# CHAPTER SEVEN

## Reflection

At least two sorts of development seem to be called for. In classic theology claims about the material dimensions were made in a doctrine of creation that declared the actual physical contexts and dimensions of human life, whatever they may in fact be, to be fundamentally good and supportive of human freedom...The claims about the material dimensions of personal existence could be made in terms of an ontological relationship between all reality and God. This unchanging and unchangeable relationship, we saw, was logically distinct from the relations constituted by knowledge of God and by fall and redemption...It may be that theological anthropology will be unable to do justice to the material dimensions of human life until it has recovered a full-blown doctrine of creation as a mode of relation to God other than relationships in consciousness...In addition, theological anthropology may be able to deal with persons in their genuine concreteness only by a second "turn", from the person as patient or subject of consciousness to the person as agent.

*David Kelsey*[1]

Everyone's philosophical theology essentially includes within it the principles of his whole theological way of thinking. Thus, every theologian should produce the entirety of this part of his theology for himself.

*Friedrich Schleiermacher*[2]

## 1. Interaction and the Cognitive Orientation

The attempt to construct a theory of the relation between the processes of revelation and those of human learning has involved a wide range of theoretical fields. The variety of topics on which it has been necessary to draw conclusions are all potentially the subject of a thesis in themselves. These include the nature of the social sciences, the nature of perception, the relationship between the cognitive and affective aspects of learning, the mechanisms of socialisation, the nature and significance of human subjectivity and agency, the sphere of man's proper autonomy in relation to both his creatureliness and his fallen nature, the work of the Holy Spirit in revelation and in relation to the human spirit and the way in which the relation between Christ and the believer is to be understood. The main task has been not simply to bring these areas together and to give an account of their relationship with Christian learning, but to bring them together in such a way as to form one coherent overall thesis.

A comparison may be drawn with the work of Dr.John Hull in his book, *What Prevents Christian Adults From Learning?* In that book, Dr.Hull presents material from a number of theoretical areas and applies it to the problems of Christian learning. But his concern is confined to the way in which the various psychological or sociological factors with which he deals may inhibit Christian learning. The limited nature of his purpose makes it unnecessary for Dr.Hull to attempt a relation of the various fields on which he draws - it is sufficient merely to show the influence of each area separately. But in attempting a single overall theory of Christian learning, it is not sufficient simply to demonstrate the contribution of each separate area. The different fields must be brought

together within a single framework of interpretation and their relationship to one another clarified.

The main problem posed by this requirement is the close interrelation of conclusions drawn from disparate theoretical fields. Revision of a conclusion drawn from one particular area would require the reappraisal of the whole thesis. It has been necessary, for example, to reject both philosophical empiricism and Piagetian theory, and in each case the reasons have been carefully but briefly given. Further evidence which seemed to require the acceptance of either of these competing approaches would invalidate the entire thesis. In particular, the doctrine of the Holy Spirit plays an important part in the establishment of a relationship between nature and grace, human autonomy and divine intervention, and learning and revelation. If substantial reasons could be given for an interpretation of the work of the Holy Spirit different from that put forward here, the connection between revelation and learning would have to be reinterpreted along different lines.

On the other hand, one of the most interesting aspects of the attempt to establish connections between material in differing fields has been the discovery of substantial areas of overlap and continuity, in many cases between workers who appear to have been unaware of one another's results. Ulrich Neisser, for example, shows no signs of being familiar with Jerome Bruner's very similar theory of interaction.[3] The reasons for these areas of continuity can be traced to philosophical considerations. Writers in different fields are faced with the same basic questions concerning the mechanisms of perception and the nature of human beings, and their agreement is due, in most cases, to their selection of certain standard answers. The material from the different but related subject

areas presented here is held together by a common philosphical orientation. The task of this final chapter is to attempt to examine some aspects of the orientation behind the theory presented here - to make explicit the theological and philosophical approach which undergirds the thesis as a whole.

One of the most important elements in the theory is what has been referred to above as the "cognitive approach" or "cognitive orientation". In the context of the study of perception, the main feature of the "cognitive approach" is the role of the "world model" of the perceiver in the processing of information. In the words of de Mey, quoted above,

> The central point of the cognitive view is that *any* such *information processing*, whether perceptual (such as perceiving an object) or symbolic (such as understanding a sentence) is *mediated* by a *system of categories* or *concepts* which for the information processor constitutes a *representation* or *model* of his world.[4]

It is only the categories involved in the perceiver's "world model" which enable perception to take place at all. Without them, as the experiments of Bartlett and Bruner amply demonstrate, recognition of a given object of perception would be impossible.

A central feature of the cognitive orientation is the hermeneutical nature of perception, recognition, comprehension and memory. This general orientation is translated into a theoretical model by means of the theory of interaction. Interaction is a hypothesis which explains the results of numerous experiments, of which the playing

card experiment of Bruner and Postman is one of the most celebrated. As a theoretical model, interaction plays an important unifying role throughout the thesis.[5]

1. It suggests that both perception and learning are the outcome of human agency. The ability of human beings to construct a psychological environment is a reflection of the active nature of perception and information processing.

2. The mode of understanding termed *verstehen*, by which men and women understand and interpret the point of view of others may be viewed as implicitly interactive. *Verstehen* is the foundation of the Weberian or hermeneutical approach to social science, in which the agent's point of view and interpretation of his actions is the significant level of analysis.

3. Allied to Weber's approach are symbolic interactionism and related approaches to socialisation based on the work of G.H.Mead, in which social interaction is understood as the exchange of frameworks of interpretation.[6]

4. Interaction is the foundation of an approach to learning which interprets it as the outcome of personality as a whole, in which ability to learn, propensity to learn and direction of learning are all outcomes of the formation of identity.[7]

5. Interaction provides the foundation for the view of learning as assimilation and accommodation which lies behind the recognition of the need for teaching methods geared to active engagement on the part of the learner.

In the social sciences generally, however, interaction is a highly unpopular hypothesis. This is not only because it requires the rejection of empiricism and, with it,

the prevailing positivist orientation, but because of the difficulties it throws in the way of experimental precision. In order to obtain replicable results from experiments on human behaviour, it is necessary to quantify the stimulus and control the conditions of the experiment. If the value of the stimulus and the way the conditions are interpreted differs from individual to individual, this becomes extremely difficult.

The rejection of interaction for reasons such as these is to be viewed as inadequate, given the complexity of the theoretical foundations of experimental method examined in the opening chapter. A difference in theoretical orientation is to be noted between the natural sciences, where Kuhnian and related understandings are increasingly accepted, and the empiricism and emphasis on quantification still prevailing in many parts of the social science field. It has been suggested that the choice is to be made between these two approaches in favour of understanding all disciplines as, in varying degrees, hermeneutical. Quantification may be accepted as a small-scale and highly-defined approach within a larger field. The work of Odom, described in connection with the theory of perceptual salience, has demonstrated what can be done with the use of pretesting to discover the experimental subject's initial interpretation of a given stimulus.[8] Experimental work, such as that reviewed in chapters 2 to 4 of the thesis, may be understood as constituting "normal science", the testing and extension of one particular framework of interpretation from a number of possibilities.

The cognitive approach to perception and intelligence generally constitutes the "lowest level", or level of abstraction nearest to and most closely bearing upon the experimental data, of a set of closely linked aspects of a broader orientation. The outcome of the cognitive approach is a view of human beings as *interpreters* of the world around

them, as *creators* of psychological world-models and co-creators of the *human world*, the product of and matrix for the processes of socialisation. This view is interpreted, at a higher level still, as the result of human autonomy and human autonomy given theological significance in relation to divine creation. It is by a process of careful relation of theological and philosophical orientation such as this that theological statements, which, in themselves, have a high level of abstraction, may be applied to the concrete experience of human life and filled out in terms of a theory of learning.

## 2. Interaction and the Synthetic *A Priori*

Founded on the contribution of the subject in perception and comprehension, the cognitive approach is implicitly related to the philosophy of Immanuel Kant. The development of the cognitive approach in the context of philosophy of science and the study of cognition represents a "turn to the subject" of the same kind as that exhibited by Kant's *Critique of Pure Reason.* As such, it encounters the same kind of problems as does Kant's philosophy. The task of this and the following sections is to draw attention these problems. In many cases, however, it will be suggested that the cognitive approach, and particularly the theory of interaction, offers a contribution to the solution of the difficulty. In particular, the use made of the cognitive approach in the course of the thesis represents a two-fold contribution to the interpretation of the philosophical framework developed by Kant:

1. In the course of chapter 2 above, reasons have been given for treating philosophical theories of knowledge and language as *paradigms* to which psychological investigation of the same topics stand as *normal science*. Philosophical models such as Kant's are to be taken as general frameworks capable of experimental analysis and consequent modification.[9]

2. Kant himself rejected the idea of revelation, preferring to confine religion to the limits of reason alone. But in his comments on the nature of philosophy itself, the possibility arises that the limits of reason may not be sufficiently broad to allow a satisfactory resolution of the problem of mankind's religious inclination. The true subject of philosophy, Kant believed, was mankind, and the nature of mankind was impossible to

describe satisfactorily. Use has been made of this position, in chapter 1 above, to attempt to establish the relationship between revelation and the limits of human reason, so as to allow a view of revelation which both interprets and takes account of the limits on metaphysical speculation imposed by the Kantian framework.

One of the most important reservations of philosophers about Kant's work concerns his use of psychological terms in the course of the development of a philosophical position. The *Critique of Pure Reason* repeatedly refers to psychological faculties or "functions of the soul" - those of "sensibility", by which impressions are received from the outside world; of understanding, by which a system of categories is imposed on those impressions; and imagination, by which the categories of the understanding are applied to the impression received by sensibility by means of "schemata". Again, Kant refers a number of times to the fact that the subject of his investigation is specifically *human* understanding, the limits of that understanding being the limits of human cognitive capacity. In the Transcendental Deduction, he writes,

> This peculiarity of our understanding, that it can produce *a priori* unity of apperception solely by means of the categories, and only by such and so many, is as little capable of further explanation as why we have just these and no other functions of judgement, or why space and time are the only forms of our possible intuition.[10]

This feature of Kant's work has frequently been the subject of criticism. Strawson, for example, objects to its "psychological idiom". It is, he believes, only one of several possible "idioms" for the point Kant wishes to make.[11] Strawson's objection

springs from the conviction, shared by empiricist philosphers in general, that logic and psychology are distinct and separate fields. Popper's strongly and repeatedly expressed conviction that the psychological processes leading to a particular scientific discovery have no bearing whatever on the logical processes of its justification has already been noted.[12] So also has the belief of Hamlyn, Hirst and others that the psychology of learning has no bearing on the logical status of what is learned. Grounds have been given for rejecting this position as mistaken.[13] In the study of knowledge, philosophy and psychology have complementary and related roles. There is, in Stephen Toulmin's words, "a dialectical succession of logical priority" between questions of psychological development and of logical justification.[14]

Further, this demarcation between logic and psychology was not accepted by Kant himself. The most important aspect of Kant's philosophical position is his "turn to the subject". As a consequence of the turn to the subject, Kant sets out to analyse not *propositions* but *judgements*.[15] His starting-point takes for granted, therefore, a human action, the action of judgement, and an action requires human capacity, in this case psychological capacity. In this respect, Kant's *Critique* is closely comparable with Wittgenstein's *Philosophical Investigations*. There, Wittgenstein begins by pointing out that language has its origin in the action of speech.[16] There thus arises a distinction between speech as a human action and language as a set of propositions, which is exactly parallel to the distinction arising from Kant's *Critique* between judgement and propositions. It is a mistake, therefore, to refer to the psychological orientation of Kant's work merely as an "idiom". For Kant, logic was a reflection of the working of human

cognition and the limits of logic were the limits of human cognition. This dependence of logic upon psychological capacity could be argued in detail. The main outlines of the position appear implicitly in the course of the thesis.

One of the most frequent and damaging criticisms of the *Critique* is the commonly accepted observation that, in his attempt to delineate the full extent of the categories of the synthetic *a priori*, Kant was dependent on Euclidean geometry, classical logic and the Newtonian world-view, all of which he accepted as axiomatic and all of which have since been shown to require substantial modification and supplementation. In effect, Kant assumes an historically constant "human nature" and takes no account of historical changes in human consciousness. The discovery of time-scale and the effects of historical process in the nineteenth century made Kant's outlook obsolete. Toulmin calls his work, "The last great *a-historical* synthesis of human thought and achievement."[17] The demonstrable inadequacy of Kant's description of the synthetic *a priori* tends to call into question the viability of the concept as a whole.

The modification of the Kantian framework in the present work, however, presents a means of incorporating the influence of historical development into that framework. The essence of this modification is the replacement of the relation postulated in the *Critique* between the active faculty of the understanding and the passive faculty of sensibility by a process of *interaction* in which "understanding" and "sensibility" are mutually conditioned. In Kant's original scheme the understanding is only ever active and sensibility only ever passive. The relation between them is achieved by the capacity of the imagination for the formation of schemata, a schema being a "third thing", homogeneous with both category and intuition.[18] Since understanding is only ever active

in the process of judgement, it can never be affected, and the categories consequently modified, by the influence of the intuitions. In the process of interaction, however, this is precisely what takes place. The "categories of the understanding", which in this model are the schemata themselves, are continually being modified as a result of experience. In Kant's original description, moreover, the understanding supplies the *form* of any given judgement, while the intuitions of sensibility supply the *content*, and in this way "objects" are made "to conform to our knowledge". It is of the essence of the process of interaction, however, that the distinction between form and content does not apply to the organisation of tacit knowledge. It is, rather, a necessity of explicit, logical, inference, the kind on which Kant relied in the process of working out his account of the categories.

The influence of culture and history is not only allowable under this modification of Kant's theory but axiomatic. It has been demonstrated at length in the course of the thesis that the categories of the understanding are formed as a result of experience. This experience may be either corporate or individual. A considerable proportion of human learning consists of cultural transmission, whereby the individual grows into and makes his own the forms of experience common to his particular culture and society. Within this process of socialisation, however, there is plenty of room for distinctive individual experience and interpretation. It is, in fact, the possibility of individual differences of experience and interpretation which prevents a culture from ossifying. The outcome is that "human nature" may be said to be both historically conditioned and yet also the outcome, in each individual case, of a process of self-definition.

It has sometimes been supposed that the recognition of the deficiency of Kant's attempt to describe and delineate the categories of the understanding must lead to the complete rejection of his framework. But this need not be the case. The rejection of Kant's description of the categories leaves untouched the arguments he deployed in the "Transcendental Deduction" to show that we do, in fact, apply categories to intuition to arrive at concepts. As Stephen Korner writes,

> I take the view that even if Kant's proof of the complete list of Categories was not successful he may still claim to have established that we do apply Categories in making objective empirical judgements. This is an important fact about our thinking which Kant's empiricist predecessors did not or would not see.[19]

The attempt to give a complete list of the categories is logically dependent on the more fundamental argument of the "Transcendental Deduction". The main argument, therefore, is not affected by the overthrow of the subsidiary one.

In addition to this logical point, there is the evidence of the experiments of Bartlett and Bruner, to which a great deal of other similar data could be added, to the effect that perception is dependent on the application of categories.[20] Kant's theoretical epistemology is to be taken as a paradigm for the psychology of perception and cognition. The hypothesis is that perception is to be understood as the result of the application of categories to sensory data, and the evidence adduced above is overwhelmingly supportive of the hypothesis. What is required to make the Kantian framework plausible is an account of the nature of the categories said to be applied. This

will take the place of Kant's attempted proof, the failure of which makes his theory appear implausible. It is this which is attempted in chapter 3 of the thesis.

The replacement of Kant's list of categories by the description of tacit knowledge in chapters 2 and 3 above leaves to be resolved the question of what features of human cognition can be said to be innate. In Kant's original presentation, the whole of the categories of the understanding are required to be innate, because they can never be modified or formed by experience. Under the theory of interaction, on the other hand, a very large proportion of "tacit knowledge" is the result of experience. Yet the principle remains that without *some* initial concepts as a framework of interpretation, perception itself is impossible. Some proportion of tacit knowledge must, therefore, be innate or inborn and not the result of experience. Kant's contention that there must be a synthetic *a priori* of some form, whether or not it is of the logical form he ascribed to it, must, therefore, be upheld. In an interesting article on the relation between human cognition and the functioning of artificial intelligence, Z.Pylyshyn designates this area as "functional architecture" or the equivalent of the computer programmer's "virtual machine", the capacity of the basic level of software required for the machine to operate.[21] In linguistic philosophy, this area may be taken to represent what Stuart Hampshire calls the "necessities of discourse", those assumptions which underlie the possibility of language.[22] Exactly what is comprised by this area of innate understanding will be the subject of a subsequent section.[23]

## 3. Imagination

There is no clearly recognised shared understanding of "imagination" in modern psychological study, and in philosophical epistemology its definition has varied through the years.[24] In Kant, the imagination plays a particularly important role. Imagination is responsible for the essential process of "synthesis", or the application of the categories of the understanding to the sensible manifold, a process without which knowledge would be impossible:

> Synthesis in general...is the mere result of the power of the imagination, a blind but indispensable function of the soul, without which we should have no knowledge whatsoever, but of which we are scarcely ever conscious.[25]

The important function thus ascribed to the imagination was taken up, among others, by Coleridge as a central feature of his explanation of the poet's craft.[26]

One of the most important of recent thinkers to give an important place to the imagination is Michael Polanyi. Imagination plays a key part in Polanyi's explanation of the process of scientific discovery. He was fond of quoting instances of scientists, of whom Einstein was his favourite example, whose distinctive contributions to science had their roots in "intuition". Thus Einstein was intuitively aware from the age of 16 that there was something missing in Newtonian physics, but had to work for many years before he discerned what the solution was. Discoveries such as Einstein's theory of relativity are examples of what Polanyi describes as reintegration of the "particulars" or

"clues" to form a new whole. A new general theory is proposed, after the manner of a Kuhnian paradigm, to explain the existing known facts, some of which, previously overlooked, may become vitally important under the new theory.[27]

For Polanyi, this process amounts to a change of "vision" and the process underlying it is an extension of perception. Thus while, for Kant, imagination is an integral part of perception, Polanyi's theory of imagination is modelled on a theory of perception. A person who puts on a pair of inverting spectacles initially has a difficult time finding his way about. But in time the brain gets used to the inverted image and he is able to function normally. Only when he eventually takes the spectacles off will he have to take time to readapt to normality. In the same way, says Polanyi, imagination reintegrates familiar particulars to form a new "vision" of reality.

Several times in his writings, Polanyi refers to Plato's dialogue, *Meno*, in which the difficulty is raised that the awareness of a problem is impossible without a sense of the solution. If all knowledge were explicit, no problem could be recognised before its solution were discovered! But if the awareness of a problem is part of tacit knowledge, then knowledge of a problem and the clues to its eventual solution may be given together. The same observations which indicate that a problem exists provide the clues to its solution. All that is needed is the reintegration of these clues into a new and more satisfactory picture. "To know what to look for," Polanyi writes, "does not lend us the power to find it. That power lies in the imagination."[28] Imagination is the faculty employed in the deliberate attention to the problem, the attempt to "see" the solution.

Intuition is a deeper, spontaneous, non-deliberate faculty, which may be activated by the application of the imagination to reintegrate the particulars into a coherent whole.

Guidance in the search for a solution is provided by what Polanyi calls a "gradient of deepening coherence". The best solution is the one which explains the known observations most coherently. Two assumptions must be made, both of which Polanyi espouses, and which form important elements of his work. The first is the existence of an independent and coherent reality, whose coherence leads the scientist on in the attempt to picture it. Scientific theories may then be envisaged as provisional models, best attempts to describe the nature of reality. The second is the independent reality of the values expressed by the scientist in the search for scientific truth. These are to be taken as expressions of a common human reality, whose deepest level is expressed in the person. Thus it is "personal knowledge" which acts as the underlying integrating level in all attempts to discover the nature of reality.

No theoretical approach which makes use of the terms "tacit" and "personal knowledge" can fail to acknowledge its debt to Polanyi's work, and, indeed, much of Polanyi's vision is to be found, whether tacitly or explicitly, incorporated in the present work. Polanyi was one of the first to challenge the philosophical framework which dominated post-war science, to describe perception as an heuristic skill, and to look in the direction of psychological experiments for the solution to the philosophical problems of perception. More important still is the move toward an alternative framework for the understanding not simply of scientific discovery but of perception as a whole. "What Polanyi does," writes Daniel Hardy,

> is to move decisively away from the mechanical model of early modern science, where reality was seen as residing in the object or in the laws which appeared to govern the object's behaviour, and to move toward a dynamic or interactionist model, where reality is perceived in the relation between the object and its knower.[29]

Despite Polanyi's insistence on the independence of the real world and its important role in guiding the process of discovery, the outcome of his position is that what we *know* is to be taken only as an approximation to that reality, a model which is the creation of human imagination.

For all Polanyi's significance, his important work was written between 20 and 30 years ago, which in scientific terms is a long time. In the construction of the thesis, his work has been supplemented from a number of sources. Chief of these is Thomas Kuhn, who adds an important historical dimension to the description of the processes of scientific discovery, but more important still, an interpretative dimension more specific in its description of the logical structure of induction. As early as 1959, N.R.Hanson suggested that the "logic of scientific discovery" might be analogical in character.[30] Over the next 10 years or so, Kuhn succeeded in demonstrating that this was the case. Kuhn's description of the "logic of tacit inference" is more detailed and satisfactory than the "from-to" of Polanyi's account of tacit integration.[31] Whereas Polanyi takes the work of the Gestalt psychologists as his starting point, Kuhn goes behind Gestalt psychology and demonstrates the reasons behind their observations. In cognitive science, the work on the structure of schemata reviewed earlier carries forward that of both Kuhn and Polanyi in

the direction of greater accuracy, although leaving a great deal of progress still to be made.[32] The drawback of this work is that it is carried on without Polanyi's awareness of the effects and implications of his own work not simply for the philosophy of science but for philosophy in general and for theology and religion.

What Polanyi described as the imagination and as the spontaneous work of intuition has been analysed in the present work in terms of "schemata". The usage of the term "schema" to describe a component of tacit knowledge is related to Kant's use of the term. Kant describes a schema as the means by which synthesis takes place. It is a "third thing", homogeneous on the one hand with the category, and on the other with the appearance. It must be at the same time "intellectual" and "sensible".[33] The modern use of "schema" is not derived from Kant at all. It came into cognitive science from Sir Frederic Bartlett, who derived it from Sir Henry Head. Nowhere in *Remembering* does Bartlett show awareness of Kant's use of the term, and references to Kant in the modern literature are practically non-existent.[34] In both Kant and in modern usage, however, a schema is what must be applied to perceptual data before recognition takes place. It is the means by which the "manifold of intuition", the constant flow of diverse sense-impressions, is sifted and interpreted. The difference is that in cognitive theory there is no need for pure, unschematised categories of the kind which Kant painfully works out according to the rules of logic. Schemata are derived from experience, applied to experience and modified by experience. This change makes a great deal of difference to the use of the term "imagination". In Kant, the term is quite clearly defined as a third faculty operating as mediator between sensibility and understanding. But in modern theory no clear line of demarcation can be maintained between the functions of what

Kant called "understanding" and "imagination". The formation, modification and application of schemata is the subject of cognition as a whole.

As far as the form of the schemata is concerned, Kant gives an excellent description of the problem, one which has rarely been equalled in the modern literature.[35] According to Kant, the schema for a dog must include all the information necessary for the correct classification of any given dog. It cannot consist merely of an image of a particular dog nor yet of all the images of all the dogs so far encountered by the individual. Neither of these would allow him to recognise a previously unfamiliar example as a dog. A schema must include "rules" for the recognition of objects sufficiently flexible to allow of modification in the light of specific instances. Kuhn's description of "exemplars" as cognitive categories may be understood to meet these requirements. Exemplars are undefined categories based on similarity. The introduction of explicit definition introduces rigidity in the form of boundaries which are superfluous for the functioning of tacit knowledge. The relationship between exemplars is based on perceived similarity. The broad category "bird" includes some "central" examples such as "robin", others more peripheral, such as "turkey" or "ostrich". The basis of their connection is analogy and their relationships multi-dimensional. Whether the appropriate connection for "robin" is "raven", "aeroplane" or "Christmas" depends on the context of the discourse in which it appears.[36]

This description of the way in which the schemata function as the elements of tacit knowledge points to their extreme complexity - a complexity which defies complete analysis. As Kant himself wrote

> The schematism of our understanding, in its application to appearances and their mere form, is an art concealed in the depths of the human soul, whose real modes of activity nature is hardly likely ever to allow us to discover, and to have open to our gaze.[37]

While interpreting the progress made in the study of schemata in cognitive science as a development within and clarification of the Kantian framework, it must be conceded that important questions remain to be answered. According to the earliest workers in the field of Artificial Intelligence, complexity was the only obstacle to the complete description of the processes of human cognition. Their optimism is philosophically related to that of the early social scientists, such as J.S.Mill, who believed that the complete description of human behaviour by means of scientific laws of cause and effect was only a matter of time - the only obstacle being the extreme complexity of those laws. In the course of the thesis reasons have been given for the rejection of this position.[38] The analogical structure of the relationships between schemata, it is maintained, points to the need for an explanation for "intuitive fit", an explanation which is to found in the realm of affect, which is, in turn, a reflection of the role of intention, not only in the direction of action but in the processes of cognition as a whole.[39]

The evidence assembled strongly indicates the role of goal orientation in cognition - the selection of information is based on what is deemed relevant to present purposes; comprehension involves intention; attitudes are predispositions to action based on constellations of values; and so on. All this points to the role in cognition of human agency. Most psychologists, it is to be acknowledged, resist the intrusion of the concept

of agency into the search for the explanation of cognitive processes. The agent is equated with a *homunculus* or "little man" in the head, used as a ready-made explanation in place of a convincing, if hypothetical, process. The rule governing work in the empiricist tradition is that no additional entities are to be introduced to make the proposed mechanism "work". Thus Bartlett, for example, successfully avoids using the term "self" in this way, defining it instead as the interplay of appetites, instincts, interests and ideals, and "temperament", and "character" as due to the order of predominance of perceptual tendencies.[40] The same concern lies behind the search for a mechanism to account for selective attention so as to avoid the introduction of purpose.[41] In another context, perceptual salience, Barber and Legge avoid the use of the term "purpose" by subtituting "motivational need state of the organism".[42] In Artificial Intelligence, the euphemism is "executive routine", the assumption being that such routines must ultimately be reducible to process explanation.[43]

The position proposed here is that while it is possible to *model* intentionality by the use of processes, hypothetical or actual, such processes can never *explain* intentionality. Purpose and intention are the contribution of the human agent, whose explanation must necessarily be of a different order.[44] This is because certain elements in the interpretation of a given situation are to be taken as presuppositions of the act of interpretation and communication, and could never be deduced from experience alone. They include the tacit recognition of a distinction between language and the world which language describes. It is these elements which allow the possibility of *meaning* in any given situation and they arise from the fact that a person is an acting subject. The

meaning of what it is to be an acting subject can, therefore, never be exhausted in description.

The philosophical orientation of the thesis as a whole requires the conclusion, therefore, that the process of cognition can never be exhaustively explained. Imagination remains, "An art concealed in the depths of the human soul, whose real modes of activity nature is hardly likely ever to allow us to discover." Herein lies a potential weakness. This weakness can be partially offset in the theological sphere. In defence of the consignment of the human agent to a special order of logical explanation, it can be argued that humanity is of a different order *theologically* to the rest of creation. This position, adopted in chapter 5 of the thesis, will be explored in a subsequent section.[45]

## 4. Transcendental Idealism and the Status of the "Real"

One of the problems associated with Kant's philosophy is the difficulty attending his concept of "transcendental idealism". Kant's starting point was the empiricist description of experience as consisting of separate and fleeting impressions received by the senses. It required the application of the categories of the understanding in the process of synthesis before these fleeting sense-impressions could be made to yield an intelligible concept. The outcome is that our knowledge can never be of "things-in-themselves", or objects as they exist in the "real world". Such objects must be presumed to exist as the source of the impressions received by the senses, but the concepts which we have of objects are those produced by the process of synthesis. Those concepts conform not to the objects themselves but to the categories of the understanding.

In working out his "transcendental idealism", Kant was consciously steering a middle path between two extremes, the extremes of empiricism and rationalism, represented by Locke and Leibniz respectively. "In a word," he wrote,

> Leibniz *intellectualised* appearances, just as Locke...*sensualised* all concepts of the understanding, i.e. interpreted them as nothing more than empirical or abstracted concepts of reflection. Instead of seeking in understanding and sensibility two sources of representations which, while quite different, can supply objectively valid judgements of things only in conjunction with each other, each of these great men hold to one only of the two, viewing it as in immediate relation to things in themselves.[46]

Precisely the same dichotomy exists potentially between "data driven" and "concept driven" information processing. While the one, taken by itself, requires that all mental concepts conform passively to the objects of the external world, the other, taken by itself, runs the risk of losing contact entirely with the external world and resulting in "controlled hallucination." What is required is that data driven and concept driven processing interact to produce a concept which is not a *passive copy* but an *interpretation* of the external world.[47]

The outcome of interaction is, therefore, the same as for Kant's theory, namely that the objects of the "real world" are to be taken as *empirically real* but *transcendentally ideal*. They are empirically real in that they produce impressions which are really disclosed to the senses and must therefore be assumed to exist independently of our concepts of them. But they are transcendentally ideal in that our concepts of objects are the result of interpretation to fit in with our overall "world model". We do not know objects in themselves, only what we make of them.

As it stands in Kant, the theory of transcendental idealism is open to certain grave objections. One of these is the anomalous position of space and time. One of the earliest objections was that of Jacobi in 1787. Kant assumes that perception is *caused* by things-in-themselves. But causation, as we understand it, must take place in space and time. Kant maintains, however, that space and time exist only as forms of our understanding and not for things-in-themselves. If that is the case, the question to arise is: how is it possible for things-in-themselves to produce impressions?[48]

There are several examples in the natural sciences of theories which survived initially because of the recognition of their potential explanatory power, despite a number of apparently weighty objections, which were subsequently shown to be misconceived. It is suggested here that the apparent contradiction to which Jacobi drew attention is an example of a similar case in the history of philosophy, which it has taken the discovery of the relativity of space and time and the theory of interaction to overcome. According to the theory of interaction, the concept we have of any real object will be different in some degree from the way that the object exists in itself but the concept nevertheless owes a good deal to the way that the object actually exists. Because of the replacement of the purely active role of the understanding by the process of interaction, the same may now be said of space and time also. The form of our understanding of space and time may be said to owe something to the way space and time actually exist, even though their real form remains unknown to us. Objects may thus be said to exist and to cause sense-impressions in space and time, but the form of space and time in which they exist may well be very different from space and time as we understand them. This is precisely the situation revealed by the discovery of the relativity of space and time. With the theory of relativity and the advances in theoretical physics based upon it, the possibility is opened up that space and time may involve many more than the three spacial dimensions and one temporal involved in the form of our understanding. It is in this multi-dimensional space-time continuum that sense-impressions are caused, but the outcome of our interpretation of these impressions is the "human world" with which we are all familiar. The theory of relativity is counter-intuitive because it appears to defy the experience of space and time

with which we are familiar, even though it is analytically sound and appears to have passed the test of empirical experimentation so far.

Kant's suggestion was that we may have more success in the tasks of metaphysics, "if we suppose that objects must conform to our knowledge."[49] Polanyi insisted that the "gradient of increasing coherence" came about as the result of the gradual conformity of the scientist's ideas with the structure of reality.[50] Under an interactionist scheme, these statements are complementary descriptions of the same process. The transcendental idealism of the Kantian framework is retained in that what we know is never the world "in itself" but only a model or interpretation of the world, based on experience. But that framework is modified to allow the real world to arbitrate, in the course of experience, between a good model and bad one. A person's world model is a "best approximation" to reality.[51]

The same may be said to apply with regard to the status of scientific theories. The "research programmes" described by Lakatos are "best possible approximations" to be understood as analogous to reality. A research programme is a "way of seeing" with the power to suggest potentially fruitful avenues of research, expose new problems requiring solution and generate progressively more adequate subsidiary models. A research programme extends itself until sufficient anomalies arise in the research generated to expose its inherent limitations and the search begins for a better and more adequate model. The same is true of Kuhnian paradigms. Of the two possible meanings of the term, exemplar and disciplinary matrix, the second is closely comparable to Lakatos' research programmes. It is, in the words of Margaret Masterman, a "crude

analogy" of finite extensibility, which fails when pushed too far due to the weight of anomalies generated in the course of "normal science".[52] According to Ian Hacking, the parallel between Kuhn's paradigms and Lakatos' research programmes is now widely accepted.[53] Both can be seen as implicitly theories of scientific progress towards increasingly adequate descriptions of the "real world". This "real world" lying behind and controlling the direction of scientific progress, in just the same way as that described by Polanyi, is empirically real, in that it discloses itself to the senses - it gives measurable observations. But it remains transcendentally ideal in that while scientific theory may approach, in asymptotic manner, a genuine description of reality, the time can never arrive when that reality can confidently be said to have been fully described. It can be known only through the scientist's model.

The same may be said with regard to the "critical realism" described by Ian Barbour.[54] Rejecting naive realism, positivism, and instrumentalism, Barbour maintains that scientific theories are *both* representations of the world and the product of the imagination. While they *intend* to describe the real world, models and theories are incomplete and selective. They are to be taken as provisional, and yet requiring commitment - the commitment of the scientist to the model as the best available description of the world. Scientists, Barbour insists, are *actually* critical realists. They think that that what they are trying to understand is the real world, but their models are only tentative descriptions of reality. Like Kuhn's, his theory is not a prescription for the way scientists ought to behave, but a description of the way they do behave. The fact that this one position can be labelled both realism and idealism indicates the scope of

interactionism - its ability to unite the respective roles of nature and scientific imagination in one coherent theory.

## 5. Necessities of Discourse

One of the problems to arise from the account of knowledge given here is that of communication. If the world each person inhabits is a psychological model of his own construction, how is mutual understanding and social co-operation possible? In the course of the thesis, two overlapping solutions have been proposed; it is the task of the present section to reflect on the philosophical aspects of these possible solutions:

1. *Verstehen*. Individuals possess the ability to "take the stance" of another. It is possible to construct for ourselves the point of view of another with regard to the whole or a specific part of a given situation. By doing so, it is possible to understand the other person's intention and the meaning he assigns to his own actions. This ability makes possible the construction of shared frames of reference, within which successful communication can take place.[55]

2. Socialisation. Socialisation is the general name for the great variety of formal and informal processes by which individuals harmonise their respective world models with one another. Each reference group, whether large or small, formally or informally constituted, temporary or semi-permanent, requires a shared frame of reference, understood, if not necessarily subscribed to, by all the members of the group.[56] A school, for example, has both a set of formal rules and an "ethos" or "hidden curriculum", broader in scope than the rules, which expresses the "way things are done". This may include the boundaries of acceptable relationships between teachers and pupils, expectations of pupil behaviour and guidelines for relations between the sexes.

The construction of shared frames of reference by means of which communication becomes possible should not be seen as an additional facility, separate and subsequent to the creation by each individual of a psychological world-view. It has been stressed, in the course of the fourth chapter, that the social context in which th individual learns to name and to value the items of his experience is inescapable. Each person encounters the world already structured by parents and other significant authority figures, whose systems of meaning he is likely to internalise without significant reflection. Claims to knowledge based on observation take place only within culturally defined systems of concepts expressed in language. Even for the description of necessarily private experiences, such as the sensation of pain, each person relies on the means of expression provided for him by the language itself. The act of naming an object or sensation cannot be taken as the basic level at which language makes contact with reality, since descriptions even of private sensations attain meaning only within the context of shared frames of reference.

This feature of experience and language was seized upon by Peter Winch as the main point of his book, *The Idea of a Social Science*. Winch took over from Wittgenstein the term "form of life" to describe a social and cultural context, which, like a reference group, may be large- or small-scale, temporary or long-lasting, and within which rules and criteria for meaningful action are publicly recognised and rational communication is possible. It is "forms of life", Winch argued, which constitute the link between language and the world it describes.[57] (Whether Winch has interpreted Wittgenstein's use of the term "form of life" correctly is open to question. An alternative understanding will be referred to in the next section.) However, if the meaning of language is the outcome of

forms of life, the question arises as to how communication between forms of life is possible.[58] Must every term be translated at the boundary between forms of life or is there some universal characteristic of human life which makes cross-cultural communication a possibility?

"Forms of life" are supposed to provide definitive contexts within which language can be used to apply to the world. However, at an earlier point in the thesis it was remarked that the relation between language and the reality it describes is itself irreducible to the terms of a description.[59] The essence of a form of life must, therefore, remain beyond the reach of explicit formulation. It has been established that the relationships between items of tacit knowledge do not depend on logically explicable rules or conventions but upon the recognition of similarity relationships prior to the explicit formulation of a rule defining in what the similarity consists.[60] This feature of schemata may be understood as due to the fact that, as vehicles for classifying and storing knowledge of the world, they constitute an extension of the mechanism used by the body for the continual monitoring of its own position. Nor is the mechanism of memory the only aspect of human cognition firmly rooted in bodily existence. The means of perception likewise consist of physical mechanisms, and the interpretation of the data from the various different senses to form a unified impression of the position of the body in relation to the immediate surroundings is very much a bodily skill.

It is bodily mechanisms which supply the link between the world and the concepts by means of which that world is described. Thus, the presence of the body, as an object among other objects, must be taken for granted in any description of the world.[61]

The existence of the body is a presupposition for experience rather than an inference from it. So, too, is the independently existing physical world in which the body locates itself and from which it receives perceptual data. The activity which Kant describes as "synthesis" is not, in origin, a conceptual but a bodily skill. It is at the level of bodily mechanisms that the application of a schema converts the judgement, "This feels heavy," to "This is heavy," thereby conferring "objectivity" upon the object of perception by designating it an independently existing thing.[62] Thus, the existence of oneself as a subject and of a real world independent of one's perception of it are both presupposed in the fact of experience.[63]

A further essential feature of the background of convention necessary before it is possible to describe the world is the nature of language as a means of *communication*.[64] The background to the naming of an object is a shared activity. A distinction is thus to be made between speech, which is an action with a specific purpose, and language, whose structure is a reflection of the variety of human purposes expressed in speech.[65] Examples may be given of the way in which the structure of language reflects the activity of speech. One is predication, based on the structure of topic and comment which is an underlying feature of attention. Another is case-grammar, reflecting such features of action as the agent, the object of the action, recipient, location, possession and so on. Jerome Bruner has suggested that these features of non-linguistic convention provide the key to the task of language learning. Young children first construct a given situation for themselves pre-linguistically and then learn to symbolise it by means of language, first in non-standard forms and later in grammatically correct sentences.[66] In this way, they gain

access to a system of communication whose formal rules defy explicit analysis. This is because the rules are pre-linguistic, irreducible to exhaustive description, consisting of the complex interplay between human beings. The presence of other human beings as rational agents with purposes similar to our own is thus a further element of the universal human situation.[67]

Three important elements have been isolated by inference from the preconditions of shared knowledge. These are the reality of the self, the reality of other selves and the reality of an independent shared physical world. Together, they form the fixed points against the background of which the construction of any given situation takes place. Following Stuart Hampshire, they may be called "necessities of discourse", features of the human situation without which language itself is impossible.[68] It is, by implication, impossible to demonstrate any one of these features of human existence by means of inference from experience. Attempts to do so may usually be found to take one or both of the other two for granted.[69] But behind these necessities of discourse lies the fact of the bodily basis of experience. Earlier, it was suggested that such common and seemingly inescapable features of cognition as, "Every event has a cause," may reflect the fact that knowledge arises through the medium of the body.[70] Here, it may further be suggested that knowledge of ourselves, of the independent world of objects and of other selves is mediated through the body.

## 6. "I"

The argument of the previous section took as its starting point the "problem" of communication. That communication can be posed as a problem is an outcome of the subject-object framework of the thesis as a whole. Within this scheme it is the possibility of the knowledge of objects and the communication of such knowledge that appear problematical. The presence of the knowing subject, by contrast, is axiomatic. However, whenever the knowing subject has become the subject of enquiry, it has been necessary to draw attention to its peculiar logical and metaphysical status.[71] The problems associated with the use of the concept of the subject must now be examined.

Given the broadly Kantian framework of the thesis as a whole the appropriate starting point of this examination is the transcendental ego of Kant's *Critique*. Kant maintains that it is impossible for the subject to become an object of knowledge. What can be known about it can be known only indirectly, by inference from its effects. From the activity of synthesis, in which unity is imposed on the sensible manifold, Kant argued that we are entitled to assume the existence of a continuing, single self, or "I think".[72] Moving on from Kant to the evaluative response to the social self, which emerges from the study of social interaction, the presence is suggested of an agent with goals and purposes, in particular, the maintenance of self-esteem and the pursuit of social acceptance.[73] There is, it is argued, an awareness of the underlying subject which is of quite a different kind from the knowledge of objects of experience. Such an awareness, writes H.D.Lewis, is "immediate". Awareness of oneself as subject occurs *in* the experience of other objects, in the knowledge that this experience is *my* experience.

Reference to "I", writes A.J.Ayer is different from reference to any particular hypothetical description. But, "It is a difference which defies description." "What" I am is the subject of a description of personal history, but every detail of such a personal history *might* have been different without affecting the "Who" whose history it is. Reference to "I" is simply demonstrative, an identification of the subject of a particular history.[74]

Despite the logical difficulties associated with it, the presence of the active subject is an indispensable feature of the argument presented in the thesis. In Kantian theory, the existence of the transcendental ego is an *analytical consequence* of the Transcendental Deduction, which philosophically underpins the whole approach.[75] The addition of the social context as a new dimension to the knowing process introduces the idea of continuous interaction between the subject and the self-schema as a basic feature of the dynamic of personality formation. The importance attached to the acceptability of the image of self presented in social interaction is a reflection of the human quest for secure identity which, the evidence presented in the fourth chapter suggests, provides the dynamic for the learning process. This feature of the human situation is further illuminated by the reasons advanced in the first chapter for regarding the basic nature of human beings as an unknown factor, the quest for which lies at the heart of the theoretical systems of both philosophy and the social sciences. Finally, a theological perspective is introduced in the examination of the significance of the phrase "the image of God" as the biblical designation of human nature. It is precisely the consciousness of oneself as a free and active subject which, it is argued, constitutes an essential part of the image of God in

men and women. The image of God, otherwise the essential nature of the subject, remains unknown until revealed in Jesus Christ.[76]

Precisely because of the centrality of this account of the subject to the thesis as a whole, it is important to consider the objections which might be made to it. The argument based on Humean empiricism, to the effect that the idea of the subject as an independent existent is a reification of what is, in fact, only an element in the process of perception, has been examined in earlier chapters.[77] The conclusion reached was that this argument depends upon the characterisation of perception as an essentially passive process. It was rejected on the grounds of the considerable body of evidence which seems to indicate the presence of an active subject. Another, and possibly stronger, counter-argument remains to be faced, whose essential feature is an objection to the whole subject-object framework within which the thesis has been constructed. This subject-object framework gives rise to a duality of inner reality and outer reality, of personal psychological and shared physical worlds. Within this framework, the autonomous subject is said to be the source of independent purpose which is expressed in communication and in action.

The counter-position turns this basic framework more or less on its head. Rather than actions resulting from the presence of autonomous subjects, it is action which *gives rise to* subjects. Language, the mediator of a shared reality, enshrines a system of concepts, within which the individual is enabled to differentiate his own point of view. Self-knowledge is the creation not of the inner subject but of the shared environment. Within this alternative paradigm, the difficulties inherent in the concept of the subject are

allowed full weight. The subject is a logical oddity, a mysterious, non-substantial entity, an occult existent impossible to locate.

Much of Wittgenstein's later philosophy was devoted to liberation from the metaphysical illusion he believed to be enshrined in the subject-object framework, to exposing the bewitching effect of the inside-out way of thinking inherited by Western philosophy from Descartes and Kant. Instead of the existence of the knowing subject, it is "life" which is taken for granted and "forms of life" which constitute the basic, the given.[78] Forms of life are not to be interpreted as social or cultural contexts, but as basic human interactions, such as conveying anger or pity. Such interaction, Wittgenstein appeared to believe, constituted a level of communication at which human beings are transparent to one another. The ability to feign anger, pity or some other emotion is parasitic upon this basic level at which the personal experience of the emotion and its expression in bodily and facial gestures are inseparable.

This apparent equation of emotion with its expression has led many to label Wittgenstein as a behaviourist. This reaction is even less surprising when it is realised that many of the essential features of his theory were anticipated by the work of George Herbert Mead, who termed his own position "social behaviourism".[79] Mead insisted that the private experience of meaning is an abstraction from the social, which is the primary level of meaning. Language, he argued, is the means of the transformation of the biological organism to the minded organism or self. Social interaction is a conversation of gestures, each gesture having as its function the determination of the next action or gesture. Thus, the *meaning* of any given gesture is simply the action to which it gives rise. Mind emerges only when the individual becomes conscious of the meaning of his

own gesture by taking the role of the other. In this way, the individual becomes conscious of himself as a source of meaning.

This environmentally orientated theory of meaning is echoed in the work of social scientists in various fields, notably that of James and Eleanor Gibson in the field of perception. It is an important aspect of the work of William James, the psychologist most quoted by Wittgenstein, whose theory of the self was mentioned in an earlier chapter.[80] In relation to the subject, its main feature is the emergence of the subject from social interaction rather than *vice versa*. "I" becomes a point of view and "consciousness" simply the appearing of the world. The meaning of one's actions to oneself (the foundation of the Weberian approach to the study of social interaction) emerges from rather than forming the basis for their meaning to others. In this perspective, the reality of others ceases to pose a problem for philosophy; instead the presence of the other is axiomatic, in much the same way as the reality of the subject in the subject-object framework. What we have called in the previous section "necessities of discourse" cease to be "presuppositions" of the subject and are to be seen as abstractions from the forms of life, translations of the conditions of social interaction into categories of mental meaning. But, "Nothing is more wrong-headed," Wittgenstein insisted, "than calling meaning a mental activity."[81]

It is significant, however, that the "I-me" relationship forms a central feature of Mead's theory. Although it might be argued that as a behaviourist Mead failed to break free from the dominance of Cartesian thinking, it might equally be asserted that the idea of the emergence of the subject from the experience of social interaction fails to do

justice to the evidence for the extent of the role of the subject in perception and the formation of the self. Whilst admitting the weaknesses of the concept, it still seems possible, even under the alternative "outside-in" framework we have been exploring, to retain the idea of the independent subject, first as at least a grammatical feature of experience, then as designating a unique point of view, and from these concessions to advance to the idea of a centre of action, of the possibility of freedom of purpose and decision within the constraints of the shared environment.

Even within the strictest Wittgensteinian framework, there exists the requirement of a *capacity to relate*. "To understand language as a form, or rather as a multiplicity of forms, of expressive activity, as Wittgenstein encourages us to do, is to rehabilitate the self as a responsive agent in vital connection with others of the same kind."[82] The lack of a capacity to relate, or a capacity to relate only in ways so totally different from those we know as to be absolutely unintelligible, would set the individuals concerned outside the human community. The idea of the capacity to relate as the basic meaning of the "I" is precisely what we have seen to be involved in the "image of God".[83] The bodily nature of human beings and the social context in which human life is carried on were both seen to be integrally related to the divine image. Thus, despite the questions raised against the concept of the subject by the existence of an alternative paradigm for the understanding of the self, it seems possible to retain the idea of the individual "I" as a responsive agent.

The rehabilitation of the responsive agent takes us once again into the realm of human freedom and beyond exhaustive categorisation. In theological terms, the situation is expressed by maintaining the ultimate mystery of persons. The nature of the subject, or

"who 'I' am" is a spiritual reality, something to be known only in relation to God. The image of God in men and women, expressed in relatedness and capacity for relationship, is intrinsically and significantly related to the possession of spirit, which is the essential characteristic of human beings. The possession of spirit is expressed in a relatedness to God of all men and women, each of whom thereby participates in a universal general revelation, and a capacity for relationship to God, the possibility of which is mediated by Jesus Christ.

Probably the most significant attempt to construct a theological system which takes account of the insights of Kantian philosophy is that of Friedrich Schleiermacher. The outcome of Kant's thought appeared to be that talk of God was to be understood either as idle metaphysical speculation or as a reflection of one of the regulative principles of either pure or practical reason.[84] What Schleiermacher attempted to do was to make room for the awareness of God as an integral feature of human life. As he pointed out in the *Brief Outline*, one of the tasks of the theologian is to justify the place of the Church from the point of view of human experience.

> Unless religious communities are to be regarded as mere aberrations, it must be possible to show that the existence of such associations is a necessary element for the development of the human spirit.[85]

The way in which Schleiermacher proposed to make room for a transcendent possibility in human life was by drawing upon contemporary human studies in order to suggest an expansion of the transcendental ego to include the realm of "Feeling" or "immediate self-consciousness".[86] The "immediacy" of self-consciousness characteristic of the realm of

Feeling may be compared with the "immediacy" of the "knowledge" of oneself as subject in the course of either knowing or acting. Thus, Schleiermacher points out, joy or sorrow are immediate, as states of feeling directed wholly outward, in contrast to self-approval or self-reproach, in which the consciousness of an objective "self" is present. Feeling, he argued, supplies the connection between Knowing and Doing. The same circumstances may give rise to a difference in action between individuals, depending on their state of immediate self-consciousness. His analysis of the relation between the three is reminiscent of the way in which situations are interpreted and translated into action by means of attitudes.[87]

Piety, Schleiermacher went on to explain, is a particular modification of immediate self-consciousness.[88] The consciousness of being in relation to God is the common element in piety which distinguishes it from all other states of Feeling, and it is an element of immediate self-consciousness. The "awareness" of God available to human beings is thus of the same kind as the immediate awareness of oneself as subject. As a further stage in the argument, a new factor is introduced in order to explain the particular content and character of piety. This is the relationship of immediate self-consciousness to the social context in which Knowing and Doing take place, characterised by degrees of activity and receptivity, freedom and dependence. The development of receptivity is a normal part of consciousness. All existence, Schleiermacher writes, is existence "along with an Other". In the pursuit of piety, it is God who is the Other, whose existence "along with" us helps to form our understanding of and response to experience. In ordinary receptivity, there are degrees of freedom and dependence. In all relationships, even those of a child with his father, there is some degree of freedom. But in our relationship with

God, says Schleiermacher, there is no degree of freedom. Thus, the consciousness of being in relationship with God will be a consciousness of "absolute dependence". This is the state of immediate self-consciousness which constitutes the highest state of piety.

The evidence Schleiermacher had to draw upon in support of his characterisation of piety as the feeling of absolute dependence would have included his own experience of piety and religious community. But in the context of his argument the value of this experience is limited. Observation of immediate self-consciousness itself is impossible, since it is part of the realm of the transcendental subject. All that is possible is the interpretation of what are taken to be its effects. It is the argument from the presence of degrees of freedom and dependence in relationships with other men and women which is most important. But this argument is by no means beyond dispute. What Schleiermacher has done is to run together the two types of relationship with God referred to earlier, the ontological relationship, in which men and women as creatures are entirely dependent, and the relationship involved in the fall and redemption, in which, we have concluded, a degree of freedom is possible by God's deliberate gift.[89]

The idea that the state of Feeling characteristic of Christian experience is one of absolute dependence is to be rejected. There remains, however, a close comparison between the way in which Schleiermacher maintains that God is to be known, in immediate self-consciousness, and the position advanced here with respect to the relation between the Holy Spirit and the human spirit. In particular, it has been suggested that what takes place in revelation is the communication to the believer of the "identity" of Christ by means of the Holy Spirit. The particular level of human personality at which this communication takes place is that which Schleiermacher termed immediate self-

consciousness. The content of the revelation, however, is not absolute dependence but the character of Christ. The presence of Christ in immediate self-consciousness or identity is answered by the knowledge of the incarnate Christ available from the biblical record. What took place in the incarnation was an accommodation of God to the conditions of human knowledge in which, in the Person of Jesus Christ, he established a relationship with human beings involving degrees of freedom and dependence. While the identity offered to the Christian might be said to include the supremely potent "God-consciousness" of Christ, this is to be understood not as historically mediated by the Christian community but as a direct gift of the Holy Spirit.

In describing the relationship between the Holy Spirit and the spirit of the believer, no attempt has been made to advance beyond the reticence of Scripture itself or the limits of the philosophical framework within which the theory as a whole moves. It has been suggested that the work of the Spirit is both to enlighten and to enable the believer, to provide a new centre for the evaluation of self and others and a new centre of agency. It has been argued that the presence of the indwelling Holy Spirit constitutes no limitation of the agency of the believer but rather an enlargement of her freedom. It has been explained that the progressive modification of attitude, value and self image which ought to be seen as the results of Christian learning come about only as a result of the engagement of the Christian with the world on the basis of the new identity available in Christ, and that the choice of such engagement remains with the believer herself. The capacity of God to effect this kind of change in the life of a human being by means of the Holy Spirit and the manner of the relationship remains a mystery. Revelation takes place, it has been argued, where the Holy Spirit meets, touches or, in Moule's words "impinges"

on the human spirit.[90] But the argument that this is what takes place in revelation does not rest on the direct examination of the process. Its basis is the whole theoretical framework advanced here, within which specific effects of the Spirit's work in individual Christians may be interpreted. This framework, Kantian, interactive, and involving the evaluation of persons as autonomous agents, is one in which the personal subject or transcendental ego has a logically indispensable place.

## 7. The Purpose of God in Creation

Throughout the thesis, the idea of the "image of man" or doctrine of humanity has played a central role. Such images or doctrines may be, and frequently are, explicitly formulated. For example, researchers in the Freudian tradition, or in that related to behaviourism often referred to as "learning theory", work to an explicit and definite estimate of the essential nature of men and women.[91] In other cases, the dominating "image of man" may be covert and unspecified. Nevertheless, even a tacit and unacknowledged image is likely to play an important guiding role in scientific research. It is the researcher's tacitly held theory of human nature by which attention is directed to potentially significant features of the evidence and which arbitrates between alternative lines of further investigation. The theory supplies those values which lie at the root of what Polanyi calls personal knowledge and are expressed in the quest for significant new insight into the human condition.[92]

There are thus two ways in which revelation may play a role in the social sciences, corresponding to the two types of "image of man", the explicit and the tacit.

Certain aspects of the content of revelation, expressed in a theological doctrine of man, might consciously be used as a "research programme" by a theologically orientated social scientist. On the other hand, any person whose upbringing and education have taken place within a tradition which has been formed, partly or wholly, by Christian revelation will inherit a tacit "image of man" reflecting, to some extent at least, a Christian doctrine of mankind. Such a view may then colour his response to the task of research.[93] The quotation from Brunner given on page 31 above is intended by the author as a description of the consciousness of the "man in the street" of his own day. But the accuracy of Brunner's portrayal is dependent on the degree of influence to be ascribed to Christian doctrine in the formation of the culture he describes. The modern-day grandchildren of those Brunner intended to describe might be found to be very different in their tacit assumptions about the conditions and purpose of human life, even though the presuppositions of tacit knowledge require the recognition of the transcendent dimension of human existence in some form.

Despite its centrality to the understanding of human existence, the doctrine of human being is also extremely problematical. Two reasons have been suggested for this, one deriving from the conditions of creation, the other from the "fallen" condition of humanity. Partly, the uncertainty is due to the nature of men and women as autonomous agents capable of development and self-definition. Partly, it is a result of sin, classically understood as estrangement from God. Just as, on the individual level, the "I" is the creator of a "self-model", at the level of culture and scientific paradigm, humanity is its own evaluator. The knowledge of one's own true nature is something which can only be reflected from the consciousness of another. Lacking an authentic knowledge of God,

men and women lack also a definitive awareness of their own origin, destiny and value. It is not the "image of God" which is lost at the "fall", but the knowledge of the original of that image and, with it, the ability to interpret the image both in theory and practice.[94]

Despite the possibility, inherent in revelation, of a definitive appreciation of human nature along with true knowledge of God, the doctrine of humanity is equally problematical for the theologian. The reason for this is to be found in the conditions of the reception of revelation.[95] Revelation is understood only against the background and with the aid of prior understanding. A full appreciation of all that is given in revelation concerning the nature of mankind is achieved only as a result of a process of assimilation and accommodation, in which the categories of a prior understanding are slowly and perhaps painfully altered. If these categories are allowed to remain immune from such a process of revision, the process of formation of a doctrine of mankind fully reflecting the truth given in revelation will remain incomplete.

Reference has been made earlier to the suggestions made by David Kelsey as to the course of fruitful future development in the theology of human being.[96] First, he suggests the need for the recovery of a "full-blown" doctrine of creation. This will be a doctrine in which two kinds of relationship are recognised between God and mankind. One is an ontological relationship, in which men and women are seen to be dependent upon God, who provides and upholds the means of life. The other is a relationship constituted by knowledge of God. While the second is subject to variation through sin and redemption, the other remains constant and unbroken and forms the background for any appraisal of the relationship of God to human life. Second, Kelsey suggests the need

for a recovery of the vision of men and women as agents - actors rather than acted upon by circumstances outside their control. This, he believes, might be achieved as a result of liberation theology with its human scale and central concept of "praxis". Or, it might result from the revival of a conceptual scheme in which agency plays a central role.

The most difficult problem to arise from this programme is that of reconciling the autonomy involved in human agency with the radical dependence upon God required by the doctrine of creation. The idea of human agency itself seems to be threatened by observation of developments in the contemporary world. On the one hand, it is difficult to reconcile the stress on the autonomy of the human subject with those approaches which emphasise the determination of human behaviour by factors outside conscious control, whether they be social or psychological. Equally difficult is the maintenance of a vision of human autonomy, implicit in the idea of self-constitution, with the degrading poverty of such a large proportion of the world's population, the result of which is that material survival becomes the main goal of existence.[97]

The reconciliation of human agency with the dependence required of a creature is achieved by the separation of the two kinds of relationships, the one involving autonomy as an element of the divine constitution of mankind in creation, the other involving continuing dependence. The belief thus sustained in men and women as agents first and foremost acts as a check to threats from the various kinds of reductionism. With its emphasis on the hermeneutical nature of cognition, the cognitive orientation integrates a wider set of determinants of human behaviour than those provided by the determinisms of sociology and psychoanalysis. In this view, behaviour is a response to an interpretation of the situation in which factors are weighted according to a person's predispositions

based on past experience. Such a view undergirds the possibilities of conscientisation and praxis through which, by reinterpretation of their situation, individuals are enabled to take control of their circumstances and become makers of their own environments.

Two further questions arise from the development of the view set out in this thesis, the key to whose resolution may lie in the recovery of a doctrine of creation as the governing context for the view of human nature on which the interpretation of the reception of revelation depends. The first concerns the relationship which has been postulated between the natural mechanisms of learning and the supernatural operation of the Holy Spirit. The position which has been maintained is that revelation is received by means of the natural processes of learning and the question is whether the "naturalism" of this position is undermined by the involvement of the Holy Spirit. The second is the related question of interventionism. The concern is whether the supposed action of God by means of the Holy Spirit, arresting and redirecting the learning process, constitutes an intervention in the course of human life for which no theological basis of understanding exists.

The construction of the thesis has taken place with the first of these questions constantly in mind. Its purpose is precisely to demonstrate the plausibility of a relationship of this kind between the natural and the supernatural. If the reality of revelation is to be maintained then some kind of relationship must be postulated between nature and grace. The position advanced here is that this relationship is established by means of the contact between the Holy Spirit and the human spirit.[98] The possibility of such contact without disrupting the naturalism inherent in the description of the learning processes involved in the reception of revelation depends on the kind of doctrine of

creation outlined above. One of the most important outcomes of the doctrine of creation is the intrinsicality to human nature of a relatedness to God.[99] Men and women can be said to exist in a relatedness to God characterised not simply by dependence but also by free personal response, even where that response consists of hostility or estrangement.[100] It is within the parameters of this relatedness, distinctive to human beings, that the work of the Holy Spirit in revelation takes place. Examples have been given on pages 150-151 above to show how the Holy Spirit is to be understood as acting without diminishing the essential autonomy of the human agents through whom God's purpose is achieved. The same is true, it has been suggested, of the process of inspiration. Finally, the effect of the work of the Spirit in the believer is to uphold and enlarge the freedom which is his in the divine purpose.[101]

The second of these two related questions has already been partly answered in the discussion of the first. An estimate of the propriety of any particular action within the cosmos ascribed to God depends on a doctrine of creation. There is an enormous difference between a view of the universe as contingent and dependent for its operation on the continual direction of a divine Creator and one in which nature is governed only by its own immanent lawfulness.[102] From the perspective of the latter view, the actions of God in redemption and revelation are alien intrusions, redirecting the course of a self-sufficient system. From the point of view of a doctrine of creation, however, the position may be advanced that the universe exists for a particular purpose and, further, that the lawfulness displayed by the universe is a reflection of and means to the achievement of that purpose. Against this background, the plausibility of divine "intervention" may be

maintained if it can be shown to uphold that lawfulness and achieve that purpose. The whole aim of this thesis has been to show that the mode of divine revelation which has been proposed is one which maintains the lawfulness of the created universe, rightly interpreted by means of a doctrine of human nature in which men and women are constituted by God as agents. As a supplement to this position, it may further be proposed that such a revelation is an element in the divine purpose for mankind. It is suggested that this consists of the re-establishment of the sovereignty of men and women over creation and of the possibility of a free and loving relationship with God and with one another.[103] This, it is maintained, is the purpose of the incarnation of Jesus Christ and the gift of the Holy Spirit, a movement from God towards mankind in which revelation is an integral element.

## Notes

1. "Human Being", *Christian Theology,* ed.P.Hodgson and R.King. London: SPCK, 1982, p.165-166.

2. *Brief Outline on the Study of Theology*. Atlanta: John Knox Press, 1966, §67, p.39.

3. U.Neisser, *Cognition and Reality*. San Francisco: W.H.Freeman and Co., 1976; J.S.Bruner, "Personality Dynamics and the Process of Perceiving", *Perception: An Approach to Personality,* ed.R.R.Blake and G.V.Ramsey. New York: Ronald Press Co., 1951.

4. M.De Mey, *The Cognitive Paradigm*. London: Reidel, 1982, p.4.

5. Interaction is not to be equated with the cognitive orientation. First, because the cognitive orientation is much broader in scope than a theory of perception, embracing the philosophy of science and offering an approach to the sociology of knowledge among other applications. Secondly, because interaction is only one possible theory to account for the hermeneutical nature of perception, which is integral to the cognitive orientation. De Mey, for example, attempts a different model. Third, interaction has been proposed, by Bruner, Neisser and Bigge, for example, without reference to a broader cognitive orientation. The connection between them, however, is an important element in the overall epistemology proposed here.

6. See, for example, E.Goffman, *Frame Analysis*. Harmondsworth: Penguin, 1974.

7. Bruner's original paper appeared in a volume entitled *Perception: An Approach to Personality*. It might equally well have been entitled "Personality: An Approach to Perception".

8. Pages 92-93 above and references to Odom in bibliography.

9. This position can be illustrated by the comparison of Wittgenstein's two philosophies. Wittgenstein himself appears to have regarded his earlier formulation as capable in principle of empirical reference. The supposition that language pictures reality by means of simple logical forms ought to be capable of confirmation by the discovery of one or more of these forms. ("A Note on Logical Form", *Proceedings of the Aristotelian Society Spplementary Volume 9*, 1929, p.162-171.) It was, perhaps, the disappointment of this hope and consequently the apparent failure of this criterion which suggested the weakness of the earlier position. Certainly, the insistence that philosophy should be empirically grounded is a feature of Wittgenstein's later work, with its constant use of examples. Moreover, the philosophical position, "The meaning of a word is its use in the language," serves as a paradigm for psychological research and has been used as such by both Bruner and Wertsch. (J.Bruner, "The Ontogenesis of Speech Acts", *Journal of Child Language 2*, 1975, p.1-19; J.V.Wertsch, "From Social Interaction to Higher Psychological Processes: A Clarification and Application of Vygotsky's Theory", *Human Developmant 22*, 1979, p.1-22.)

10. I.Kant, *Critique of Pure Reason*, tr.Norman Kemp Smith. London: Macmillan, 1929, B145-146, p.161; see also B149, p.163-164 and B29, p.61.

11. P.F.Strawson, *The Bounds of Sense: An Essay of Kant's* Critique of Pure Reason. London: Methuen, 1966, p.5f.

12. Above, p.36. Sir Karl Popper, *The Logic of Scientific Discovery*. London: Hutchinson, 1959, p.31.

13. Above, p.46,68.

14. S.Toulmin, "The Concept of 'Stages' in Psychological Development", *Cognitive Development and Epistemology*, ed.T.Mischel. New York: Academic Press, 1971.

15. S.Korner, *Kant*. Harmondsworth: Penguin, 1955, p.18f.

16. L.Wittgenstein, *Philosophical Investigations*. Oxford: Basil Blackwell, 2nd.ed.1958, I.1.

17. S.Toulmin, *Knowing and Acting: An Invitation to Philosophy*. London: Macmillan, 1976, p.211.

18. See further below, p.238f.

19. Korner, *op.cit*., p.56-57. See also D.W.Hamlyn, *Perception Learning and the Self: Essays in the Philosophy of Psychology*. London: Routledge and Kegan Paul, 1983, p.52f.

20. Above, p.53-56.

21. Z.W.Pylyshyn, "Computation and Cognition: Issues in the Foundation of Cognitive Science", *Behavioural and Brain Sciences 3*, 1980, p.111-169, p.123f.

22. S.Hampshire, *Thought and Action*. London: Chatto and Windus, 1959, p.13f.

23. Below, p.246-249.

24. According to Hume, both imagination and memory mimic or copy perception. Imagination may mix, compound, separate or divide ideas, though not invent new ones.

Imagination by itself, however, is not sufficient to support belief. This requires a "particular feeling or sentiment", a more steady and intense conception than that present in imagination. *An Enquiry Concerning Human Understanding*. Oxford University Press, 2nd.ed., 1962, p.17, 47-49.

25. Kant, *Pure Reason*, A78, B103, p.112.

26. S.T.Coleridge, *Biographia Literaria*. London: Dent and Dutton, 1975, esp. chapters 10 and 13.

27. Although these points are made by Polanyi frequently throughout his work, the summary that follows is based on "The Creative Imagination", *Chemical and Engineering News 44*, 1966, p.85-93.

28. *op.cit*., p.89.

29. D.W.Hardy, "Christian Affirmation and the Structure of Personal Life", *Belief in Science and in the Christian Life: The Relevance of Michael Polanyi's Thought for Christian Faith and Life*, ed.T.F.Torrance. Edinburgh: Handsel Press, 1980, p.74-75.

30. N.R.Hanson, "Is there a Logic of Scientific Discovery?", *Current Issues in the Philosophy of Science*, ed.H.Feigl and G.Maxwell. New York: Holt, Rinehart and Winston, 1961.

31. See above, p.80-83.

32. Above, p.84-89.

33. *Pure Reason*, A138, B177, p.181.

34. However, see D.E.Rumelhart and A.Ortony, "The Representation of Knowledge in Memory", *Schooling and the Acquisition of Knowledge*, ed.R.C.Anderson, R.J.Spiro and W.E.Montague. Hillsdale, NJ: Lawrence Erlbaum, 1977, p.100.

35. *Pure Reason*, A141, B180, p.182-183.

36. See above, p.82-83,89-90.

37. *Pure Reason*, A141, B181-182, p.183.

38. Above, p.24f.,145.

39. Above, p.91-105.

40. F.C.Bartlett, *Remembering*. Cambridge University Press, 1932, p.213.

41. Above, p.95-97 and references.

42. D.Barber and P.J.Legge, *Perception and Information*. London: Methuen, 1976, p.82-83.

43. See, for example, U.Neisser, *Cognitive Psychology*. Englewood Cliffs, NJ: Prentice-Hall, 1967, p.292-296; E.Tulving, *Elements of Episodic Memory*. Oxford University Press, 1983, p.132-134.

44. Above, p.63-67.

45. Below, p.261f.

46. *Pure Reason*, A271, B327, P.283.

47. Above, p.46-47. The phrase "controlled hallucination" is used by de Mey in his discussion of selective attention. *Cognitive Paradigm*, chapter 10.

48. Korner, *op.cit*., p.41-42.

49. *Pure Reason*, Bxvi, p.22.

50. Above, p.236-237.

51. The plausibility of transcendental idealism remains a subject of dispute. Strawson, for example, insists that a "hard-line" interpretation of the *Critique* must conclude that the world we know is a creation of the mind. Korner objects that, "At the end of the Transcendental Analytic even the most insensitive and self-willed reader must, it would seem to me, feel convinced that the thing in itself is an important part of the Kantian philosophy." *Bounds of Sense*, p.21-22; *Kant*, p.91.

52. Above, p.20-21; M.Masterman, "The Nature of a Paradigm". *Criticism and the Growth of Knowledge*, ed.I.Lakatos and A.Musgrave. Cambridge University Press, 1970, p.76-85.

53. I.Hacking, *Scientific Revolutions*. Oxford University Press 1981, p.142.

54. I.Barbour, *Myths, Models and Paradigms*. London: SCM, 1974, p.11, 37-38, 45-48.

55. See above, p.26,113-114. Also Goffman, *Frame Analysis*.

56. Above,p.127-128.

57. Wittgenstein, *Investigations*, II.xi, p.226; P.Winch, *The Idea of a Social Science and its Relation to Philosophy*. London: Routledge and Kegan Paul, p.3-39.

58. The concrete form of this question appears in the sphere of anthropology, where the question is how it is possible for men and women from different cultures to understand one another. See, in particular S.Lukes, "Some Problems about Rationality" and

M.Hollis, "The Limits of Irrationality". *Rationality*, ed.B.Wilson. Oxford: Basil Blackwell, 1960, p.194-213, 214-220; both originally published in *Archives Europeenes de Sociologie VII*, 1967, p.247-264,265-271.

59. Above, p.65-66.

60. Above, p.88-89.

61. Hampshire, *op.cit*., p.47f.

62. *Pure Reason*, B142, p.159.

63. *ibid*, B157-159, p.168-169.

64. Wittgenstein, *op.cit*., I.1-2.

65. The source for the argument of the following paragraphs and the experimental evidence supporting it is to be found in J.S.Bruner, "The Ontogenesis of Speech Acts", *Journal of Child Language 2*,1975, p.1-19. The quotation is from p.3.

66. See also Vygotsky's theory of the development of word meaning to be found, in particular in *Thought and Language*. M.I.T.Press, 1962.

67. See further J.Wisdom, *Other Minds*. Oxford: Basil Blackwell, 2nd.ed.1965. Also, O.R.Jones (ed), *The Private Language Argument*. London: Macmillan, 1971.

68. Hampshire, *op.cit*.,p.13-14.

69. For example, the argument of Roger Trigg for the existence of the shared physical world. *Reason and Commitment*. Cambridge University Press, 1973.

70. Above, p.76

71. See above, p.146f.

72. *Pure Reason,* A115-130, B129-169, p.141-175.

73. Above, p.146-149.

74. A.J.Ayer, *The Problem of Knowledge*. Harmondsworth: Penguin, 1956, p.184-187; H.D.Lewis, *The Elusive Mind*. London: George Allen and Unwin, 1969, p.235-248.

75. Korner, *op.cit.*, p.67.

76. Above, p.129-133, 26-32, 140-147, 148-153.

77. Above, p.130f.,136,147.

78. Wittgenstein, *loc.cit.* The interpretation of Wittgenstein's philosophy given here is based on Fergus Kerr, *Theology after Wittgenstein*. Oxford: Basil Blackwell, 1986. As Kerr himself points out, interpreters of Wittgenstein have in general been slow to appreciate the full significance of the questions he raised, possibly because they remained "bewitched" by the metaphysical viewpoint he was challenging.

79. Mead, *Mind, Self and Society from the Standpoint of a Social Behaviourist*. The book consists of papers collected, arranged and published posthumously.

80. Above, p.147.

81. *Philosophical Investigations,* I.693.

82. Kerr, *op.cit.*, p.134.

83. Above, p.142f.,152, and note 39, p.166-167.

84. *Pure Reason,* A614f., B643f., p.514f.

85. F.D.E.Schleiermacher, *Brief Outline on the Study of Theology*. Atlanta: John Knox Press, 1966, §24, p.22.

86. Schleiermacher, *The Christian Faith*. Edinburgh: T.& T.Clark, 1928, §3,p.5-12. In the letters to Dr.Lucke, Schleiermacher described himself as a "dilettante" in the field of human studies. Nevertheless, these occupy an important place in the foundation of his theology. Rather than base his theology on a position derived from human studies or interpret human studies from the point of view of a particular theological approach, his method was to attempt a new synthesis by using the insights of the two fields to interpret one another, a method comparable to the one attempted here. (verbal discussion with Prof.S.W.Sykes, 1985)

87. See above, p.102-105.

88. Schleiermacher, *op.cit.*, §4,p.12-18.

89. Kelsey, "Human Being", p.166; see above, p.151 and below, p.261f.

90. C.F.D.Moule, *The Holy Spirit*. Oxford: Mowbrays, 1978, p.7f.

91. See J.Shotter, *Images of Man in Psychological Research*. London: Methuen, 1975; D.Peck and D.Whitlow, *Approaches to Personality Theory*. London: Methuen, 1975.

92. See above, p.235-236.

93. Compare the two ways in which Christian learning may be said to take place within the sphere of revelation, p.210 above.

94. G.S.Hendry, *The Holy Spirit in Christian Theology*. London: SCM, 1957, p.117.

95. See above, p.32-34 and chapter 6, p.184.

96. Kelsey, *op.cit.*, p.165-166.

97. *ibid.*,p.164-165.

98. See above, p.171-172.

99. Kelsey, *op.cit*., p.143.

100. See E.Brunner, *Man in Revolt: A Christian Anthropology*. London: Lutterworth Press, 1939, *passim*.

101. Above, p.209, 199.

102. See Brunner, *op.cit*.,p.542f.

103. See above p.199.