1 New paradigms and modal states

The idea of scientific paradigms came to the attention of the social sciences in the late 1960s. Thomas Kuhn's suggestion was that scientific knowledge in a particular area at any one time was limited and structured by its basic theoretical framework ('paradigm') and that scientific revolutions, as in the case of those associated with Galileo and Newton in the seventeenth century, and with Einstein, Heisenberg, Schrödinger and others in the late nineteenth and twentieth centuries, involved the replacement of one 'paradigm' by another (Kuhn 1970).

Ironically, Kuhn seems to have regarded the social sciences as never having achieved their first proper paradigm (cf. Kuhn 1970: 15). However, as Nick Perry has noted, the concept of the paradigm was immediately attractive to social scientists (Perry 1977). Anthropologists and sociologists soon decided that their fields of study already had a number of fully fledged 'paradigms' (such as functionalism, conflict theory, culture-and-personality and social interactionism). A corollary was the tantalizing idea of a *new* paradigm that might resolve many of the difficulties within the social sciences and provide a needed source of revitalization.

More recently, the growth of significant new approaches in the physical sciences, such as those of David Bohm and Ilya Prigogine (e.g. Bohm 1981, Factor 1985, Hiley and Peat 1987, Prigogine 1980), in psychology (Pribram 1971, 1984) and in evolutionary theory (e.g. Maturana and Varela 1980) have encouraged suggestions that equally radical transformations might be possible and appropriate in the social sciences (e.g. Loye et al. 1986, Brown 1988). So far, to my knowledge, not much has materialized in the form of explicit theoretical proposals.

This book introduces what could be termed a new 'paradigm' for the general area of social and cultural anthropology. The approach suggested

is a radical one in many respects, and I hope that it will be found stimulating and productive in a variety of fields within and outside anthropology. However, the whole idea of a drastic 'paradigm change', of a scientific revolution on the Newtonian or Einsteinian scale, in which one whole way of looking at the world becomes replaced by something quite different, needs some careful consideration.

Such a dramatic process of conversion may have been appropriate to the relatively confined circles within which Western scientific thinking took place up to the earlier part of this century. Today, whether we like it or not, the *de facto* state of affairs in the academic world is far more pluralistic. The old idea of all branches of knowledge growing, as it were, out of the trunk of a single tree, reducible to a single basic set of understandings, is finally fading.

The main Western incarnation of this idea since the nineteenth century has been the suggestion, not quite dead even today, that the sciences are hierarchically linked. Thus biology and geology, for example, should be reducible to chemistry, and chemistry in its turn to physics, which ideally consists of a few basic laws from which everything could be deduced by strict mathematical procedures. Transformations in physics itself, and for that matter in mathematical logic (Gödel's theorem), have long since made this whole programme implausible.

As far as anthropology is concerned, the one major attempt at such reductionism in recent years has been the biological reductionism of Edward Wilson, Richard Alexander and others. It is now becoming clear that the more sophisticated practitioners of sociobiology and related approaches are finding it necessary to concede a largely autonomous area to human 'culture' in some form.[1] The quote marks around 'culture' refer to the unsatisfactory nature of the concept, and among other things this book will have some suggestions about new ways of conceptualizing 'culture' and about the whole problem of the interface between biology and anthropology.

More generally, though, the tree with its many branches is losing its credibility as an image for knowledge, to be replaced, perhaps, as Gilles Deleuze and Félix Guattari have suggested in the opening chapter of *Mille Plateaux*, by the many-centred, multiply interconnected underground network of the rhizome. An ideal of many ways of knowing, each with their uses but none with claims of ultimate hierarchical dominance, is perhaps one of the central features of the 'post-modern' situation. This point has been made in relation to anthropology by, among others, Victor Turner (1985: 177ff.) and Marilyn Strathern (1987).

This perspective seems to me also to be appropriate to how the world's

body of knowledge as a whole is developing today. There will increasingly be a plurality of ways of knowing on the global scale, and none of these approaches to knowledge is going to have absolute authority or primary status.[2]

This is, in a sense, an unavoidable feature of a world where Washington, Moscow, Beijing and the other centres of once-autonomous understandings are increasingly having to learn to coexist, and where it is no longer a question of 'Western' knowledge going to the 'East' or of 'Eastern' knowledge coming to the 'West', but of a single world society learning how to live with and make use of its multiple heritage. That situation may still be an unfamiliar one for many people but it undoubtedly has its positive aspects. It underlies much of the thinking behind this book.

The new theoretical framework proposed in this book (the multimodal framework or MMF) is intended to be appropriate to, and to provide a description of, such a context of multiple ways of knowing. As a 'paradigm' for anthropology it provides a resolution for several complex theoretical issues, in particular those concerning the relationship between individual and society, and (as mentioned already) between anthropology and biology. It is intended, however, to be part of a developing group of approaches, rather than to form a central framework for a unified social science.

One of the strongest points of the MMF is its ability to make sense of concepts and modes of operating within traditional societies that have been very hard to incorporate effectively within Western modes of knowing. Here I refer in particular to procedures such as shamanism, spirit-possession, and rituals relating to 'gods' and 'spirits' in non-Western society in general. My own need to find an adequate theoretical framework for understanding such processes in Tibetan society was a primary motive for the initial development of the MMF, and I have applied the MMF to Tibet in a series of studies (Samuel 1984, 1985c, 1989).

Another central motive behind the construction of the MMF was a desire to provide a satisfactory theoretical foundation for the group of anthropological approaches generally known as 'interpretive' or 'symbolic' anthropology. I believe that this school of anthropology (one might take Clifford Geertz, Victor Turner and Claude Lévi-Strauss as exemplars) incorporates some vital and important insights into the human condition. Nevertheless, as its critics have demonstrated, there are serious problems with its underlying theoretical assumptions. Beginning in chapter 3 with the work of some of the more prominent critics of interpretive anthropology, I demonstrate how a more thoroughgoing reconceptualization of the field suggests a new type of framework within which interpretive anthropology

can form part of a consistent scientific approach to anthropology. The MMF is an example of such a framework.

The MMF incorporates a number of features that I believe are suggestive of the directions in which anthropology as a whole should develop over the next couple of decades. Among these are

(i) the deliberate dissolving of individual–society, subject–object and mind–body dichotomies;
(ii) an explicitly anti-empiricist position that goes along with the pluralism mentioned above with regard to systems of knowledge;
(iii) a willingness to make use of concepts that are, in Western terms at least, not particularly 'experience-near' (cf. Geertz 1985), and
(iv) a readiness to treat established social scientific vocabulary as radically open to question.

Concerning (iii) and (iv), major 'paradigm changes' of the past have demonstrated that genuine scientific innovation involves as much unlearning of old concepts as acquisition of new ideas. This book would probably fail in its purpose if it did not make many of its readers uncomfortable at one place or another at the dismissal (or at least relativization) of some cherished idea. (If it is any consolation, the MMF still has the same effect at times on its author.)

The whole question of the 'scientific' nature of the MMF is likely to disturb some readers. A significant school of anthropologists has in recent years begun to see anthropology as a primarily humanistic and interpretive discipline rather than as a science. These scholars regard scientific formulation as inappropriate and even antithetical to the sensitive awareness of other modes of understanding the world and of their intrinsic values. As I explain in chapter 2, I have considerable sympathy with this point of view, but I have explicitly rejected it in this book. Anthropology is here conceived of as constituting a *natural science of society* (to adopt a phrase used by A. Radcliffe-Brown, see Kuper 1977: 25).

By this I mean that anthropology, like other sciences, operates in terms of one or more theoretical frameworks, each ideally consistent within itself, and each providing the basis for a description and understanding of certain aspects of the 'real world'. I use the term 'theoretical framework' rather than 'paradigm', both because 'paradigm' has come to be very loosely used in recent years, and also because the precise level of application of 'paradigm' has always been something of a difficulty (cf. Kuhn 1970:175ff.). I conceive of a 'theoretical framework' as something underlying and more basic than a specific theory. It provides a language, including not only vocabulary but a syntax and a semantics, within which theories may be framed.

One message of this book is that anthropologists and other social

scientists should treat the fundamental presuppositions that constitute their theoretical frameworks as much more open to change and modification than has generally been the case. This level of theory should be seen as something that is consciously *designed* in order to be most appropriate for the task in hand. In this way anthropology can be both scientifically rigorous (where appropriate) and explicitly pluralistic. The MMF is presented both because of its intrinsic value and also as an example of the kind of theoretical framework that I believe anthropologists could now profitably begin to explore.

In the remainder of this first chapter I give an introduction to the MMF. Chapters 2 to 6 give some theoretical background to the MMF along with a more detailed exposition of the framework itself. In chapters 7 to 12 I apply the MMF to some ethnographic material and consider its consequences for anthropology and for the social and human sciences.

What is the multimodal framework?

As I have already implied, the MMF differs in a number of ways from established frameworks in the social sciences, in particular in its rejection of assumptions implicit in ordinary language such as the mind–body and individual–society dichotomies. It can therefore be a little difficult, on a first encounter, to understand just what the MMF does. There is a natural tendency to reinterpret it in familiar but inappropriate terms. Here I shall start with a relatively intuitive approach, using the idea of 'informal knowledge', and then proceed to a more systematic presentation.

If we begin with the Kuhnian conception of the scientific paradigm, then one way to regard the MMF is as resulting from a kind of *extension* of the paradigm concept to cover the area of informal and non-scientific knowledge.

By 'informal knowledge' I mean the knowledge that is implicit in our daily activities, in the collection of techniques, information and ways of behaving that we use to carry on the business of living, in what Pierre Bourdieu refers to as the *habitus* (Bourdieu 1977). Some of this knowledge may appear to us as factual knowledge: the bus routes by which we get to work, the differences between the prints left by various animals in the bush. Other parts may scarcely seem knowledge at all: the ways in which we have learnt to walk, to carry our bodies, to operate our brains and central nervous systems. All these, however, may be considered as 'knowledge', since none are given to us directly by nature, even where, as in the case of how we learn to operate our nervous system, there is probably a strong genetic component in the particular behaviour.

I have deliberately given examples that pertain to 'mind', examples that relate to 'body' and examples that might be somewhere in between, because the picture of informal knowledge that I am trying to construct for the reader is not of something contained within the mind, but of a patterning of mind and body as a totality. This, as I have already suggested, is an explicit feature of the MMF.

At the level of this kind of informal knowledge people differ a little, and perhaps more than a little, from each other. Operating successfully in the world places certain constraints on what we do, but there is undoubtedly a wide range of personal bodies of informal knowledge each of which enables an individual to survive, after a fashion, within his or her social context.

But what is the relationship between this informal knowledge and the systems of formal knowledge familiar to us, for example, through science? Presumably, in some way, the systems of formal knowledge must derive from the informal knowledge of past and present human beings. They must have 'crystallized' out of the changing flux of informal knowledge systems and attained some degree of stability and independent existence.

Such 'crystallized' systems, which include law codes, forms of bureaucratic organization, formal systems of etiquette, and the like, as well as scientific theories, are an important part of social reality, and once formed they act back upon the changing flux of informal knowledge in complex ways. Once they have been created, they have a certain stability but they are not eternal and in time dissolve back into the general flow of informal knowledge. While we have learnt to represent certain systems of formal knowledge in purely conceptual terms (e.g. as a scientific theory) they derive from more complex patternings of mind and body and retain in some form their origin in such patternings.

All this gives us a picture of social life as describable in terms of a kind of continuing flux of informal knowledge out of which systems of formal knowledge gradually crystallize and which they, in turn, act back upon. This metaphor of 'crystallization' has some limits. For one thing, a crystal is clearly delimited from the solution out of which it forms. This is not so true of systems of formal knowledge. It is unclear whether we should locate them in or outside the individuals who create, use, and are in turn structured by them. Here, as with the mind–body division, we have a dichotomy that the MMF explicitly rejects.

Another difference between real crystallization and the formation of knowledge systems is that real crystals may differ in size and structure, but they either form or do not form. The equivalent process in social life does not have this all-or-nothing character. In a sense, any intersubjective agreement between two individuals about anything represents a little bit of

this process of crystallization of knowledge. Systems such as the sciences are at the other extreme, with a formal external representation in the form of writing and an existence that spans centuries of time and millions of people. All human beings partake in at least one system of this kind: language.

We can begin to see that informal knowledge has the potential to be a very central and basic category, including all aspects of social life. The MMF is, in a sense, a framework that describes human social life precisely in terms of this changing flux of informal knowledge and of the processes of crystallization and dissolution within that flow.

To get much further, we need a language with which to speak of the flux of informal knowledge and of the processes of crystallization. The key terms of the MMF provide such a language. Before considering them directly, it is worth trying to specify rather more clearly what this informal knowledge consists of and where it is located, and in particular what the rejection of the mind–body and individual–society dichotomies might imply.

Neither mind nor body

We will begin with the MMF's rejection of a mind–body dichotomy, since this is probably easier to explain than its rejection of the dichotomy between individual and social modes of explanation. The basic variables or quantities within the MMF explicitly include both mind and body processes. It is assumed that these are parallel aspects of a total system.

For example, the techniques involved in hunting wild animals, gathering wild plants, or entering a shamanic trance, are all regarded as techniques of both mind and body. They involve both specific modes of perception (involving the training of the sensory organs), and certain concepts and mental distinctions. They also involve specific internal bodily processes. These allow human beings, for example, to make subtle distinctions in the vegetation surrounding them, or to enter a trance state and generate new 'cultural' content from within it.

The learning of these techniques is regarded in the MMF as something that takes place in the totality of the mind–body system, rather than primarily 'in' the mind or 'in' the body. In other words, within the MMF, the question of whether a particular process happens at the level of 'mind' or 'body' is improperly put and does not make any sense. Much the same is true of the question of whether a particular item of behaviour is willed by the 'individual' or determined by biological or social pressures.

The MMF is not interested in claiming that what goes on within the human mind is 'really' just electrical impulses or hormonal discharges (cf. Changeux 1986). Nor does the MMF assert that what goes on in the mind

involves anything outside the mind–body complexes of human beings. However, the MMF also holds that those mind–body complexes cannot ultimately be analysed separately from each other and from their total physical and biological environment. An important part of that environment is made up of other human beings, which brings us to the second dichotomy that the MMF deliberately erases, the opposition between 'individual' and 'society'.

Neither individual nor social variables

The MMF rejects the present dichotomy between two kinds of explanatory language in the social sciences, one dealing in *individual* variables and one dealing in *social* (*group*) variables such as society or culture. In philosophical language, the MMF is neither a form of 'individualism' nor a form of 'holism' (or 'collectivism') as normally understood (e.g. O'Neill 1973, Agassi 1975).

Social scientists have generally assumed that it is necessary to operate in terms of one or another, or perhaps a combination, of these kinds of explanation, but there is no *a priori* reason why this must be so. The assumption derives merely from our past mental habits. The ordinary (commonsensical) human modes of perception and explanation in modern Western culture have long seen human social reality as constituted by the actions and intentions of individual human beings. Several generations of sociologists, anthropologists and other social scientists have established an alternative mode of explanation in terms of an autonomous realm of social variables (Durkheim's 'social facts'), and these explanations have themselves become part of popular discourse. There is no reason to accept that these two types of explanation are the only ones possible or appropriate.

Explanations in terms of both individual and social variables, separately or together, have been useful and productive. Virtually all social scientific explanation has so far employed them. Nevertheless, the attempt to develop these modes of explanation, singly or in combination, into an adequate and consistent social theory leads to a series of paradoxes that have bedevilled the social sciences for generations. The paradoxes are exemplified below in chapter 3 for the case of interpretive anthropology.

The present situation of the social sciences has some analogies to that of classical (seventeenth- to nineteenth-century) physics. Classical physics was brought into being when Newton, Descartes and others made an initial departure from the modes of thought of ordinary human perception. We might draw a rough parallel with the creation of 'society' as an autonomous realm of explanation in the work of the nineteenth-century sociologists. However, in physics it became apparent towards the end of the nineteenth

century that a second and a more radical break was required. This involved a move to modes of theorizing that were considerably more distant from the habits of our normal perceptions and had fewer inbuilt assumptions about the nature of things.

We can take as an example what happened to the concepts of space and time as they developed through the introduction of general relativity. An important point is that this transformation involved more than the simple replacement of one mathematical description (theory) of space and time by another more correct description. It brought with it a new attitude to the whole notion of theory, an attitude that was eventually to manifest itself in the philosophy of science in the writings of authors such as Karl Popper, Thomas Kuhn or Paul Feyerabend.

Consider Erwin Schrödinger's well-known introduction to general relativity, *Space–Time Structure*, first written in 1950 (Schrödinger 1954). Schrödinger begins by abandoning conventional notions of space and time completely and assuming merely a generalized and unstructured 'manifold', a mere assemblage of all points in space and time. He then gradually introduces elements of structure in the form of mathematical relationships (constraints) applying to the points in the manifold. His aim is to find the simplest and most limited set of assumptions that will generate observed experience, in other words, that will give something close enough to ordinary observable space and time in those areas where Newtonian assumptions work.

I emphasize the steps involved here, since I shall follow an analogous procedure below in introducing the MMF. Ordinary categories are first held in abeyance, and the area of reality in question considered in as general, free and unstructured a form as possible (the 'manifold'). A set of appropriate concepts is then tried out. These concepts can be seen as possible 'constraints' upon the freedom of the unstructured manifold. Rather than rushing to reconstitute all of the concepts through which we customarily view the world, the point is to find the minimal set of assumptions that will generate observed experience. These may or may not bear much resemblance to previously familiar concepts. Typically they are quite different. Thus 'gravity' in general relativity is no longer, except in a secondary and derivative sense, Newton's force operating between discrete 'objects' in dependence upon their mass and the distance between them. Instead it is incorporated as a kind of 'curvature' of the structure attributed to space and time.

At the risk of labouring the point somewhat, the question is not whether gravity is in fact a force between two objects or a curvature of space–time. This kind of question could only apply in an empiricist science. The question is which of the two descriptions is simpler, more appropriate and

more useful, in the sense of being able to describe accurately as wide a range of phenomena as possible.

The general relativity description has to be mathematically equivalent to the Newtonian description to a high degree of accuracy within 'normal' circumstances. This must be so, because the Newtonian description is known to be accurate within those circumstances. Newtonian physics describes the orbits of the planets within the solar system, for example, to a high (though not perfect) degree of accuracy. It is only where very high velocities or very long periods of time are involved that the predictions of Newtonian physics are significantly different from those of general relativity. Similarly, the probability fields of quantum mechanics have to produce recognizable, conventional, discrete 'objects' within the realm of direct human observation, but they do not necessarily do so for phenomena at very much smaller than human dimensions or at very high temperatures.

The MMF involves this kind of move away from a conventional way of seeing the world, though at this stage in a less mathematical form. The reality that we interpret normally in terms of 'human beings', individual or collective, and their behaviour, is taken as being representable by some kind of general unstructured field or 'social manifold', within which neither 'human individuals' or 'societies' are identified. Structural variables are then introduced, which can be regarded as descriptions of, or constraints upon, the structure of the manifold. These variables are not defined in terms of 'individual' or 'social' entities. They form an autonomous realm of activity from which our conceptions of 'individuals' and 'societies' may be seen as deriving.

A strong argument in favour of such an approach is that conceptions of 'person' or 'individual' are well known to be culturally variable to a great degree (cf. Heelas and Lock 1981; Carrithers, Collins and Lukes 1985; Marsella, DeVos and Hsu 1985). If we assume a basically Western (or for that matter any specific non-Western) model of the person we are taking for granted something that is more appropriately treated as a cultural product. Any such procedure is likely to generate theories poorly adapted to deal with the diversity of concepts of person, individual and self in the real world.

Another point about this approach is that it helps to shift our focus away from the exclusive and competitive claims of individual theoretical frameworks and towards those connections that existing frameworks fail to capture. My own (somewhat neo-Kantian or neo-Madhyamika) assumption is that the 'social manifold' is considerably, if not infinitely, more complex than any representation we can make of it. At any rate our theories so far plainly allow only for limited and simplistic representations