in exactly this way. A nomadic desert people might operate on the basis of the inductively derived claim that it will rain during the next year. This would involve them in planning on the basis of this expected, but uncertain event. It is manifest that part of the substantive doubt which is acknowledged by those involved may belong to the conditions of action.

Nevertheless, in seeking to understand the relation between culture and practice, one must make no assumption that within differing cultures, the source of the uncertainty is conceptually located in the same way. Although there must be a distinction drawn between the reasonable and the unreasonable doubt, that which is substantively uncertain may be seen as belonging *either* to the conditions of action or to the individual's acting. Consider the condition of parents who produce two children. The children may be two boys, two girls, or a boy and a girl. In the framework of Western thought the sex composition is seen as something which merely *happens*, determined by a *deus ex machina*, as a product of the conditions of action. However, there is no reason why this aspect of the event should not be seen as having been actively produced by a human agency. The parents could have behaved well, and therefore, have been rewarded with two boys. Alternatively, a mediating agency, such as a god, may have been presumed to bring about the event because humans have acted deservingly.

ENDS, PLANS & CONDITIONS OF ACTION

It may be wondered, if there is no fixed conceptual line between the individual's acting in pursuance of goals, and the conditions of action, whether the latter realm need exist at all. The answer must be affirmative. This follows from two basic points. 1) There is a line drawn between the reasonable and the unreasona-

ble doubt. 2) The realm of end achievement is conceptualized as being uncertain, and the subject of reasonable doubt. We are sure that the conceptualized conditions of action are non-empty, though this hardly gives it much definition. What is the minimal form of the conceptualized conditions of action?

To identify this we need to remember that human material life is sustained by culturally regulated cooperation. This is not to be equated simply with a situation where language exists and people directly seek their individual ends. The central feature of culturally regulated cooperation is that although individuals may frequently be treated as ends, they must at least *sometimes* be treated as means. But, if people are used as means, they cannot in their totality be conceptually assimilated into the realm of end achievement. It is aspects of people which are minimal elements of the actor's conceptual conditions of action. This implies that those aspects provide the minimal resource to produce means. One can also conclude that no aspect of the real world need be conceptually relegated to the conditions of action. The individual must understand that there are other end seekers, and also, that s/he like others, is a means provider. Indeed, one can only become aware of oneself as an end seeker while becoming aware of oneself as a means provider. The two conceptions are linked *ab initio*, and both are manifested in activity directed away from the same point.

What exactly are the aspects of people which are the minimal element in the conceptualized conditions of action? One may be tempted to say that what others are engaged in doing is used as a means. But this will not do for the minimum, since *engaged in doing* belongs to the uncertain realm of end achievement, and the assertion that there is something beyond reasonable doubt in the conditions of action. This *something* must not be human doing directly, but rather the human *potential* for doing. What one can assert is that a way of life is predicated on the assumption that humans have certain powers of action. They can harvest food or build automobiles. The human possession of powers of action is the minimal element in the conceptualized conditions of action.

There is an important associated corollary. In any cultural context there is a conceptual

realm of end achievement. In the social world this uncertainty arises from the fact that the means provider is also an end seeker. She will not provide the means unless she is thereby seeking to achieve a sub-end of her own. Since the realm of end achievement is considered uncertain, so is that of means provision. Though the existence of these powers is beyond reasonable doubt, whether means will be provided is not. There are two reasons. First, powers which are seen certainly to exist are conceived in relation to humanity in general, and it is an open question whether the end achiever can gain access to those actually possessing the powers. Assuming access, the second problem is willingness. It may be known beyond reasonable doubt that X acts to the end E, but E is doubtful of attainment because of doubts as to X's willingness to act. It is the need to resolve the issue of willingness which distinguishes doubts about people from doubts about the natural world (Parsons 1949 10).

IMPLICATIONS

In any cultural context there is a conceptual realm of end achievement. There is also a conceptual realm of conditions of action which minimally incorporate powers of action. What can be said about the allocation of the remaining cultural elements? There is no reason *a priori* to think that all the remaining items will be unambiguously allocated to either of our two spheres. There is good reason to believe that many conceptions will straddle the two spheres. The origin of this tendency to straddle is the fact that the conception of end seeker goes hand in hand with that of means provider and both act from the same point. The core element in what is conceived as the conditions of action is not material things, but that which is also a seeker of ends. In this light, it is not surprising that some observers or preliterate peoples have characterized their relations with the world in personalized terms (Frankfort et al 1949 12). We have established that knowledge of end seeker and means provider is obtained through cooperative praxis. This leads from the beginning to concept formation which simultaneously derives from the two basic spheres. This includes the centrally important concept of *person*.

Our conclusion may be judged equivalent to

the statement that religion is always found in society. In this connection, the special feature of Western society is that there is a strong tendency for all cultural material to be conceptually polarized between the sphere of end attainment and the conditions of action. It is stultifying that the Western concept of deity straddles these two spheres. Deity never seems to be allowed to *do* anything, and as a condition of action, is merely assigned a *watching brief* (Berger 1969 119).

Another core element that emerges from our account which is prominent in many religions is power. We have concluded that it is the acknowledgment of powers of action which is the minimal element of the conceptualized conditions of action. The end seeker must acknowledge that he needs and depends on these external powers of action. These powers are the fundamental element which is external to the end seeker, and set over and against him. He has lost control, and knows it. In the modern concepts of the Deity, the major non-affective and non-evaluative quality which he possesses is unlimited power. The Deity is seen as timeless and omnipresent. Recognition of powers involves recognition of potential which necessarily exists across space and through time.

Because in preliterate societies, humanity is more subject to influence than nature, the term "*god*" tends to stand for general human powers, the desired exercise of which is always uncertain due to the wills of particular persons (Nadel 1954 12). This notion tends to be generalized to the natural world (Durkheim 1912; Durkheim & Mauss 1903; Radin 1937). In widely different kinds of society, this *power* aspect of deity tends to exist beside the idea that the Deity is a mediator in human end-achievement. We gain ends *through* the Deity without treating the Deity as means. This is a persistent notion, because in the framework of life, some ends tend to be achieved thus through other actors.

INDUCTION, THEORY, & PRAXIS

In considering induction, we will develop the view that we must account for certain elaborate cultural formations as attempts to cope with uncertainty. Analytical philosophers maintain that any induction is unjustifiable. But in discussing the principles of induction, they

contrast two situations when an inductive conclusion might be reached. 1) A situation when a thing of a certain sort, "A" has been found to be associated with a thing of another sort, "B", and has never been found dissociated from a thing of sort "B", and 2) a situation where the phenomenon is not a generalization from individual cases, but can be subsumed under scientific theory. It is frequently suggested that we can have more confidence in inductions under the second condition. In one identifiable respect, there is no reason to be more confident in the second case than in the first. Even where there exists a scientific theory, the empirical evidence for the theory can only be a finite number of observations.

What light can we shed on the persistent belief that confidence is more justified for induction? At this point, it is significant to note that the first condition merely concerns a proposition form and an infinite number of inductions of that form could be made. The second condition involves reference to scientific theory, of which, in any cultural context, there are only a finite number. The individual generalization is formed using concepts which link directly to particular scientific theories. Scientific theories are not randomly formed as generalized reflection on the work. They link intimately to praxis. There is practical need for humans to form principles enabling them to choose between real alternatives. They seek to operate with principles which make it more likely that they will reach their objectives. This is the essential context of scientific theory. They are essentially the cognitive principles which are explicit in a specific culture, to enable humans to cope with uncertainty. When the problem is basically one of knowing what is likely to happen, this is solved by reference to pure science. If the problem is essentially one of deciding what means to adopt to reach a given objective, then the reference is to applied science. If people acted according to the formulation of random generalization, there would be social chaos. Since there are an infinity of possible generalizations that could be formed which would be chaotic in this sense, for practical purposes, our confidence in inductions is not merely limited; it is zero. On the other hand, since we are assured that acting according to scientific principles is best, our confidence is maximal in acting on inductions.

Scientific theories may be absent in preliterate societies, but there is still a paramount need to operate with selective principles which distinguish between practical alternatives. Though religious ideas will generally be manifest in this sphere, these should not be considered as agglomerations of ideas which, though of spiritual or normative evaluation significance, are random as regards practical reality. There must be a response for those realities if a form of life is to be sustained. Embedded in the corpus of ideas, one will find common sense theories incorporating the general notion that water puts out fire. It is the existence and use of common sense theories such as this which is the *sine qua non* of praxis. Theories, rather than isolated deductions, are the bedrock of confidence which sustains life.

CONCLUSION

Ironically, it seems that only when the sociology of knowledge embraces the phenomenon of uncertainty can it be placed on a more secure foundation. But how has it come about that sociologists have tended to neglect this phenomenon? Part of the explanation may be that social thought is anchored in a certain empiricist tradition. According to Hamphsire (1959 47) "the deepest mistake in the empiricist theories of perceptions, descending from Berkeley and Hume, has been the representation of human beings as passive observers receiving impressions from 'outside' of the mind, when the 'outside' included their own bodies." This orientation draws attention away from the ways in which modes of thought arise from human activity. When emphasis is on observation rather than activity, the time dimension may be ignored. Observation in its contemplative form tends to exist outside of time, while activity is rooted in time. Our own starting point was the observation that although philosophers tell us that all knowledge is uncertain, inductive inferences necessarily inhere in human praxis. Within any culture a line must be drawn between reasonable and unreasonable doubts. The sociologist can determine by reference to the theory of knowledge how the boundary is constructed and how it changes.

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