BEYOND ATOMISM AND HOLISM:
THE METAPHYSICS OF PSYCHOLOGY

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The aim of this thesis is to investigate the relationship between models of human nature and psychology. A central claim is that all psychological theories necessarily presuppose a model of human nature and by virtue of this, a broad metaphysical theory.

Following a brief review of some of the multidisciplinary literature concerned with models of human nature it is concluded that certain implications follow from adopting a particular model. For example implications for social science research and the interpretation of behaviour.

A survey of the psychological literature reveals that two models have tended to dominate the debate, an agency model and a deterministic model. The relevance and importance of philosophical debate in psychology is established.

A conceptual framework is developed that permits the construal of metaphysical systems as theories in the same sense that scientific theories are. The question of how to evaluate theories is discussed and a criterion outlined.

It is argued that different metaphysical theories underlie the psychological theories associated with humanistic, behavioural and system theories. These metaphysical theories generate different notions of causality, epistemology and explanation in psychology. Each is critically evaluated and the metaphysical theory underlying systems therapy is found to be the most powerful.

The thesis concludes with a discussion of some of the implications for clinical psychology. It is claimed that a
systems ontology enables psychologists to avoid the pitfalls of eclecticism and promotes a unified and pluralistic conception of clinical practice.
CHAPTER I

INTRODUCTION

What kind of beings are we? Are we simply machines or creators of our own natures? Are we puppets controlled by inexorable forces or craftsmen shaping our own lives?

Life's but a walking shadow, a poor player that struts and frets his hour upon the stage. And then is heard no more. It is a tale told by an idiot, full of sound and fury, signifying nothing.¹

Questions such as these have literally haunted men and women since they acquired the capacity to reflect on themselves and their lives. They are important "metaphysical" questions and matter to us. The "solutions" to the problem of human existence tell us about the logic inherent in the world and our place in it. It teaches us, for example, about the meaning of grief. Issa, a zen master, on the death of his son wrote:

This dewdrop world -
It may be a dewdrop,
And yet - and yet - ²

How we interpret events, the action of others, even our own internal dialogue depends, in part, on the way we see ourselves.

¹Shakespeare, Macbeth (V,v), quoted in Kaufman, From Shakespeare to Existentialism, p. 13.

In this thesis I will examine three answers to the above questions concerning the nature of people. However, I will locate these "solutions" to the problem of human nature within a wider network of ideas and values; the metaphysics of models of human nature. I do not pretend to have produced the "right" answer or even to have handled the complex and difficult issues surrounding this topic in the most appropriate way. The approach I take is experimental, conjectural. Its value will be determined by the insight yielded and whether it is supported by the 'facts'.

Perhaps most people have experienced moments of sheer bewilderment when confronted with the puzzle of human existence:

The greatest mystery is not that we have been flung at random among the profusion of the earth and the galaxy of the stars, but that in this prison we can fashion images of ourselves sufficiently powerful to deny our nothingness.\(^1\)

Plainly the differences between us must be very deep - not just technical or strategic or methodological but philosophical and perhaps moral.\(^2\)

Malraux's words suggest a particular conception or model of human nature; as active beings we seek meaning and purpose at all costs.

Matson touches upon the major theme of this thesis: models of human nature are linked to world views or metaphysical theories and a disagreement over models inevitably reflects these 'deep' differences.

\(^1\) Malraux quoted in Friedman, To Deny our Nothingness, p. 17.

\(^2\) Matson, Without-Within, p. 45.
It follows that there are different ways of conceptualising people, different models of human nature. I will briefly review some of the psychological, philosophical and social science literature that explores this issue.

Eacker (1983) identifies five classic doctrines of human nature, each of which offers a self-consistent interpretation or theory. These range from a relativist view (p. 237) where man/woman is the measure of all things to the models of Idealism and Teleology.

Wilson (1979) argues that there are two predominant competing models of the world and human nature, animistic and objective models. These function as sets of categories or theories which structure human experience and interpretation of the world. For example, each model describes the mind-body relationship in different ways and therefore generates different interpretations of people's actions and behaviour.

Hollis (1977) claims that a review of the philosophical and social science literature indicates that there are two dominant models of human nature, plastic and autonomous models. He argues that there is a connection between science and a model of human nature.

Every social science needs a metaphysics, I contend, in which a model of man and a method of science complement each other.\(^1\)

In his seminal book, *Seven Theories of Human Nature*, Stevenson (1974) examines and discusses the competing images of people found in such diverse disciplines as theology, philosophy, political theory and ethology. He examines the

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\(^{1}\) Hollis, *Models of Man*, p. 3.
competing claims of these theories and links them to differing conceptions of what constitutes solutions to human existence.

Shatter (1975) argues that contemporary man/woman is a mystery to himself/herself. He claims that in psychology there are a number of models of human nature from the mechanistic-behavioural view to agency models.

In his study of images of human nature in literature, Friedman (1978) notes the diversity of such images. He claims that each person is comprised of a variety of images which change and evolve. He argues that such models of human nature play an important role in our attempt to understand ourselves and the human condition.

We cannot deny, therefore, that no matter how monstrous, mishapen, irrational and distorted the images of man presented to us by contemporary literature and art may be, they do mirror significant aspects of the human condition.1

In their theoretical study of social psychology, Harré and Secord (1972) identify two different and contrasting theories or models of human nature in the literature, mechanistic and autonomous man/woman. They claim that such models function to guide and legitimate methodology and psychological research.

Shatter (1980) argues that our images of ourselves are important in guiding individual and social action. He also notes that particular images tend to create the very reality they attempt to picture or represent.

In an extensive study of changing images of human nature, Markley and Harman (1982) trace different models back

1Friedman, To Deny Our Nothingness, p. 21.
to the neolithic, semite and early Greek periods. They define an image of human nature as a set of assumptions about the origin, nature and capacities of people, and their relationship to others and the universe.

Kimble's (1984) research into what he terms the two dominant cultures in psychology, the humanistic and the scientific, suggests that there are two different models of human nature underlying the different rankings of epistemic and non-epistemic values. That is, psychologists belonging to the scientific culture tend to emphasize the lawfulness of behaviour and to recommend analysis at an elemental or "atomic" level. In contrast, "humanistic" psychologists stress the holism of human functioning and the importance of taking into account people's essential freedom. Different models of human nature seem to emerge from the two cultures; a law governed mechanistic being in contrast to a holistic free one.

Capra (1984) in his study into the relationship between cultural change, world views and values, argues that a new model of human nature and world view seems to be emerging. In opposition to the entrenched mechanical view of people this model views them as complex multi-system beings.

In an interesting study on Goffman's work, Schudson (1984) notes the importance of his model of human nature for the actual practice of social science research. Goffman's view of human nature has some affinities with that of Shakespeare quoted earlier: as an anxious, role playing, risk avoiding individual, whose life centres around the manipulation of the presentation of his/her self to others.
In this view, a person is a rather isolated, narcissistic and tragic being.

Commenting on the relationship between feminist politics and contrasting views of human nature, Jagger (1983) argues for the relevance and importance of the topic for political theory. She claims that models of human nature lie at the centre of political philosophy and the life sciences because of the way they link human "goods" to human needs. Jagger identifies different models behind such feminist political positions as liberal, radical, marxist and socialist feminism.

In a similar vein Holmstrom (1984) investigates the marxist view of the nature of women and stresses the significance of the topic for feminist theory and social policy.

This discussion establishes that there are a number of different and conflicting models of human nature currently being presented and debated in the psychological, philosophical and social science literature. What follows from this? Why is it important whether we hold a mechanistic or existential model of human nature? The short, perhaps cryptic answer, is that everything, from social policy to epistemology, follows from a particular model of human functioning.

Markley and Harman (1982) argue that a model of human nature exerts a powerful influence on determining values and social policy. Hollis (1977) and Kekes (1985) claim that questions about human nature run deep and are directly linked to social and moral action.

Questions about human nature are deep, perhaps the deepest in philosophy.
Many fundamental disagreements in
epistemology, moral and political philosophy, in the philosophy of history, and the social sciences, can be traced to conflicting visions of it.¹

Shawer (1975) stipulates that different practical circumstances and social policies result from justifying action by reference to one model rather than another.

But what is the link between social policy and human nature?

Jaggar (1983) develops an argument that clearly links the two. She claims that in order to come to an agreement about what is socially desirable it is first necessary to identify what it is that people need. The kind of things people need are clearly related to the kind of beings they are. That is, to a model of human nature. Different models will lead to an identification of different needs and therefore to different social policies. Jaggar argues that the essential core of any model of human nature is a conception of wants, purposes, needs and abilities. She adds that it is possible to see many of the disputes in the various human sciences as based on conflicting views of human nature.

A second more abstract way a model of human nature is linked to social policy is by way of a principle of the distribution of social benefits and burdens, that is, a principle of social justice (Miller 1976). Whether a principle is grounded in a notion of rights, needs or desert (Feinberg 1973) in part depends on the way in which both a person and his/her relationship to society is conceptualized (O'Neill 1973).

¹Kekes, Human Nature and Moral Theories, p. 231.
A third way centres on the link between culture and social institutions:

From this perspective, no social science can ever truly stand outside or transcend the social practices and institutions that have served to constitute it in the first place.¹

Whatever views of human nature are dominant in a culture are reflected in the social institution of a society and therefore are linked to social action and policy.

Woolfolk and Richardson (1984) claim that there is a direct connection between behaviour therapy's stress on the control (rational) of behaviour and the ideology of modernity, with its emphasis on rationality and control.

Behavior therapy, in its theory and clinical practice, exemplifies both modern modes of thinking and the values of the modern technological society.²

Stevenson (1984) makes the point that different conceptions of human nature are often embodied in different social systems and lifestyles. Thus (for example) given the model of human nature that underlies behaviour therapy and the pervasive relation between a culture and social institutions, it is clear that a change in one affects the other. A model of human nature is linked to social policy by way of its cultural link with social institutions.

A second important consequence of adopting a particular model is that once formulated it can actually shape our perception of ourselves (Shotter 1980).


Howard (1985) notes the power of images of human nature to "feedback" to people a picture of their nature and, he argues, to actually cause them to become more like the person described by the model. A self fulfilling prophecy!

Woolfolk and Richardson (1984) while acknowledging this possibility, place more emphasis on the consequences of adopting an inappropriate model of human nature. They argue that when people uncritically accept a prevailing ideology and "false" model of human nature, this leads to inappropriate social and personal goals and to consequent conflict and suffering.

It is interesting to note the different conceptions of persons implicit in the above discussions. Howard implies that people can be shaped into a particular identity, that human nature is malleable, while Woolfolk and Richardson assume that a conflict occurs because of the gap between inappropriate social and personal goals, and human nature. This implies that there are some goals that will more accurately reflect human nature; it is not malleable.

A third consequence of adopting a particular model concerns the more general issue of values and meaning.

Stevenson (1974) claims that an individual's sense of meaning and purpose in life is conceptually connected to the kind of being he/she believes he/she is. Therefore different views of human nature lead to different conclusions about what people ought to do in order to live a meaningful, moral and purposive life.

A fourth consequence concerns the implications for research in psychology and the related issues of explanation and epistemology.
Koch (1981) states that what models of human nature are accepted influence the choice of methodology and thus the direction of research in psychology. He further argues that there are several models implicit in psychological research that distort human qualities (nature) and therefore results.

Bandura (1978) claims that the model of human nature underlying particular theories in psychology tends to direct research to particular processes or areas. He points out that in addition to the theoretical influence of such models, they also have important social implications.

Danziger (1985) lamented the dominance of a methodological imperative in psychology which underlines the important function of methodology without being aware of its theory ladeness (Hooker 1975b). This point is directly linked to the philosophy of science and theories of epistemology, explanation and methodology and will be discussed in detail later. For now it will suffice to say that there is a theoretical (conceptual) link between the methodology one chooses and one's theory, including a model of human nature.

A fifth and final consequence concerns the interpretation of human action. Wilson (1979) argues that we require a model of human nature in order to make sense of, to interpret, the actions of others. A model functions to structure experience and it would not be possible to interpret or even to perceive the "actions" of others without it. Given the fact that there are different models of human nature, it follows that there are different, possibly common sense ways, of interpreting the actions of others.
A similar point holds for interpreting our own experience. In order to understand what I am feeling etc. and thinking etc. and its meaning or significance, I need to have some idea of the kind of being I am. Because there are a number of different models of human nature, it follows that, in principle, I could interpret or understand my actions and inner life in different ways (Rorty 1980).

However it is important to keep in mind that the converse is not necessarily so. That is, because I interpret myself in various ways it does not follow that there are various models of human nature.
CHAPTER II

MODELS OF HUMAN NATURE IN PSYCHOLOGY

Throughout the history of psychology two general models of human nature stand out, persons as mechanisms and persons as agents. Although different writers have emphasized slightly different aspects of these models and used different terminology, there has been enough overlap to suggest they have been talking about the same models of human nature.

I will now review some of the recent literature in philosophical psychology in order to substantiate the above claim.

Hollis (1977) distinguishes between what he calls an autonomous model and a plastic model of human nature. He claims that these two contrasting models have consistently emerged in the literature on the nature of people.

Hollis describes autonomous man/woman as an active and creative agent with a substantial self. He/she is capable of monitoring his/her own behaviour and explaining his/her own actions by reference to reasons for acting. When actions are explained in this manner enquiry stops, there is nowhere else to go. In a nutshell, "rational action is its own explanation" (p. 21).

On the other hand plastic man/woman is a passive and mechanistic being, whose nature is shaped and controlled by the environment and/or a fixed inner structure. This is a deterministic and naturalistic view of man/woman whose action and behaviour can only be adequately explained by reference
to natural laws. Such a being behaves rather predictably in specified situations and can easily be manipulated because of this predictable and lawful behaviour. The factors that shape or determine actions tend to be external to the agent. Even internal genetic or structural factors are external to the agent in the sense that they act upon him/her.

In his review of the psychological literature dealing with the models of human nature issue, Joynson (1980) claims that two distinct models or theories of human nature can be identified; a mechanistic-Lockean model and a teleological or Leibnitzian model.

In the mechanistic or Lockean tradition a person is viewed as essentially a passive being. He/she only becomes 'active' when prodded into action by external stimuli. Joynson argues that associationism with its notion of complex abilities or functions being built out of mental and sensory elements, suggests a mechanistic model of human nature. The links between these mental "atoms" are thought to be forged by simple mechanical principles such as those of association or habit. Thus the 'agent' is reduced to an aggregate of simple functions or elements and reference to intentions or (the agent's) reasons is not considered to represent an adequate explanation. Such phenomena are themselves explained in terms of the conjunction of simple or atomic elements. Any explanation of human behaviour will, it is argued, be formulated entirely by reference to these processes.

In stark contrast to this mechanistic view of people, the teleological or Leibnitzian model stresses the teleological aspect of human functioning. A person is an active
free agent, who is the source of his/her own actions. These actions are explained by reference to the agent's own reasons and (consciously endorsed) motives. By virtue of possessing the capacity to set goals, make decisions and form intentions, an agent is able to organize and control his/her own life.

Joynson claims that the various schools of modern psychology presuppose different models of human nature and therefore different models of explanation. He concludes that it is important not to ignore or dismiss a model of human nature and the intellectual tradition it embodies, simply because it clashes with the received view in psychology.

Harré and Secord (1972) argue that the philosophical foundation of recent social psychology rests in part on a mechanistic model of human nature. This model stipulates that behaviour should be explained by reference to factors external to the agent.

Psychologists are prone to view a human being as a complicated mechanism whose behavior can be fully explained, in principle, by a combination of the effects of external stimuli and prevailing organismic states. People are viewed as objects which are passively affected by events in their environment.\(^1\)

Harré and Secord argue that an analysis of the concepts of social action and agency suggests the futility of accounting for complex action in mechanistic terms. In order to adequately study human social life, they argue, it is necessary to take into account the "meaning" of an action. This requires reference to social rules and, at least in

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\(^1\) Harré and Secord, *The Explanation of Social Behavior*, p. 30.
part, to the agent's intentions. Therefore, they recommend another model of human nature, autonomous man/woman, ought to be introduced in order to solve the difficulties created by the uncritical acceptance of a mechanistic model. Harré and Secord stress the importance of treating people as agents who act rationally and possess the ability to monitor and control their behaviour. Thus an explanation of social behaviour or action will take the form of appealing (at least in part) to an agent's reasons, not to organism-environmental "laws".

A criticism of Harré and Secord's attempt to undermine social psychology based upon a mechanistic model of human nature is that they simply beg the question. One of their major arguments against the mechanistic view proceeds by undertaking a conceptual analysis of "agency". On the basis of this analysis, they argue that a mechanistic model cannot accommodate an adequate concept of agency and therefore it is an inadequate model of human nature. However by appealing to the analysis of action and thus to the agency model, they beg the question. An advocate of the mechanistic view could argue that conceptual analysis is not the best way to proceed because agency concepts are themselves theory impregnated; by the agency or autonomous model of human nature.

A second point is that by appealing to essentially (analytical) philosophical concerns Harré and Secord inherit its virtues and vices. For example, they drive a wedge between the facts of human behaviour, etc. and the concepts employed to accommodate them. Rather than appealing to a model of human nature (by virtue of being a theory) in an
attempt to explain human behaviour, they appeal to meanings. Thus discussion of theories of human nature collapses into analysis of (the meaning of) concepts. This approach is directly opposed to the naturalistic position I take in this thesis, where models of people are conceptualised as essentially theories.

Shotter (1975) similarly identifies two predominant images of human nature in the psychological literature. A conception of human nature in mechanical terms, operating according to (mechanical) laws. An explanation of mechanistic man's/woman's behaviour appeals to general laws linking external facts and his/her (passive) responses.

However, according to the other popular model of human nature, a person is an active, free and rational being. He/she has the power to act upon the world and change it according to his/her needs and intentions. Autonomous man/woman is an open-ended being who is essentially self-defining; he/she creates his/her own humanity (p. 11, 13).

Shotter puts his cards on the table and rejects what he terms the behaviouristic-mechanistic model of human nature and forwards his own existential view. He stresses the importance of grasping an agent's meanings (intentions, motives, etc.) when attempting to explain action, and believes that a science of psychology should be fundamentally different from natural science. It will seek understanding rather than prediction and control, and will be a science of moral action. Shotter rejects causal explanations of human action because of their deterministic nature and argues that it is inappropriate to conceptualize human action in such terms.
It is clear that Shotter rejects the mechanistic model of human nature and wants to base a science of psychology around an agency view. However he makes the mistake of thinking that seeking the mechanisms underlying behaviour necessarily involves a crude reductionism. This is only the case if such a reduction proceeds within the framework of a simple mechanistic model of human nature. One can legitimately speak of underlying mechanisms without presupposing such a model or the empiricist epistemology and world view associated with it (Bhasker 1975, 1979; Keat & Urry 1975).

Shotter also mistakenly believes that if a person's actions can be explained causally then they cannot be explained in terms of intentions and reasons. And that given the importance of such explanations it must be the case that causal explanations are fundamentally mistaken when applied to human action, and so must determinism.

However recent work in the philosophy of mind and action (Scarrow 1981; Davis 1979) has established that reasons can be causes. Therefore a causal explanation does not necessarily rule out one in terms of reasons. I will spell this out in more detail later.

Shotter has also failed to distinguish between the various forms of determinism (Bunge 1979, 1983; Bhasker 1975). It is only really computational determinism that argues that for every event (or action qua event) there are a prior set of conditions from which it can be unerringly predicted and which made it inevitably occur. Possibly this version of determinism rules out agency explanation. This is because it appeals to factors independent of, or external to, the agent. However other forms of determinism, which simply
point to the lawfulness of events and behaviour do not pose the threat to human freedom that Shotter imagines.

Finally, Shotter mistakenly identifies natural science with an empiricist philosophy of science and neglects the vast literature on alternative conceptions of science which do not presuppose a mechanistic world view or Humean notion of causality (Newton-Smith 1981; Chalmers 1982).

Markley and Harman (1982) argue that a review of the relevant literature indicates that the mechanistic model of human nature has dominated western culture for the last three hundred years. They claim that in psychology both Watson and Skinner adopt a mechanistic view, ostensibly for respectable scientific reasons. That is, as a reaction against the unreliability of introspectionism. However, they argue, both Skinner and Watson neglect the important causal role played by "mentalistic" processes and promote a "black box" conception of the organism, with behaviour being explained by reference to input and output. The mental "atoms" of Lockean association are replaced by the atomism of S-R connections. While such concepts as free will and consciousness are rejected as pre-scientific and irrelevant for the explanation (and control) of behaviour.

Markley and Harman note the recent emergence in professional psychology of a humanistic image of human nature that focuses on the person as agent. The roots of this image date back to Socrates and emphasize, they argue, the uniquely human abilities of reflection and expression.

A problem with Markley and Harman's discussion resides in their lack of argument. They simply state positions, describe limitations without developing any critical awareness
of the important issues within the debate (for example, discussion of what constitutes an explanation). This probably reflects the inter-disciplinary flavour of their book. It is also debatable whether the abilities of expression and reflection are unique to human beings.

Matson (1973) edited an important collection of articles on humanism and behaviourism, which focussed on the conflicts and respective criticisms. He argues that throughout history there have been two radically different conceptions of human nature, a Lockean or determined model, and a Leibnitzian or autonomous model. The former views people as controlled by external forces and as victims of fate, while the latter claims that people are, at least potentially, creative, reflective, autonomous beings who are capable of controlling their own destinies. Matson argues that these two different models of human nature are reflected in the humanistic (autonomous model) and behavioural (determined model) psychological traditions. He argues against the behavioural mechanistic model with its denial of human freedom and autonomy.

Matson does not really develop any detailed arguments against the behavioural or mechanistic models of human nature and seems to rest his case on the intuitive premise that a person is a free and autonomous being. He criticizes behaviourism for its claim that such notions are illusionary, and appeals for support to our experience of our own freedom.

However Matson is simply begging the question and the committed behaviourist could simply shrug his/her shoulders and reply "so much for intuition!" While people may have a sense of their own freedom it does not follow that they are
actually free. They may simply be mistaken concerning the connection between intentions, etc. and actions. Rorty (1980) has clearly shown that there is no (epistemically) privileged self knowledge. People are simply more familiar with their interior life; "raw feels" do not provide a foundation for beliefs.

The growing interest of psychologists in the models debate is evident in the publication of a recent volume edited by Chapman and Jones (1980). The articles are based on the contribution of psychologists and philosophers to a British conference on models of human nature. However with the exception of Joynson (above) and Harré (1980), the contributions, for a number of reasons, are generally disappointing.

Firstly, they do not address themselves to the important conceptual and theoretical issues attached to the topic. For example there is no mention of the "new" philosophy of science (Manicas & Secord 1983) and its relevance and importance for psychology. In fact, the concept of "model" is actually derived from the philosophy of science literature.

Secondly, as vividly outlined by Harré (1980) in his paper, most psychologists focus purely on models representing known or "visible" aspects of human functioning and neglect the use of those attempting to represent or describe generative mechanisms or the nature of particular structures. That is, to picture the underlying or unknown aspects of human functioning.

Thirdly, they conduct their debate totally within the framework (or straitjacket) of an empiricist philosophy of
science. This in itself is rather unforgivable given the recent development of alternative conceptions of science (Boyd 1983; Hooker 1974). However what is particularly galling, is that the contributors fail to adequately acknowledge, or to discuss, empiricism itself. The absence of work utilizing models describing underlying generative mechanisms (Keat & Urry 1975) is also probably related to the empiricist bias displayed.

In summary, a reading of some of the philosophical and psychological literature on the topic of models of human nature indicates the predominance of two conflicting and contrasting models. These are, in Hollis's (1977) terminology, autonomous and plastic models of human nature.

At this point some psychologists might simply concede the above points concerning the consequences of adopting a particular model of human nature but argue that such issues do not matter to psychology, and indeed, should not. They are philosophical, metaphysical, issues that a tough-minded empirical science simply ought to ignore. That is, they may ask, of what relevance are such issues to psychology?

The first thing to note is that such criticism invariably springs from an empiricist epistemology and philosophy of science. The metaphilosophy of empiricism indicates that philosophical debate is (essentially) either conceptual or conventional in nature or it is nonsense (Hooker 1975; Ayer 1974). Thus in a sense, it is empty.

I will discuss some of these issues in detail later but at this point will simply point out that from alternative epistemological and philosophical research programmes,
such problems are meaningful and relevant to psychology and psychologists.

For example Royce (1982) argues that philosophical issues are relevant to psychology. He supports the value of conceptual clarification and theoretical development in psychological research programmes (Lakatos 1970). And in their recent article on the implications of the new philosophy of science for psychology, Manicas and Secord (1983) stress the importance of philosophical work for psychology. They also point out that much of the antipathy of psychologists towards such work is a consequence of their entrenched positivist philosophical framework.

Others, for example Shotter (1975, 1980), Howard (1985), Bolton (1979), Keeney (1982), Harré (1979) and Jahoda (1980) also argue for the importance of such philosophical issues as models of human nature for psychology. However such an appeal to authority is not a powerful defence.

An alternative strategy, to indicate the relevance of such a topic, is to demonstrate that theories in psychology must necessarily refer to persons, and therefore to competing models of human nature. That is, enter the models debate.

One such argument rests upon the important distinction in abnormal psychology between normal and abnormal behaviour or functioning (Davison & Neale, 1978). Both concepts are clearly linked to a particular view of what a person is and therefore to what constitutes normal or abnormal changes within such a person. There are different and contrasting conceptions of human nature and thus there are different notions of what constitutes normal or abnormal behaviour or
functioning. Therefore theories in psychology that refer to, or use the concepts of normal or abnormal, necessarily invoke the models debate. To make a more general point, it does not have to be a reference to persons in a clinical context or in personality theory. Any reference to subjects or persons, I argue, also necessarily invokes the models debate. For example reference to an organism (human) in operant psychology, to a subject in cognitive experiments and so on. Once it is established that persons are being referred to, and that there is more than one currently accepted model or theory of human nature, then it follows the model of human nature debate is introduced, even though it might be ignored or go unrecognised.

A second argument rests upon the point that debate concerning models of human nature is (arguably) theoretical debate. That is, the use of such concepts or theories in psychology represents an attempt to explain something, human behaviour or action, no matter how general such an explanation is, or how much it needs to be supplemented by additional theories and "facts". To refuse to allow the use of such theoretical terms is, by implication, to refuse the use of all theoretical terms in psychology. This runs counter to the now accepted (more accepted!) view that theoretical terms cannot be eliminated in scientific explanation or defined explicitly in terms of observational terms (Feyerabend 1978; Newton-Smith 1981). Therefore, it is as legitimate to use theoretical terms referring to human nature, as it is to use any theoretical terms in psychological explanation. Of course, this argument assumes that terms referring to human nature are theoretical ones and not empty or meaningless.
This assumption linking metaphysical theories to scientific ones is derived from a naturalistic position that will be outlined later in this thesis.

Frequently the objection to the introduction of philosophical discussion in psychology hinges on the belief that science, properly construed, is based on the application of a methodology (Skinner 1953, Mackenzie 1977) which is theory neutral. If science consists in applying a methodology that is theory neutral what, the objection runs, is the point of theoretical or philosophical discussion? Let us get down to the business of doing psychological science.

A third argument designed to demonstrate the relevance of philosophical debate in psychology, attacks this notion of a theory-neutral methodology. Hooker (1975a) argues that often theories are internally related to the methodology that is used to test them. Specifically, the theory under test prescribes the terms in which we are to describe our observations, specifies what measurement devices are used on what data, how the data are to be processed, in what form they are to confront the theory and so on. Similarly Danziger (1985) claims that while it is methodological procedures that produce the observations that count as scientific, they are theory-laden. That is, methods are based on assumptions about the subject matter and their application only "confirms" these assumptions. The method used to test a theory often presupposes the truth of the theory. Indeed once the researcher him/herself is conceived of as an instrument, and given that observation is theory-laden, then it follows that one's methodology is theory impregnated and presupposes the truth of the theory (or whatever epistemic
values one endorses) under test.

It is also obvious that the characterization of the researcher as a research instrument, entails (by way of the argument outlined earlier) the models of human nature debate. Thus the use of methodology presupposes theory, and once this is conceded then the door has been shut on the attempt to deny the importance of philosophical debate in psychology.

In conclusion, I argue that the models of human nature debate, and the philosophical issues arising from it, are both relevant and important for psychology.
CHAPTER III

THE METAPHYSICS OF MODELS

Having established that psychology ought to be concerned with the model of human nature debate, there remains the problem of the appropriate method or way of tackling it. A survey of the relevant literature reveals several different attitudes and strategies.

Stevenson (1974) and Eacker (1983) simply speak about models of human nature as constituting incompatible frameworks. That is, as fundamental or metaphysical frameworks that are not true or false, right or wrong. It is just a question, so to speak, of getting inside them and seeing things as they do. This is clearly a (conventionalist) position (Chalmers 1982). Shaffer (1978), Markley and Harman (1982) and Barclay (1968), while attempting to evaluate competing theories of human nature, seem at a loss regarding the appropriate criteria to do so and resort to talking about the usefulness of a model of human nature or its coherence with human experience and so on. While Shotter (1975) evaluates the mechanistic model from a humanistic viewpoint and thus simply begs the question. Hollis (1977) tends to view theories of human nature as conceptual schemes and uses philosophical argument to evaluate them.

It appears that most writers tend to discuss such models in isolation from any broader metaphysical system. And if they do, they do not regard this system as a theory.

I argue that this is a mistake, but one that is not surprising in view of the dominance of empiricist epistemology
and theory of science until recently. Of course whether one sees metaphysics in such terms is itself a reflection of one's metaphilosophy (Hooker 1975b) and worldview. I favour the adoption of a naturalistic realism and an evolutionary epistemology (Wuketits 1984) which allows metaphysics an important role as theory, in explaining the general nature of the world. That is, constructing a general theoretical framework that incorporates the findings and "facts" of theories from the various domains in science, for example, physics, biology, chemistry, psychology.

I find this failure to consider the relationship between a model of human nature and a broader metaphysical theory somewhat more puzzling in the light of the fact that such a model constitutes a theory about the nature of people. It is a theory regarding the kind of properties or powers people have, and their relation to the world. A broad metaphysical theory is an attempt to formulate an ontology, that is, the basic set of categories or entities, processes and relations in the world or universe. Since talk about human nature is necessarily talk about some of the basic entities etc. in the world, it seems rather shortsighted to neglect the rest of the world.

Although empiricism (or some variant of it) has been subject to intensive criticism it is still a viable philosophical research programme (van Fraassen 1980). As I have mentioned above, there are currently a number of interesting research programmes in the philosophy of science (Kuhn 1972; Feyerabend 1978; Shekhawat 1984; Boyd 1983, 1985; Newton-Smith 1981). I do not intend to discuss these and will simply present the theoretical position that supports the
presentation of metaphysics as theory. There are various components to this position which require separate discussion and elucidation: (A) Semantic Realism, (B) Naturalism, (C) Evolutionary Epistemology.

(A) Semantic Realism

Under this theory realism is viewed as a semantical thesis (Hooker 1974, 1975b) according to which theories in science describe the way the world really is. Thus, if a theory is true, then the world functions and behaves exactly as described. Theories are constructed to describe the activity of generative mechanisms and structures, independently of any particular sequence of events (Bhasker 1975; Keat & Urry 1975). A scientific explanation therefore requires reference to, and knowledge of, the causal properties of such mechanisms. A realist theory of science endorses the use of iconic paramorph models (Harre 1980), where the subject and the source of the model differ, to represent the unknown underlying structures or mechanisms that generate the various visible patterns of events and processes in the world. This type of model differs from that often used in contemporary empiricist psychology (Harre 1980). That is, homeomorph models, which are simply abstractions and an idealization of already "visible" properties.

A realist model allows for the possibility of a natural necessity, where the causal powers of particular structures are activated given the appropriate enabling conditions. The necessity consists in the fact that given the nature of a particular system or structure, and the appropriate enabling or releasing conditions, a particular response must occur
(Harré & Madden 1975). Otherwise it must have undergone changes in its nature (lost or changed some of its powers) and therefore is not the same thing. Clearly such a concept of causation requires the notion of a stratified, multi-levelled world and stresses the important role of model building in science.

An empiricist model of science (Suppe 1974) with its view of theoretical terms is ultimately grounded in the observable world and its laws will not countenance such a concept of causation.

(B) Naturalism

A naturalistic epistemology or theory claims that science and philosophy are not separate disciplines but are continuous (Dancy 1985; Stroud 1984). It also involves the rejection of a foundational epistemology (Hooker 1975b). That is, epistemological and philosophical principles are formulated in the light of the relevant scientific findings and are not considered as foundational in any a priori sense. There is no privileged class of beliefs that has the status of unrevisable truth, as foundational. We commence the process of acquiring knowledge through a trial and error imaginative process and painstakingly, although fallibly, approach the truth (Campbell 1974).

Even the most fundamental and "sacred" beliefs are open to challenge and revision. Metaphysical beliefs or theories are also open to refutation and revision, and in this respect are like any theory. That is, they are able to be tested against the data, which are yielded by the various theories
in the different scientific domains. Thus metaphysical theories constitute theories in two senses:

(1) they are testable.
(2) they attempt to explain the general nature of the world.

(C) Evolutionary Epistemology

Human knowledge is not static in the sense of being discovered once and for all. It evolves over time as we learn more about ourselves and the world in a way similar to human biology, and increases our ability to adapt to changing circumstances (Campbell 1974; Alston 1985).

In short, evolutionary epistemology is an epistemological system which is based on the conjecture that cognitive activities are a product of evolution and selection and that, vice versa, evolution itself is a cognition and knowledge process.1

Thus our knowledge of the world develops through the imaginative development of conceptual systems and theories.

Evolutionary epistemology constitutes a dynamic "dialectical" approach in which theories (scientific, literary, metaphysical, moral) are revised and adapted in the light of increased information.

... epistemology is the best theory we can raise, taken in the light of the scientific findings concerning the scope of human knowledge and, within its scope, what it is rational to accept ... and for what purposes and why ... 2

1Wuketits, Evolutionary Epistemology - A New Copernican Revolution, p. 2.

Given its naturalist tone, an evolutionary epistemology tends to accompany a naturalistic conception of the relation between scientific and other theories, and the world.

Thus to conclude my discussion, I argue that models of human nature constitute theoretical talk and ought to be viewed in relation to broad metaphysical theories. These theories can usefully be conceived of as general or broad theories of the nature of the world which are revisable and testable in the light of evidence from particular theories in specific scientific domains.

I will now outline the structure of a metaphysical theory and the consequences of accepting a particular theory. However first I will briefly discuss the concept of metaphysics and some of the literature concerning its status and role in science.

Taylor (1974) sees metaphysics as providing the foundation of philosophy and argues that the fruit of metaphysical thought is not knowledge but understanding. It is distinct from science. While Schlesinger (1983) argues that theories in metaphysics are influenced by discoveries in science, he claims they are not pointed in any particular direction by such discoveries. He also points to the rather loose structure of metaphysical theories, while not denying that some are general theories of the nature of reality.

Wartofsky (1979) while admitting that metaphysical theories can be first level models of reality, claims that their primary role is a second level one. That is, they provide some insight into the practice of rational thought and understanding, and in this respect guide theory formation in science.
Harré (1964) claims that the function of a general conceptual scheme (a metaphysical theory) is to provide material for an ultimate explanation. He argues that the general conceptual scheme (G.C.S.) adopted determines what kind of things, processes and properties one is prepared to accept exists. However what there actually is, is determined by empirical activities and science. Thus a G.C.S. constitutes a high level theory which is fleshed out (or "tested") by particular scientific theories.

Pepper (1966) and Harris (1965) argue that metaphysical theories differ from other theories only in their unrestricted scope. They see an important task for metaphysical theories is to reflect upon the theories and data in science and to form as coherent and systematic conception of the world (including the nature of people) as possible on the basis of the evidence.

It is clear that although some writers caution against metaphysics in the above sense, others (Bunge 1979; Hooker 1975a) argue for the importance of metaphysical theories in providing a necessary general picture of the world. It is also clear that the naturalistic tone of Harris (1965), Pepper (1966) and Harré (1964) is consistent with the position taken in this thesis.

As argued earlier, every theory in psychology necessarily presupposes a model of human nature and every model is connected to a broader metaphysical theory, which specifies what are the fundamental entities, processes and relations in the world.

I argue that a metaphysical theory generates a particular metaphilosophy (Hooker 1974, 1975b). These are
principles that guide the formation of particular theories of science, epistemology and so on. They do so because a description of what the world is like suggests ways in which it can be known, or explored. For example if the world is composed of fundamental atomic elements which behave in a predictable mechanical fashion accessible to observation, then an epistemology ought to reflect that (Goldman 1985). Alternatively, if the world is constituted by multi-level interlocking systems of which each level is relatively autonomous and unobservable, then the preferred epistemology would be one that prescribed model building, and so on. Thus whether explanation hinges on laws (and the predictions etc. from them) founded on regularly associated events or on the description of underlying mechanisms, depends on the ontology adopted.

Therefore a metaphysical theory and its related meta-philosophy place constraints on the type of epistemology and explanation acceptable. These influence the kind of methodology used in order to generate "knowledge".

A metaphysical theory provides the basic world picture for research programmes in particular disciplines or sciences. For example, "mechanism" in biology, psychology and physics. Each of these lower level research programmes (Bhasker 1975) within a particular discipline, generates in turn particular theories. For example the different behavioural theories within the behavioural research programme (Schwartz 1982). Thus, a metaphysical theory sets constraints on or generates a particular kind of research programme in the various sciences. It is a "super general" (metaphysical) research programme. In addition the kind of epistemology, methodology and
explanation accepted are linked to this ontology (Danziger 1985). The way the world fundamentally is built also suggests what concept of causality would be appropriate. In a world composed of atoms connected by simple mechanistic principles whose movements are (directly or indirectly) observable and who are without any internal structure, some form of regularity or Humean causation would probably (although not necessarily) dominate. In a world that is stratified with semi-autonomous levels, a view of causation that refers to underlying generative mechanisms and structures, would figure more in scientific explanation; and so on.

Given that metaphysical systems are construed as theories, how are they to be evaluated? Empiricists tend to focus on predictability (Hooker 1981) and the ability of theories to account for "the facts". According to the logical positivists, facts exhaust the content of theories, as all theoretical terms were thought to be definable in observation terms. That is, are able to be given an explicit definition (Hooker 1975; Suppe 1974).

I propose to follow Newton-Smith (1981) and Howard (1985) in arguing that there is no single criterion or epistemic value that will provide an infallible means of sorting out the good theories from the bad. In fact, what counts as "good" or "bad" itself depends on the epistemic values accepted. For example predictability, internal coherence, fertility, increased scope and so on (Hooker 1981). And even the way epistemic values are ranked constitutes a theory (of methodology) and reflects cultural and social values.
The factors that guide theory choice or evaluation do not ensure (mechanically) the truth of a theory, they simply function as fallible indicators of a theory's truth. The factors that I propose to use in evaluating metaphysical theories are adapted from Newton-Smith (p. 226-232).

(1) **Observational nesting.** This refers to a theory's ability to account for the successes of its rivals. For a metaphysical theory this will include its capacity to accommodate "data" from the various sciences.

(2) **Fertility** or scope for the future development of the theory. For a metaphysical theory this refers to its ability to suggest rich and fruitful ideas to particular sciences. For example, suggest a particular model of human nature to psychology which points to possible lines of research strategies.

(3) **Internal consistency.** An evaluation of the internal consistency of a metaphysical theory considers whether there are serious contradictions or conceptual confusions contained within it (Laudan 1977).

(4) **Smoothness** with which adjustments can be made to a metaphysical theory in the face of its failure to account for the data yielded by the specific sciences, or to resolve any conceptual confusions and contradictions that have been identified.

(5) **Simplicity.** This is a rather controversial criterion as reality may not be "simple" and therefore rather
than being an indicator of a theory's truth it may be an indicator of its falsity. However if one has two theories that have fared equally well according to the other epistemic values, it may prove useful in selecting one.

In addition to the above features it is important to consider other, non-epistemic values when evaluating a theory, metaphysical or otherwise.

What makes a line of enquiry distinctively scientific is the criticalness with which it is pursued . . . Moreover we must enlarge the schema of criticism to include (i) criticism of particular fact . . .; (ii) criticism of specific theory; (iii) criticism of kind of theory . . .; (iv) criticism of deeper, more general levels of conceptual framework; (v) criticism of the allocation of societal resources among these areas of criticism . . .; (vi) criticism of the currently institutionalized structure of research and criticism.¹

In a critical culture, it is not only theories that are critically examined but also ends or values, critical procedures themselves and so on.

This concept of a critical culture is linked to the optimal development of human potential. A major task of theories of any type is to assist (directly or indirectly) in the maximization of human epistemic potential and therefore ensure or increase the possibility of adaptation and survival. This view follows from an evolutionary epistemology.

Thus it will count against a metaphysical theory, if it promotes a picture of reality that undermines the

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¹Hooker, Philosophy and Meta-Philosophy of Science, p. 222.
institutional embodiment of critical thought (critical culture) and its associated pluralism.

In the remainder of this thesis I will examine three models of human nature underlying different therapies in clinical psychology, behavioural, humanistic and family therapy. I will not be concerned with the details of any particular therapy, but rather with the general theoretical assumptions of the psychological theory from which it is derived. I will identify the model of human nature that is presupposed and trace it to a general metaphysical theory. It is important to note I am not claiming that a particular model is necessarily linked to one particular metaphysical theory. In a sense, the linking of such a broad theory to a psychological theory via its model of human nature, is itself conjectural. There may be (and usually is) more than one possible metaphysical theory that would "explain" or support a particular model. However, I argue, that I present the most plausible candidate. I am also not saying that a particular epistemology etc. necessarily goes with a particular metaphysical theory. I am only making the weaker claim that the two are associated.

After outlining the ontology, metaphilosophy, epistemology etc. of the metaphysical theory, I will attempt to show how these influence the psychological theory. That is, how the methodology and concept of explanation of the psychological theory are linked to the metaphysical theory.

I will critically evaluate each metaphysical theory according to the set of epistemic values outlined above.
CHAPTER IV

THE METAPHYSICS OF RADICAL BEHAVIOURISM

There is a growing theoretical and philosophical debate within the behavioural research programme from which several issues have emerged as being of particular importance:

1. the identification and definition of the various strands of behaviourism; for example, metaphysical, analytic, methodological and radical behaviourism (Schwartz 1982; Mahoney 1974; Day 1983);

2. the question of the status of consciousness and conscious contents in radical behaviourism (Natsoulas 1983; Smith 1983; Schnaitter 1984; Pierce & Epling 1984);

3. behavioural philosophy of science and its relationship to recent work in epistemology (Mackenzie 1977; Rorty 1980; Lee 1983; Woolfolk 1983);

4. the philosophical foundation of behaviourism (Zuriff 1985, Hocutt 1985).

I do not intend to comment on these issues in this chapter, although I acknowledge their importance. I do not believe the basic interpretation of radical behaviourism is that problematic and suggest that such theoretical work more accurately reflects an extension, or development of the behavioural research programme, than a definition of it.

Harré and Secord (1972), Harré (1979), Markley and Harman (1982), Stevenson (1974), all argue that the model of human nature implicit in radical behaviourism and the therapy
deriving from it (Woolfolk & Richardson 1984), is mechanistic; the mechanistic model of human nature identified earlier in this thesis.

Hall and Lindzey (1970) and Hilgard and Bower (1975) claim that radical behaviourism springs from empiricism and associationism. As a consequence of this it is atomistic and reductionist, attempting to explain complex behaviour (for example, problem solving or verbal behaviour) in terms of simpler, operant elements. The simple elements are no longer mental but rather behavioural and any complex behaviour can be analyzed as essentially a chain of operants, each preserving some autonomy in the whole (Robinson 1979).

Mackenzie (1977) argues that behaviourism as a whole is based on methodological principles and emphasizes the importance (Skinner 1953) of redefining mentalistic "variables" in operational terms.

Nye (1979), in a sympathetic exposition of Skinner's radical behaviourism, argues that it is based on certain assumptions regarding the lawfulness of behaviour and its relationship to the environment (p. 21-24). These are as follows.

1. Organisms emit behaviour of particular kinds.

2. This behaviour has consequences that may affect the possibility of it reoccurring in the future. That is, either increase or decrease the likelihood that it will occur again.

3. The consequences of behaviour are determined by the organism and the physical and social environment.
(4) Behaviour is lawful and is determined and controlled in a systematic and consistent way by the environment.

(5) Environmental factors determine the details of behaviour. This gives the psychologist the advantage of being able to directly observe and target the relevant behaviour.

(6) The function of psychology is to detect the (lawful) cause and effect relationship between the environment and behaviour - by controlling conditions and observing effects.

(7) It is unnecessary and misleading to refer to thoughts and feelings when explaining behaviour. They do not control behaviour and are best viewed as effects (responses) rather than causes. The environment is the major determinant of behaviour. The belief that choice, intention and so on control and explain behaviour is a mistaken, pre-scientific illusionary notion (Skinner 1953; Blackman 1980).

In order to establish that Nye is not distorting Skinner's position regarding the role of intention and so on, I will let Skinner speak for himself:

A science of behaviour . . . rejects explanation in terms of feelings, states of mind and mental processes and seeks alternatives in genetic and environmental histories. It treats a person as an object, but as an object of extraordinary subtlety and complexity.¹

¹Skinner, "Humanistic Behaviourism: An Exchange". In Matson (ed.), Within/Without, p. 44.
The free inner man who is held responsible . . . is only a pre-scientific substitute for the kind of causes which are discovered in the course of a scientific analysis. All these alternative causes lie outside the individual . . . these are the things which make the individual behave as he does. For them he is not responsible . . .

And again:

all those questions about purposes, feelings, knowledge and so on, can be restated in terms of the environment, to which the person has been exposed.

Glancing back to the earlier review of predominant models of human nature, it certainly seems that the image implicit in Skinner's theory is mechanistic.

(1) There is environmental (external) determinism and control of persons behaviour.

(2) Even though Skinner argues that organisms are active, they are passive in an important sense. The ultimate explanation for actions does not lie in the reasons etc. of the agent, but in the environment; that is, it acts upon the person.

(3) People are mistaken if they believe they are free to choose particular alternatives.

In addition to this mechanistic model of human nature it is important to remember that the thrust of behaviourism is analytic; it seeks to reduce, explain, complex behaviours in terms of simpler units, operant atoms (Bunge 1979, 1983).

I argue that the broad metaphysical theory that underlies radical behaviourism is an atomistic-mechanistic theory.


2 Skinner, Beyond Freedom and Dignity, p. 72.
Bunge (1979) described atomism as the ontological thesis that the whole is in some respects contained in its parts and as a consequence, the study of the latter should prove sufficient to understand the movement, function, etc. of the former. The whole is simply an aggregate of individual autonomous components, thus the whole is not greater than the sum of its parts.

Bhasker (1975) outlines clearly the mechanical-atomistic metaphysical theory which he argues has three primary strands.

1. **A metaphysical thesis**, where matter is passive and causation is simply viewed as a regular sequence of separate events.

2. **A physical thesis**, where matter is conceptualized as hard "atoms" whose movements alone can explain the observed behaviour of complex things.

3. **An epistemological thesis**, where an object is able to be broken down into simple qualities that are observable. This thesis presupposes an event ontology, whose atoms are independent events, that are able to be experienced in sense perception.

Following Bhasker (p. 83) one can summarize the features of a mechanistic-atomistic metaphysical theory as follows (I have revised it slightly).

1. All causation consists of relationships (regular conjunctions) between independent events or objects. That is, it is external.

2. The atomicity of fundamental entities, whether particles or events.
(3) Passivity of matter and the immediacy of effect.

(4) The absence of internal structure and complexity. Because the emphasis is on the analysis of complex objects into fundamental components, reference to (in the epistemological strand) internal structure or complexity is irrelevant.

(5) Absence of preformation and of material continuity. This follows from the emphasis on atomicity and therefore lack of interest in structure. Given an event ontology, it is difficult to account for continuity of identity over time.

(6) Subjectivity of transformation and of apparent variety in nature.

Thus an atomistic-mechanical theory views the world as composed of simple, discrete entities or events, which are independent of the whole and linked by regular conjunction. For radical behaviourism, the epistemological variant seems the most appropriate, with its emphasis on events (behaviour) and their association with other events (environmental). Radical behaviourism prescribes the breaking down or reduction (for explanatory purposes) of complex skills into simpler ones or "operant atoms". That is, complex behaviour is viewed as constituted by chains of relatively independent operants (Skinner 1953). Causality consists of the "external" relationship between independent events, behaviour and its environmental consequences (Blackman 1980).

It seems clear that the concept of causation derived from the mechanistic-atomism theory is Humean in nature (Keat & Urry 1975). That is, events are "causally" related when
they regularly follow each other. Thus a statement expressing a causal relationship merely states that one event causes another when it is regularly precedent to it. The events in question are independent of one another and are not logically or necessarily connected. Thus a causal link between events is a contingent one; anything can in principle be the cause of anything else (Harré & Madden 1975). In order to distinguish laws (statements expressing universal "causal" relationships) from merely accidental or summative universals, it is necessary to identify some formal (logical) characteristics they (laws) share (Hempel 1965).

Clearly an explanation shaped by an atomistic-mechanistic metaphilosophy would be based around this notion of causation. It would be empiricist or positivist in nature and claim that all terms figuring in an explanation must be either reduced to or defined (partially) in terms of observed events. This follows because an event ontology with a regularity concept of laws implies that they are able to be experienced or observed. The laws used in explaining behaviour are simply universal (lawful) generalizations of an observed regular conjunction of independent events. Thus if reality consists of atomistic events and their interactions then other structures of our knowledge must reflect this. This could be achieved by formulating an empiricist epistemology; all cognitively significant knowledge is empirical knowledge (Hooker 1975) and is ultimately founded upon direct knowledge grounded in sensory experience. This direct knowledge is comprised of verbal reports of sensory experience. Thus knowledge is based on data, observed facts, and theories are simply logical calculi designed to organize these facts
and enable predictions to be made. And to repeat, explanation is a subsumption (Bunge 1983) of facts, observed events, under laws and the prediction of future events from these laws (that is, theories are hypothetical-deductive systems). The "atoms" and their contingent interactions in experience, exhaust the nature of scientific knowledge.

The kind of methodology that would be preferred would be one dependent on the epistemology and ontology outlined above. It would stress the importance of gathering facts and observing the patterns (laws) between them. It would stress the primacy of observation and the precarious status of postulated unobservable entities. Indeed, given an event ontology, such entities would be presumed to be fictitious. Any method that focused on the observational level and promoted the discovery of laws or regular conjunction between events, would be prescribed.

Relating these points to radical behaviourism it is clear that it does presuppose an empiricist or positivistic epistemology; a regularity or Humean concept of causality, with its emphasis on identifying functional relationships between the organism and the environment; stresses the primacy of observation and distrusts theoretical inferences; values operational definitions (Skinner 1953).

Mackenzie (1977) in a book on the conception of science presupposed by behaviourism, outlines the particular philosophy of science that all forms of behaviourism have inherited or endorse.

... behaviourism consisted largely in the adoption of a rigorous scientific method ... It was of course hard-headedly empiricist, and correspondingly
anti-naturalist and anti-intuitionist
. . . What differentiated it was . . . the refusal to give any consideration to any entities or processes which were not directly and publicly observable, a refusal that was explicitly implemented as a methodological maxium. Behaviourism adopted . . . a conception of scientific method that required a strong commitment to observations and strictly logical analysis, a rejection of all concern with unobservables of any sort and a corresponding unwillingness to extrapolate beyond observables in the systematic interpretation of data.¹

Therefore, I argue that radical behaviourism does presuppose an atomistic-mechanistic broad metaphysical theory and does endorse the epistemology, methodology and notions of causation and explanation that are derived from it. It is important not to be misled by the claims of radical behaviourists that their position is atheoretical and therefore does not presuppose any theory, metaphysical or otherwise. Given the empiricist strategy of reducing all meaningful knowledge (ultimately) to sense experience, it is clear that metaphysical theoretical talk would be decreed meaningless. However given the earlier argument demonstrating the necessary link between a model of human nature and a broad metaphysical theory, such exclamations can be disregarded.

I will now critically evaluate the atomistic-mechanical metaphysical theory underlying radical behaviourism and the views of methodology, epistemology derivable from it. It follows that if such a theory is negatively evaluated this will (should) have a devastating impact on radical behaviourism. It will simply be reduced to a set of techniques.

Observational nesting

The first thing to notice is that the atomistic conception of the world is at odds with that of the new physics (Zukav 1980) and ecosystem views in modern biology, etc. (Keeney 1982). The world is no longer conceptualized as a machine which functions according to simple mechanical processes determined by its atomic parts.

Modern physics thus pictures matter not at all as passive and inert but as being in a continuous dancing and vibrating motion whose rhythmic patterns are determined by the molecular atomic and nuclear configurations.1

Thus physics becomes the study of "patterns of organic energy".2 The view that the world is constituted out of interlocking systematic processes (Harris 1965; Prigogine & Stengers 1985) rather than out of independent atoms and their interaction, tends to undermine the atomism of this metaphysical theory.

Related to this is the modern view that matter is not passive but self-organizing (Prigogine & Stengers 1985). This stress on organization and pattern directly challenges the fundamental postulates of mechanism-atomism.

Bunge (1983, 1979) argues that the world is composed of different levels of systems, each of which has a degree of autonomy and whose emergent properties require explanation at their own level. For example, psychological processes emerge when an organism has a sufficiently complex nervous system (Bunge 1980). It is not possible to explain the functions and occurrence of such processes purely in terms of

1Capra, The Turning Point, p. 79.

2Zukav, The Dancing Wu Li Masters, p. 45.
neuronal properties and so on. Or again, the function of a group needs to be explained at a level that retains the integrity of the group. That is, the group has properties (emergent) that its components do not. Therefore, contrary to the claims of atomism, the functioning of the whole is not explainable in terms of that of its components.

Another "fact" that atomism has some difficulty accommodating is the increasing evidence (Hollon & Kriss 1984; Nisbett & Ross 1980) that cognitive factors are important in explaining and controlling human behaviour. This stress on complex unobservables processes is clearly at odds with atomism's strategy of reducing complex skills into simple (basic) ones and distrust of unobservable processes or entities. Concepts such as "cognitive structures" and "information processing" refer to underlying or unobservable processes, although empirically minded psychologists prefer to speak in terms of intervening variables (Kendler 1981). However the growing conceptual sophistication of psychologists and their awareness of the relevance of the new philosophy of science (Manicas & Secord 1983; Schwartz 1982) is resulting in an increasingly realist interpretation of such concepts. It is clear that as a psychological theory strongly influenced in its choice of epistemology, view of causation and methodology by atomism, radical behaviourism eschews explanation in terms of (real) cognitive factors. And in view of the increasing evidence of the importance of cognitively oriented explanation, both radical behaviourism and its underlying metaphysical theory of atomism-mechanism are in the embarrassing position
of not being able to accommodate the "data". It is also unable to account for the notion of internal structure, which plays an important role in cognitive explanation.

A final difficulty is the problem in providing a suitable theory of agency. With its emphasis on the external nature of causation (Sen 1985) (control) and fundamental passivity of agents, all actions become movement. There is no room (McGinn 1979) for the common sense view that people (as examples of agents) are able to control their actions, or act on the basis of reasons. The only plausible solution for the atomist seems to be a contextualist (Davis 1979) theory in which movements count as actions if they occur in a lawful or patterned context. For example (if such behaviour fits into some intelligent pattern of activity) goal directed behaviour. However, Davis (1979) has clearly demonstrated that such an analysis of "actions" yield counter instances, where for example, movements (in the appropriate context) caused by muscle spasms would count as actions.

(2) Fertility

The fertility of atomism-mechanism is limited by its inability to accommodate the data yielded in the various scientific domains, as outlined above. For example, the currently accepted view of matter as self-organizing, and as "patterns" of energy. In addition, its emphasis on a strong reductionism tends to promote a conservative research strategy. The model of human nature and its associated metaphysics is by virtue of its mechanism rather unfruitful and simplistic. It is out of step with the "facts" of the world and human nature currently being discovered in science.
Furthermore, its associated metaphilosophy and empiricist view of epistemology, notionality etc. yield an impoverished model of science and therefore of scientific theorizing.

(3) Internal Consistency and Coherence

There are several important areas in which the atomism-mechanism metaphysical theory seems to be guilty of conceptual incoherence and inconsistency.

The first concerns the concept of agency discussed above.

A second area of concern revolves around (Wallace 1974) the atomistic concept of causation. The Humean concept of causality has been severely criticized because of its failure to adequately characterize a law of nature and to differentiate it from an accidental generalization (Harre & Madden 1975; Chalmers 1982). Bhasker (1975) has developed an argument to establish that Humean, or a regularity concept of causality, fails to hold in open systems. It is only under experimentally closed conditions that such a regularity between events can be obtained and observed. However this presupposes that in open systems (by virtue of needing to control conditions in order to obtain the relevant regularities) there are mechanisms mediating causal processes that interfere with and control such patterns of regularities. This entails that causality in open systems, and by implication in closed systems, is not Humean. Thus there is an ontological basis for a structural or powersview of causality rather than a regularity one.

Harre and Madden (1975) argue that there are no purely formal features which all laws have and accidental generalizations do not. Indeed, they argue, universal statements
are called laws for a number of reasons, none of which is necessary while any one may be sufficient. For example if a law coheres with an accepted body of knowledge or if it has predictive or explanatory power or when confirmed by various instances and so on.

The empiricist-positivist notions of epistemology have also been subjected to extensive criticism (Feyerabend 1978).

The claim that observational statements provide a certain foundation for knowledge claims and laws because the facts which are reported are theory neutral, has been refuted. Recent work in the philosophy of science has demonstrated that it is not possible to draw the necessary observation/theory distinction. All observation, it is argued, is theory directed or laden and thus there is no epistemically privileged observational level. The facts do not speak for themselves; theory or hypotheses are necessary or presupposed in order to arrive at scientific discoveries or to explain a phenomenon (Howard 1985; Newton-Smith 1981; Boyd 1983).

In addition to the impossibility of having a secure foundation (Rorty 1980) upon which to base laws and knowledge claims, the empiricist concept of explanation is also unsatisfactory. This is because it is dependent on the theory/observation distinction and the regularity theory of causality. Once these have been undermined, then the view of explanation based on universal laws collapses.

An additional point that is linked to the empiricist programme of building an edifice of knowledge on the secure foundation of discrete sensory elements (reports of events)
attacks the view of perception as a passive process (Bourne et al. 1979, Woozly 1973). The thesis that perception is completely accountable in terms of sensation and its organization is false. Perception is (plausibly viewed as) an active "cognitive" process in which sensations (data) are actively processed and interpreted in terms of cognitive structures. We are not ultimately confronted with raw sensations, but highly processed and refined data. Another difficulty is the reliance of empiricism-positivism on some form of procedure to operationally define theoretical terms. Suppe (1974) has argued that such a procedure is in principle incapable of defining theoretical terms. When one considers Skinner's (1953) enthusiastic endorsement of such a procedure and the empiricist epistemology (and by implication, its metaphysics!) it is clear that behavioural psychology is vulnerable to the extensive criticism directed against this view.

Additional problems encountered by an empiricist-positivistic epistemology are those generated by its holistic theory of meaning of theoretical terms (Newton-Smith 1981) and the difficulties surrounding the principle of induction (Chalmers 1982). I will not discuss these problems in detail and refer to the above sources for an extensive treatment of them.

(4) Smoothness

I argue that the difficulties outlined above constitute serious conceptual anomalies (Laudan 1977) for the atomism-mechanism metaphysical theory, which are not easily or smoothly resolved. Although as a philosophical research
programme, empiricism is still "alive", it is somewhat under siege and the problems it faces are proving rather intractable (Sober 1985).

(5) **Simplicity**

One of the virtues of the atomistic metaphysical theory is its simplicity in attempting to "explain" the way the world is and our knowledge of it, in terms of independent atoms and their interactions. However in this case, its simplicity is probably more of an indication of its inadequacy rather than of its merit.

A final point to consider in evaluating this theory is whether it conflicts with some important non-epistemic values, such as the concept of a critical culture. One of the specific scientific research programmes generated by atomism-mechanism is behavioural psychology. Following Woolfolk and Richardson (1984), I argue that it is closely linked to the ideology of modernity with its emphasis on rationality and control at the expense of individual responsibility and freedom. Indeed, Skinner (1974, 1973, 1969, 1953) rejects concepts referring to people's capacity to freely choose between alternative actions as illusionary and misguided. If people are controlled by the environment anyway, why not do a proper (rational (the argument goes)) job of it and place the responsibility in the hands of "experts" (behavioural scientists). Such arguments appear to conflict with the basic requirements of a critical culture outlined earlier. To undermine this, is arguably, to undermine human adaptiveness and survival.
In conclusion, the metaphysical theory (and its implications) underlying radical behaviourism and behaviour therapy contains serious conceptual difficulties and fails to accommodate the "facts" yielded by scientific theories. Thus it constitutes an inadequate metaphysical theory.
CHAPTER V

THE METAPHYSICS OF HUMANISTIC PSYCHOLOGY

The model of human nature that is presupposed in humanistic psychotherapy is that of autonomous man/woman outlined earlier in this thesis. Harré (1979, p.253-305) has outlined the essential features of this model:

1. an agent has the power to shift from acting in accordance with one principle or impulse, to act in accordance with another;

2. an agent has the freedom to act as he/she wishes to;

3. an agent has the ability to distance her/himself from environmental and other influences;

4. an agent explains his/her actions by citing the reasons for acting as he/she did.

Shaffer (1978) has identified three therapeutic approaches that have been associated with humanism: existen­tial experimental therapy, client centered therapy and gestalt therapy. All these approaches stress the autonomy and integrity of the individual and presuppose an agency or autonomous model of human nature.

It is a difficult task to identify the characteristics of the humanistic psychology from which these therapies are derived. Matson (1973) and Shaffer (1978) argue that humanistic psychology reflects the convergence of a number of schools of thought which show a respect for the person and his/her creativity, responsibility, values, and integrity. Thus the term "humanism" (Blackham 1968) does not refer to a
homogenous body of theory which all humanist psychologists share.

Barclay (1968) discusses the philosophical basis of humanistic psychology and claims that the primary contribution are those of existentialism and phenomenology. Matson (1973) and Shaffer (1978) agree with this and stress the particular importance of existentialist thought.

Existentialism, according to Macquarrie (1973) is a style of philosophy that begins with two major assumptions: (1) It is concerned with the subjective life of individuals, their feelings, thoughts and sensations. In fact these are rarely differentiated in existential thought.

(2) It claims that human beings have no essence or nature. That is, they are open-ended beings who continually define themselves through their (free) actions.

It is this ability to act freely and to shape their lives that singles human beings out from other beings. This ability is clearly linked to the capacity to monitor behaviour, to formulate intentions and to act upon the basis of reasons (Hampshire 1967).

Existentialism is concerned with the individual's quest for meaning and authenticity in a basically indifferent world. The parameters of a person's existence are death and his/her own lack of structure. Although its starting point is existence and thus ontology, epistemological issues are important. In order to make sense of events and phenomena, people interpret and categorize them. Their own experiences and beliefs thus play a crucial role in enabling them to
understand the world.

Existentialism claims that a person has the ultimate responsibility for his/her own existence, although acknowledging that the world and personal circumstances do impose limits on them (Shaffer 1978/ Macquarrie 1973). However he/she still has an important measure of freedom and responsibility for whatever choices he/she makes. A person needs to create his/her own meaning out of the randomness and absurdity of life in order to obtain a sense of dignity, of ultimate self-respect. Failure to face up to this responsibility results in a person leading a life of self-deception, an inauthentic existence.

Misiak and Sexton (1973) point out that while all existentialists are phenomenologists because their analysis of human existence rests on a description of experience, the reverse is not true (Cairns 1968).

Phenomenology is a more general method which applies as equally to the description or analysis of perception, movement and so on, as it does to questions of meaning and existence. It is a method that is used to describe the contents of human experience. In order to ensure the accuracy of such descriptions, phenomenologists have developed techniques to minimize the distorting influences of prejudice and bias. One important rule is to stay within the limits of experience and not to make inferences about underlying states or unobservable objects. Thus in existentialism, there is a specific application of phenomenological techniques to various aspects of the individual and his/her relation to the world and others.
Macquarrie (1973) emphasizes the important point that for existentialists consciousness is characterized by its intentionality. That is, in all acts of consciousness (mental acts) there is some degree of meaning and directedness. It is not possible to think or be conscious without being aware of something; every mental act requires a mental object, whether or not such an "object" actually exists.

Shaffer (1978) argues that like the existentialism upon which it is (partially) based, humanistic psychology does not have a particular subject matter, but represents an orientation towards psychology as a whole. It opposes the general thrust or direction of much modern psychology.

... humanism as a force in psychology questions, and at times opposes, some of the major thrusts within modern psychology, in particular: (1) the assumption that psychology should emulate the philosophy and procedures of natural science, and (2) the predominant view of human beings as primarily responding to, and being shaped by, the various determining influences that impinge upon them from within or without.¹

According to Shaffer (p. 10-18) humanistic psychology is characterized by the following features:

(1) It is phenomenological or experiential and claims that psychology ought to begin with human consciousness. It is opposed to reductionism and believes that an explanation of human action ought to be couched in agency terms. There is also a strong emphasis on the here and now.

(2) It claims that man/woman is essentially a whole being and ought to be studied and regarded as such in psychology.

¹Shaffer, Humanistic Psychology, p. 2.
(3) It claims that although there are definite limits imposed on people by the world they still have an essential element of freedom. It stresses the importance of choice and the person's fundamental responsibility for his/her life.

(4) It views people as open-ended and claims that human nature can never be fully defined.

It is clear that humanistic psychology is strongly influenced by existentialist philosophy. Although Shaffer constructs an "ideal type" of humanistic psychology, most of the above features can be found in prominent humanist theorists. To illustrate this I will briefly consider the work of Rogers.

Kahn (1985) argues that the individual's quest for meaning and his/her own (subjective) perception of the world are important elements in Rogers' theory of personality and psychotherapy. He also stresses the importance of the concept of the self, which Rogers (1959) describes in the following manner. The term self refers to:

\[\text{the organized, consistent conceptual gestalt composed of perceptions of the characteristics of the "I" or "me" and the perceptions of the relationships of the "I" or "me" to others and to various aspects of life, together with the values attached to these perceptions. It is a gestalt . . . a fluid and changing gestalt, a process, but at any given moment it is a specific entity.}^{1}\]

Rogers (1951) assumes that people have an inherent tendency to move towards the fulfilment of their potential and argues that it is only when this drive is frustrated that psychopathology occurs. He claims that with empathetic

\[^{1}\text{Rogers, A theory of therapy, personality and interpersonal relationships, as developed in the client-centered framework, p. 200.}\]
understanding on the part of the therapist, each person has the capacity to solve his/her own problems, to discover (or create) his/her meaning in life.

Patterson (1973) points out the rather paradoxical position Rogers places himself in when he claims that although determinism is true, free will is an undeniable fact of human experience.

I argue that as a humanistic psychologist Rogers is committed to the principle of individual freedom. Perhaps when discussing the concept of determinism Rogers is only reiterating the existential view that there are constraints and limits on human existence.

Rogers (1951, 1959) stresses the importance of the client's perceptions of his situation, rather than the objective "facts" of the situation. This phenomenological strand is also evident when he recommends that therapists attempt to "get inside" a client's internal frame of reference. Thus it is clear that most of the features outlined by Shaffer (1978) and discussed above, are present in Rogers' theory of personality and client-centered therapy.

I argue that Holism is the metaphysical theory that underlines humanist psychology and links its model of human nature with a broader ontology (Bunge 1979). Holism is a metaphysical theory that emphasizes the primacy of the whole at the expense of its components. Its major assumptions are (Bunge 1979, p. 39) as follows:

1. The whole precedes its parts. The whole is ontologically fundamental;
2. The whole acts on its parts while the parts do not act on the whole. For example it is claimed by
humanist psychologists (Shaffer 1978) that an analysis (reduction) of the whole person into more elementary components distorts human functioning. The person is a gestalt and not an aggregate of independently functioning "atoms".

(3) The whole is more than the sum of its parts; it has properties that its parts do not possess.

(4) The formation of wholes transcends that of its components and is linked to "inscrutable" entities or agents. This is another way of stressing the autonomy of the whole and its independence from the environment of its components. Wholes (agents) are fundamental and cannot be broken down into parts without completely destroying them.

(5) Wholes cannot be explained by analysis.

(6) The whole is better than any of its parts. Thus Holism is anti-analytic and in this sense anti-scientific. "Better" refers to the value placed on the whole and thus introduces a complex debate about values (Nozick 1981).

The doctrine of Holism fits rather nicely with the autonomous or agency theory of human nature presupposed by humanistic psychology. Thus part of the furniture of the world consists of agents who as wholes cannot be explained in further terms. That is, be analyzed (or reduced) into atomic components. Any explanation must be formulated only in terms referring to the whole, to the agent.

However it is not clear how Holism could apply to other entities in the world. It is conceivable that consciousness and experience bestow upon the person a sense of
wholeness, and that to analyze this whole into components could destroy this sense of wholeness. For this would entail, in direct opposition to the nature of man/woman as agent, the introduction of some form of atomism and determinism. But it seems that for most other organisms and objects that do not possess consciousness, this does not follow. Analysis or a study of the functioning of components adds to, and does not detract from, our understanding of the whole.

Thus it seems that a radical dualism is introduced in two senses: (a) that between agent wholes and the rest of the entities in the world, and (b) between an agent and his/her body. For it does seem possible to analyze and study the functions of the components of the body without destroying its identity as a body.

It may be possible to resolve the dualism between an agent and his/her body by arguing that persons are unified beings consisting of both mental and physical properties that are inextricably linked (Strawson 1959). However I will argue later that this is a difficult thesis for humanists to defend because of the essentially mysterious link between persons and their actions.

The only way to avoid the first mentioned dualism and still retain the (necessary) ontology of Holism is to claim that every entity and object possesses consciousness. This amounts to a full-blown doctrine of animism (Runes 1976), the view that souls (agents) are attached to all things either as indwelling entities or a principle that activates them.

To state the obvious, this seems rather unlikely in view of the theories currently accepted in physics, biology and chemistry.
Thus it seems that the metaphysical theory of Holism entails a dualism between agents and the remaining objects and entities in the world.

Perhaps this can be partially explained by Pepper's (1966) point that doctrines like Holism take the common sense person as the source of explanation of everything in the world. It is because Holism bases its ontology on the person as agent that it inevitably leads to a radical dualism.

The link between an agent and the world is action; which is a consequence of the intention of agents to do certain things. In order to explain action it is necessary to refer to the "whole", not the "action" or movement executed. Analysis or reduction will explain nothing. This means enquiring as to an agent's reasons or intentions for acting as he/she did. His/her perception of the situation becomes the primary means of understanding and explaining his/her behaviour. In a sense, the world of agents is appropriately described as a web of meaning. Categories such as consciousness, action, freedom, interpretation, intention, rather than cause, effect, law, movement, become important.

It follows that given the radical dualism between agents and objects it would be inappropriate to apply the methodology used to explain the behaviour of one to explain that of the other. Therefore, a science of human action and functioning would be necessarily different from that concerned with the objections of the "natural" world. The primary mode of explanation is **hermeneutical** (Gadamer 1976). To explain human action it is necessary to interpret it according to its context and the intention of the agent. Shotter (1975) adopts
a hermeneutical position and argues that people's actions are to be explained in terms of their intentions:

Thus people's actions are not to be explained causally, as sequences of objective events linked by causal principles, but intentionally. That is . . . are to be explained as attempts to help the realisation of projects, goals, enterprises or ideals which they have invented amongst themselves.¹

Harré and Secord (1972) emphasize the importance of explaining human behaviour from this perspective and argue that a person is not only an agent but is also an observer, commentator and critic of his/her own and others actions.

Okrent (1984) claims that from the hermeneutical point of view the aim of a social science is understanding, not scientific (causal) explanation.

What emerges from such a perspective (Bernstein 1983) is that an understanding and an interpretation of an agent's actions is important.

Therefore a dichotomy also emerges between the causal explanation of the natural sciences and hermeneutic explanation. This is clearly linked to the metaphysical theory of Holism, where the functioning of the whole is to be understood in its own terms and not with reference to the functioning of its components.

Thus if reality is composed of wholes and is knowable, then this ought to be reflected in the epistemology and methodology of Holism. It is clear from the above discussion how such an epistemology would proceed: explain the behaviour of the whole only by reference to the functioning of the whole.

Because consciousness and its operations constitute the unique

¹Shotter, Images of Man in Psychological Research, p. 91.
and defining properties of agent wholes, this entails an explanation in terms of reasons and intentions. As noted above, the methodology would be hermeneutic and would consist of rules that prove effective in elucidating the agent's reasons, etc. They will provide an interpretation of an agent's actions.

The concept of causality does not really have a role to play in a Holistic ontology that is concerned with agents. The link between an agent's intentions and reasons and his/her actions is not usually conceptualized as causal (Shotter 1975). It is argued that causality obtains between (physical) events and since, for example, intentions are not (physical) events, it is inappropriate to explain human action causally.

What is the relation between Holism and humanistic psychology?

The answer is simple, the major assumptions of humanism reflect those of Holism. Humanistic psychology:

1. emphasizes the importance of treating the person as a whole and refuses to countenance reductionism; it is anti-analytic;

2. claims that human actions spring from agents (wholes) and therefore that the whole acts upon its part; in order to explain the behaviour of the person it is necessary to refer to the agent, not his/her components;

3. argues that psychology ought to make human consciousness its starting point; this links with the Holistic thesis that a whole has properties that a part lacks and that any explanation ought to reflect this; the primary characteristic of agents is consciousness (property of the whole) and thus a study of the whole ought to be based on this important attribute;
(4) stresses the primacy of agents or persons as a source of explanation; in a sense they are transcendent, that is, they are ontologically primary and are able to detach themselves from their environment and act according to their own reasons and intentions;

(5) claims that (by way of its existentialist bias) because a person is a whole, he/she functions as a whole; it is artificial and distorting to separate thoughts and feelings when discussing human experience;

(6) argues that the person (agent) has supreme value, he/she transcends the value of his/her components, in fact he/she (as a whole) is the source of value; to reduce, in explanation, someone to simpler elements, is to violate the integrity of the whole and to undermine its value.

The methodology, epistemology and concept of explanation of humanistic psychology is directly linked to Holism by way of its existential and phenomenological foundation. As argued above, to explain is to appeal to the person's own perception of something and his/her reasons for performing an action. This ties in directly with the emphasis in humanist therapy and psychology, on gaining an understanding of a person's perspective, getting inside his/her frame of reference. Any research instruments or methodology will reflect these theoretical or epistemological assumptions. For example, Mischel (1981) argues that any methodology utilized by phenomenological personality theorists in research "... represent attempts to study the person's subjective experience" (p. 303).
Thus Holism and its related metaphilosophy generate an epistemology that is focused on the agent's ability to monitor, evaluate and control his/her own actions. These are evident in the methodological assumptions etc. of humanistic psychologists and therapists. Holism gives a view of what a person is, how he/she ought to function and how to explain his/her actions.

I will now critically evaluate the metaphysical theory of Holism.

(1) Observational Nesting

Unlike atomism, Holism has the virtue of recognizing the importance of wholes and emergent properties. In this respect it is consistent with currently accepted scientific theories that emphasize the importance of systemic properties (Zukav 1980; Prigogine & Stengers 1985).

Another virtue is its strong emphasis on agency and the importance of cognitive factors in explaining and controlling human behaviour (Hollan & Kriss, 1984). The common sense belief that a person's intentions, feelings and motives play an important part in initiating action, resonates nicely with the humanist elevation of agency as the primary explanatory mode.

However there are areas of difficulty for Holism.

One problem concerns its simplistic account of the relationship between cognitive factors and action (Bunge 1979). It merely redescribes the process by noting that action or behaviour follows intentions and ignores the interlocking physical and neurological systems that mediate action. For example, the central nervous system and its various sub-
systems and the skeleto-muscular system. Holism is also unable to account for the important interactions between physical and mental processes in initiating the formation of intentions.

One of the reasons Holism neglects this interaction lies in its mysterious and impoverished view of agency. Another is its dualistic ontology and consequent dualistic (Margolis 1978) epistemology. Physical and mental processes obey different laws or rules and therefore require different notions of explanation. Thus, holism is unable to accommodate (in principle) the increasingly rich data demonstrating a relationship between the various systems of the person and the genesis of action.

A second point relates to this inability to accommodate the data yielded by neurological and physiological theories. Holism claims that human purposes and intentions cannot in principle be explained by the natural sciences;

The claim that purposes defy scientific explanation and call for the hypothesis of an immaterial mind was downed by cyberneticians, who suggested a precise general mechanism of purposive action, namely the negative feedback loop ... According to such models purposes are not states or entities in the mind but certain patterns of neural activity.1

There is an increasing amount of work being done in the area of cybernetics and general system theory, linking it with neurology, biology and psychology (Sayre 1976). It is clear that an inability to allow for the possibility of explaining psychological processes in such terms (this would be compromising the integrity of the whole according to Holism)

1Bunge, A World of Systems, p. 164.
constitutes a serious weakness in the theory of Holism.

(2) **Fertility**

I have argued that the Holism underlying humanistic psychology is unable to provide an ontology for entities and objects without consciousness. As a consequence of this it is unable to function as a (metaphysical) source of ideas and possibilities for the natural sciences. And given the opaque nature of the human agent ("Transcendent") it is only able to suggest a narrow range of options for future research both inter-disciplinary and within psychology.

I agree with Pepper (1966) that Holistic or agency ontology probably reflects a "common sense" one, and thus can do little more than redescribe and refine common sense assumptions.

(3) **Internal Consistency**

Holism's view of science, at least natural science and its associated methodology and concepts, is rather negative. It argues against the reductionism which is a common feature of scientific explanation (Bunge 1983) and the possibility of a causal explanation of human action.

However moderate reductionism (Bunge 1983; Bhasker 1975) can be a progressive strategy. Here the scientist attempts to reduce whatever can be reduced, without ignoring variety and emergent properties. Thus the reduction is epistemological rather than ontological. Also, in order to explain the emergence of such properties it is relevant and useful to study the preconditions for them, and in a sense reduce (partially) a higher level to a lower level. It is only radical reductionism with its claims that all concepts,
hypotheses and theories referring to entities at one level are completely reducible to those referring to things at a lower level, that is mistaken (Manicas & Secord 1983). Thus to (partially) reduce a higher level science to a lower level one does not imply that one can predict from knowledge of principles in the latter the behaviour of entities in the former.

The theory of agency implied by Holism generates several difficulties. The link between the agent and his actions becomes mysterious. Some agency theorists refer to the possibility of direct causation between an agent and his/her action. However given the reluctance of humanistic psychologists to apply the concept of causation to the connection between persons and action (Shotter 1975) this alternative is not available. Even if it was it is subject to severe criticism (Davis 1979).

To speak of the link between an agent and his/her actions in analytical terms is clearly prohibited. That is, to break down the whole of action into intentions, desires, motives, volition and so on. This would conflict with a fundamental assumption of Holism and its related doctrines, existentialism and humanistic psychology. To explain an agent's action in terms of his/her reasons is not to offer a reductionistic analysis. It is the agent's awareness of his/her reasons that is relevant and usually these are presented in global terms (Bandura 1978). For example such reasons as expressed in the sentence "I did x because of y" usually do not unpack into an analysis of intentions, laws of reasoning and underlying beliefs; at least for the holist theorist. Any analysis into components is suspect.
Thus the link between the agent and his/her action simply occurs and given the problems associated with its inherent dualism, it is unclear just how Holism could specify or describe such a connection in any further details.

A related difficulty concerns the status of the agent as a whole. According to Holism the whole transcends its parts and is ontologically fundamental. To attempt an explanation of how and why such an agent exists, describe his/her inner structure and composition, would violate this assumption. This appears to be an anti-analytic, anti-science attitude and has the unfortunate consequence of reinforcing (and initiating) the separation of scientific and humanistic explanation. Although there are essential differences in their subject matter, it does not follow that a different methodology should be utilized in the two domains. This is clearly at odds with the naturalistic position taken in this thesis.

The claim that the concept of causality is not appropriately applied when explaining human behaviour seems to rest on the following premises:

1. If an action is caused, then it is not free;
2. That intentions or reasons cannot function as causes.

Therefore, it is argued, one can only explain action in terms of reasons and not in causal terms.

The difficulty with this line of argument is that it ignores recent work in the philosophy of mind and is thus a hark back to the old double-aspect view of reasons and causes of the 1950's (Scarrow 1981). This work suggests that when behaviour is explained in terms of reasons, it is understood as action. However when it is explained in terms of causes,
such behaviour is understood as physical bodily movement.

But as Davis (1979) and Scarrow (1981) argue, there is enough overlap to enable us to count reasons as causes in the same sense as we view physical events as causes.

That is, in particular circumstances a reason can be a necessary condition for an action occurring, since if the agent did not have a reason, he/she would not have acted as he/she did.

In addition, knowing a person's reasons for an action can enable some degree of prediction and bestow the ability to manipulate him/her and so on.

Thus reasons can be causes despite what some humanist psychologists claim. It then follows that an explanation in terms of reasons can be a causal explanation and therefore it is possible to offer a causal explanation of human action (in terms of reasons). It does not follow from this that the distinction between explanation (reasons as causes) and justification collapses (Rorty 1980). When giving a causal (reason) explanation one is attempting to identify the motive that lead a person to perform a certain action. When justifying a course of action, often the motive or reason is known, and it is a question of appealing to values or principles to justify an action following from it.

Another source of difficulty revolves around the dualism of Holism. Problems such as explaining how the mental interacts with the physical (within and between agents) and the nature of the agent as a "mental" being constitute, I argue, intractable problems for the holistic metaphysical theory. These have been well documented and I will not examine them
any further (Wilson 1979; Margolis 1978). A final area of difficulty relates to the phenomenological strand of humanistic psychology and its link with the assumptions of Holism (via its connection with preserving the wholeness of consciousness and experience).

Phenomenology is a method used to describe and map the contents of consciousness and limits itself to the description of appearance, that is, to how mental contents present themselves. All theoretical talk about the agent and his/her experience is restricted to what is experienced, and it is illegitimate to make inferences beyond what is given (beyond the data (Kendler 1981)).

However concepts such as "self-deception" play an important role in clinical psychology and common sense explanations of human action. The difficulty is that such concepts refer to processes that are, by definition (at least temporarily) inaccessible to the agent. Otherwise he/she would be aware of deceiving him/herself, a paradoxical implication. But because phenomenology restricts psychological talk to what is experienced, and given that self-deception refers to unexperienced (unconscious) processes, it follows that according to phenomenology such processes cannot occur or are irrelevant for psychology. Indeed talk of mental mechanisms and unconscious processes of any kind would not be relevant to an explanation of human action.

I find this unsatisfactory in view of the mounting evidence of the relevance of information processing strategies in explaining the "motivation" and generation of human action (Nisbett & Ross, 1980).
(4) Smoothness

Because many of the above difficulties are inherent in the ontology of Holism it is unlikely that a smooth adjustment of its assumptions is possible. Thus I conclude that it cannot easily (if at all) overcome the above problems and retain its ontology.

(5) Simplicity

In contrast to atomism, the ontology of Holism with its metaphysical dualism, is not an elegant theory. In addition, the conceptual confusions and difficulties add to its lack of simplicity.

In order to remedy this problem a major revision of its ontological assumptions would be necessary. In fact it would require such a radical change that it would be doubtful whether it would still be a Holistic metaphysical theory.

In conclusion the metaphysical theory of Holism contains serious confusions and difficulties. Thus insofar as humanistic psychology is dependent on a holistic metaphysics, it has been seriously undermined. And given the demonstrated dependence of its epistemology and methodology on Holism, it is difficult to see how it can retain its intellectual integrity without radically recasting the theoretical assumptions on which it is based (and thus its metaphysics).
CHAPTER VI

THE METAPHYSICS OF SYSTEMS THEORY

Systems theory has emerged over the last few decades and is the synthesis of ideas from a number of different disciplines, cybernetics, information theory, general system theory and computer based simulation models (Markley & Harman 1982; von Bertalanffy 1971; Sayre 1976; Allport 1958).

In its attempt to integrate the concepts, laws and models of these disciplines a new world view and model of human nature has emerged. The world is viewed as an integrated whole rather than as an aggregate of analyzable components. It is a hierarchically organized structure or system composed of coordinated subsystems (Bateson 1972).

A person is viewed as a bio-social-psychological system with certain unique emergent abilities, for example, consciousness. He/she is able to use conceptual systems and theories to guide and initiate behaviour.

Although systems theory does not entail a materialist ontology it is frequently presented as such in the literature because of the theoretical advantages of doing so. Thus human beings are complex material systems composed of different levels, each of which has a number of interlocking, and hierarchically arranged, sublevels and systems. For example, the nervous system is composed of several functionally and anatomically distinct neurological (sub) systems.

An advantage of a systems approach is that it is possible to conceptualize a system (for example a person) as
purposive or goal seeking without needing to invoke vitalism or mysterious (Zuriff 1985) agents.

We are not stuff that abides but patterns that perpetuate themselves; whirlpools of water in an ever-flowing river.¹

Wuketits (1984) claims that a systems view of human development emphasizes the evolutionary emergent nature of the process. He argues that the driving force of nature can be traced to the complex interaction between the various systems in the world. This is a dynamic, process orientated view of the development of human nature, with the concept of organization playing a central role. Even supposedly inert, passive matter is, in fact, more accurately viewed as self-organizing (Prigogine & Stengers 1985). Man/woman is viewed as the most complex living system who, because of his/her complexities, possesses the (emergent) powers of consciousness, language and so on.

Capra (1984) captures the systems view of human nature and the world nicely:

Living systems are organized in such a way that they form multi-level structures, each level consisting of subsystems which are wholes with respect to their parts and parts with respect to the larger wholes . . . All these entities - from molecules to human beings, and so on to social systems - can be regarded as wholes in the sense of being integrated structures, and also as parts of larger wholes at higher levels of complexity.²

¹Weiner, quoted in Markley and Harman (eds), Changing Images of Man, p. 137.
²Capra, The Turning Point, p. 27.
Surveying the literature in clinical psychology there appears to be two therapeutic systems that seem to presuppose a systemic (systems) metaphysical theory, cognitive therapy, including cognitive-behavioural interventions, and family therapy (Grossberg 1981; Haley 1978).

According to De Mey (1982) one of the major assumptions of cognitive psychology is that people are complex information processing systems. A consequence of this is that the world of (our) knowledge consists of a complex assembly of linked cognitive structures. Information processing involves an active interpretation of the data. Perception is not a passive process and is conceptually mediated by cognitive models.

Even the self, according to De Mey, is explicated in information processing terms, rather than viewed as transcendent or given a special status. It is constituted by numerous sub-routines dealing with various facets of the "self" from bodily image to social roles. The "I" of selfconsciousness becomes the executive "agent", selecting and combining the particular sub-routines of the self (Armstrong 1968).

Margolis (1980) in a paper on information processing analyses of psychological processes stresses their attempt to explain molar activities such as thinking and feeling in terms of sub-molar cognitive routines and processing, while Sayre (1976) and Dennett (1981) develop theories of mind and consciousness based on cybernetic and information processing concepts, such as feedback. Sayre claims that all life processes utilize information exchange and, in a sense, information is the basic category of life. Dennett claims that
having an inner life, according to an information processing view, is a matter of having a certain sort of functional organization.

Neisser (1967) and Bourne et al. (1979) both argue that whatever we can know about the world has been mediated by complex systems (cognitive systems) which interpret and categorize sensory information.

Schwartz (1982) in his excellent review of cognitive behaviour modification identifies the major premise as the claim that cognitions (selfstatements, beliefs, problem solving strategies) are important determinants of behaviour. Although different theories allocate a different role to "cognitive factors", Schwartz stresses the importance of such processes in controlling behaviour. He prefers not to reduce them to behaviour and sees cognition as involving complex organized internal structures and processes that have a certain degree of autonomy and obey their own laws.

Bandura (1977, 1978) argues that from a social learning perspective, psychological functioning involves a continuous reciprocal interaction between environmental, behavioural and cognitive factors. He stresses the importance of regarding cognition as playing an important role in the (causal) control and acquisition of behaviour.

In addition to the above work there have been a number of recent studies in clinical psychology that argue for the importance of cognition in controlling behaviour and the necessity of referring to cognitive processes when explaining behaviour. For example, Turk and Salovey (1985a, 1985b), Mahoney (1974, 1977, 1980), Meichenbaum (1977), Phillips (1981), Grossberg (1981) and Hollan and Kriss (1984).
I argue that by virtue of their cognitive component and Schwartz's (1982) demonstration that it is a mistake to regard cognition as behaviour, such approaches are systemic.

Bunge (1979) argues that a system consists of three factors, components, an environment and a structure, which is constituted by relations between the components. In information processing or cognitive models, the various sub-routines and higher level routines are viewed as interacting with each other and ultimately the environment.

This is a dynamic active view of human nature and is able to accommodate the multi-levelled interlocking nature of systems thinking. The cognitive processes are (usually) hypothesized to be "embodied" in the nervous system (Harré 1979) and as physical processes interact with other physical systems. The higher level cognitive functions emerge as a consequence of the complex interactions between the subsystems or sub-routines. Thus more complex functions emerge out of simpler ones without being reducible to them; that is, they are emergent.

From the perspective of a realist philosophy of science, cognitive models are attempts to explain how we really function. This involves attempting to describe the underlying generative mechanisms and "powers" etc. of (internal) cognitive structures. These models are not, from this perspective, simply hypothetical models or convenient fictions or calculating devices (Suppe 1974).

Therefore, I conclude that any therapy that includes a strong cognitive component necessarily presupposes a systems approach. This is because information processing models
function according to systemic principles. I will outline these in more detail when discussing the systemic metaphysical theory. At this point I simply note that the key concepts of systems thinking (Keeny 1982) are those of organization and information exchange. And cognitive psychology is essentially concerned with the organization of cognitive structures and processes and information exchange.

Given the recent emphasis in clinical psychology on cognitive factors this suggests a movement beyond simplistic atomistic-mechanistic theories and a logical positivist or empiricist epistemology. Cognitive theorists stress the (relative) autonomy of the cognitive level, although acknowledging the importance of environmental factors in contributing to the control of behaviour.

A survey of the recent work in family therapy indicates that a systems view is being increasingly employed to explain family dynamics and to guide therapy. The family is regarded as a system composed of individuals (subsystems) and it is argued that its functioning is best described at the family system level. That is, the system has properties that the individual components lack (Haley 1978).

Searight and Openlander (1984) claim that what they call systemic therapy (a new brief problem orientated therapy) is derived from a different epistemological perspective than traditional therapies. From this perspective problems arise out of confused patterns of communication rather than from internal conflicts or inappropriate learning experiences. Thus disturbed or deviant behaviour is seen as an expression of dysfunctional relationships. The emphasis is on the family or group rather than the individual.
Keeney and Sprenkle (1982) describe family therapy from an ecosystem approach and claim that it is based on an epistemology derived from cybernetics, ecology and systems theory. This epistemology views families as wholes or eco-systems rather than as an aggregate of individual or isolated parts. The way to understand, to obtain knowledge of the system, is to focus on the patterns of communication.

Dell (1982) discusses the cybernetic concept of homeostasis arguing that it is concerned with the nature of the organization of the system as opposed to concern with its parts. He claims that systems thinking prohibits talk of aspects or parts of a system (for example the family) as separate from the whole. He also rejects the use of the concept of linear causality when describing or explaining the functioning of the system.

Allman (1982) argues that the patterns of systems reflect those inherent in nature. He views therapy as the attempt to assist people to move from a linear view of the self to a more systemic view; and as a consequence, see themselves as part of the natural world.

The therapeutic techniques used in family therapy (Katz 1984; Haley 1978) such as reframing and symptom prescription, are based on the assumption that the family system has a certain degree of autonomy.

Although some of the theoretical discussion in family work suggests a Holistic rather than a systemic approach, I argue that in general family theorists are attempting to formulate a systemic world view.

However individuals are usually inadequately treated in such theoretical work and family theorists seem confused about
what, if any, contribution they make (as individuals) to the
family's problems.

Indeed there seems to be little room for the possibility (a plausible one) that an individual within a family may have his/her own problems which require therapy without the family necessarily being adversely affected or involved.

Thus family therapy requires an ontology or metaphysical theory to support its own theoretical assumptions and techniques. I believe that the metaphysical theory of systemicism, as outlined by Bunge (1979, 1983) is able to provide this ontology.

In his theoretical and philosophical works Bunge (1969, 1979, 1980, 1983) has systematically developed a comprehensive systems ontology. He argues that the world is composed of (material) systems of qualitatively different kinds. It has a number of different levels, with corresponding sub-levels: physical, chemical, biological (this includes psychological processes) and social levels. He differentiates it from atomism and Holism.

... it should not be mistaken for the popular "systems philosophy", a new version of holism according to which everything is a system (false) and the patterns of being and becoming are basically the same at all levels (false). Our systemist philosophy is neither holistic or atomistic - it acknowledges the variety of properties, kinds and patterns found in the world ... everything interacts with other things so that all things cohere forming systems.¹


¹Bunge, A world of Systems, p. 245.
Bunge (1969) argues that each level, which is composed of sublevels and subsystems, represents the emergence of new processes and relations. One level is viewed as newer than another if it has emerged from it. Some of these emergent properties exist only at the particular level at which they first appeared. Bunge claims that every level within the world (or universe) has emerged via the process of evolution from a pre-existing one.

A natural or concrete system is constituted by components that are "coupled" to one another. That is, changes to one affect the other component(s). This is particularly evident, Bunge argues, in the functional or property systems of which living organisms are constituted, and are. Every system has (Bunge 1980, p. 32):

(a) a **composition** - the set of all its components.
(b) an **environment** which is the set of things other than the system(s) that is external to it;
(c) a **structure** which is the set of relations among the various components and between the systems and its environment.
A system can be open or closed. While an open system exchanges information with its environment, a closed system does not.

Bunge summarizes the key features of the systemic metaphysical theory (p. 245-52) as follows:

(1) Every concrete thing is either a system or a component of one. The world consists of a variety of levels (a level of structure) and every thing belongs to at least one level.

(2) Every system, except the universe, is a subsystem of some other system.

(3) Every level has some degree of autonomy and stability.

(4) Every system is involved in some kind of process. It is active.

(5) Every change in a system is lawful; a system operates in a lawful way.

(6) The system is a complex object whose components are interrelated. It has a composition, environment and a structure.

(7) Whatever is a system is a whole but not vice versa. For example, an aggregate of (atomistic) components constitutes a whole, but not a system.

The concepts of epistemology and explanation that are derivable from the systemic metaphysical theory and its associated meta-philosophy, reflect its view of reality as a stratified dynamic whole of interlocking systems.

A systemic ontology suggests an epistemology where the various levels of the world are reflected in the structure of knowledge; that is, in the theories formulated to explain
the way the world really is. Thus it also suggests a semantic realist thesis: since the world is a multi-levelled structure, our scientific theories ought to aim at giving us knowledge of it. In a sense, to claim that the world is a stratified whole is to imply that we are capable of discovering this and therefore that some sort of realist thesis is the proper thesis to guide the formation of scientific theories.

The various sciences attempt to explain the processes of the particular levels. For example, physics attempts to explain phenomena at the level of atoms and elementary particles and their interactions. Individual sciences also possess a certain degree of autonomy as each level of the world has (emergent) properties and processes that are unique to it. This implies that a radical reductionism would be mistaken because for each level's emergent properties, the whole is greater than the sum of its parts.

However there is scope for a moderate reductionism (Manicas & Secord 1983) as the understanding of each level can be increased by linking it to the underlying levels. This follows directly from the hierarchical or multi-levelled structure of the world. Each system is composed of various subsystems at different levels, which according to the assumptions of a systemic ontology interact. For example a human being is composed of physical, chemical, biological and psychological subsystems as well as belonging to social and cultural systems. An explanation of his/her behaviour may involve describing processes of more than one level.

Thus we can increase our understanding of cognitive processes by describing how they interact with neurological systems even though they have a certain degree of autonomy.
However every system and its processes ought to be described and investigated primarily in terms applying to its own level. As argued above, there is no place for a radical reductionist strategy. It is as important to identify intra-level laws (if not more) as it is to identify inter-level laws.

Because of the stratified nature of reality and the complexity of emergent processes, phenomena linked to particular systems may not be observable. This suggests a realist strategy of formulating models and theories to describe the underlying mechanisms. And because, according to the systemic ontology, the world consists of dynamic, evolving systems, any epistemology would need to take the form of the evolutionary one outlined above. Thus the epistemology would be naturalistic and evolutionary, and would be utilized within a particular view of philosophy of science, semantic realism. I argue the appropriate epistemology etc. that a systemic ontological theory would generate would be that outlined in Chapter Three of this thesis.

In a similar vein, the view of causality implicit in systemicism is a powers one (Harré & Madden 1975). That is, a causal description concerns the relation between the nature of a particular system and the conditions that enable the various "powers" or capacities of the system to be exercised. This follows because of the rich internal structure of a system and the interaction between the various levels and sublevels. The powers of a system are linked to its nature or structure which, under the appropriate enabling conditions, produce the observable effects or processes characteristic of
it. An explanation of certain processes of a system would take the form of first attempting to identify its powers or capacities and then describing the mechanism by virtue of which of these powers are exercised. As mentioned in Chapter Three, the link between a systems nature or powers and responses (effects) is a necessary (natural not logical) one. The denial of a statement describing these effects (given its nature) would be inconsistent with the theoretical description of the systems structure or nature. Given the sort of thing the system is, certain effects (in the appropriate enabling conditions) must follow.

A systemic metaphysical theory is deterministic in a weak sense, because of its assumption that all change and processes of a system are lawful (although Bunge does allow random processes to play a small part under extreme conditions). However at the level of persons or agents, this lawfulness may be more appropriately described in terms of reasons and intentions. This stress on the lawfulness and organization of systems also suggests the possibility of accounting for purposive or goal seeking behaviour in systemic terms rather than by reference to an inscrutable agent.

How is the epistemology and methodology that is linked with a systemic ontology related to those utilized in cognitive and family therapy and psychology?

It is clear from the above and earlier discussion that both family and cognitive therapy by way of their theoretical assumptions require a systemic metaphysical theory to "justify" their systems orientation.
For example, if cognitive processes are viewed as based or embodied in the central nervous system, then certain psychological functions or processes (must have) emerged from the complex biology of human beings. That is, complex human abilities emerged out of the interaction of more basic sub-routines. This is an emergent materialism:

Emergent materialism . . . holds that the C.N.S., far from being a physical entity - in particular a machine - is a bio-system i.e. a complex thing endowed with properties and laws peculiar to living things . . . (. . . Mental processes would thus be C.N.S. functions and far from being purely physical processes, they would be emergent relative to the physical level).¹

Of course this only follows if cognitive theories are viewed from the perspective of scientific realism.

Thus the systemic implications of a materially orientated cognitive approach suggests the emergence of cognitive processes and their relative autonomy, as well as the relative autonomy of the sub-routines. As I have already discussed the system nature of an information processing perspective I will now turn directly to the issue of methodology.

Various levels and sublevels are presupposed in a systemic cognitive view, the biological, chemical cognitive, social, cultural and so on. Thus it would be appropriate to use different intervention strategies or methodology, when investigating different levels (Fodor 1975). Although I phrase the following details in a hypothetical way (one could, etc.). This is only to illustrate the methodological possibilities associated with a cognitive approach. A review of the relevant clinical literature (Hollon & Kriss

suggests these possibilities have been utilized. For example, in a clinical or therapeutic context, one could focus on cognitive products (particular thoughts, images and self statements), cognitive processes or cognitive structures (Hollon & Kriss 1984). The methodology used to monitor thought or beliefs and those used to modify them would depend on the particular system or subsystem within a level targeted.

Similarly when explaining human behaviour, attention could be focused on a number of levels, from the biological to the social or cultural (given the importance of such factors on the development and "maintenance" of cognition - Bandura 1977). If concerned with the interpretation of the agent's action from his/her perspective, it would be appropriate to focus on the cognitive products; his/her reasons, motives, fears. A concern with cognitive processing would lead to an investigation of an individual's problem (for example) solving skills or thinking style. While a focusing on cognitive structures would lead to a study of beliefs, attitudes, values, concepts and so on. Clearly all these sublevels and systems are relatively autonomous, although they interact or are systemically related. The methodology used to change or record phenomena at each of these levels would be different.

Similarly the methodology used in family therapy reflects its systems orientation. For example when exploring problems from a family therapy perspective (Haley 1978) the whole family is involved and a collective, emergent picture of the various problems identified. Additionally, any intervention usually involves the whole family and its communication.
An important part of the assessment of a family consists in the observation of family transactions and processes within the interview.

As outlined above, the epistemology and related concept of explanation seems consistent with a naturalistic epistemology and a realist philosophy of science. Both reject a simple linear view of causality and stress the importance of such systemic processes as reciprocal causality feedback etc (Bandura 1978). That is, because a system is continually exchanging information with its environment and actively interpreting (adapting itself on the basis of) this information, a simple linear concept of causality is inappropriate. Both cognitive therapy and psychology and systems therapy stress the importance of reciprocal changes and "feedback" processes between a system and the environment or its own subsystems.

In conclusion I argue that both cognitive and family therapy presupposes system concepts and therefore a systemic metaphysical theory. This is reflected in their stress on the relationship between system components and the acceptance of emergent properties. The methodology and epistemology of both also reflect those derivable from a systemic ontology: a non-reductionistic strategy with a focus on the interaction of systems, between systems, subsystems and various levels, in order to understand and explain their functioning.

I will now critically evaluate the systemic metaphysical theory.
Observational Nesting

A general comment is that a systemic ontology manages to accommodate the virtues of both atomism (its emphasis on analysis) and Holism (its realisation of the importance of wholes and emergent properties), without inheriting their vices.

A first point is that a systemic theory is consistent with the world as described by modern physics and biology with their dynamic systems or ecological view.

It is also able to accommodate the various aspects of a person's functioning within a single model, particularly his/her biological (Midgley 1978), psychological and social facets. Thus an individual is composed of complex physical, chemical, biological and (emergent) psychological processes. He/she is also a member of various social groups, a society and a particular culture. That is, is a subsystem in a larger system.

These various levels and systems are clearly linked and related to an individual's development. The values, beliefs and attitudes he/she "internalizes" via socialization (by way of the influence of social groups) mediate his/her action, and thus indirectly, contribute to maintaining and creating the social world. The various systems that constitute an individual interact and control his/her functioning.

This multi-levelled complex model of human nature is multi-disciplinary; it is a unified view of human nature. Thus a systemic ontology is able to accommodate data from various scientific disciplines without difficulty. Biology, chemistry, psychology, political theory, sociology, cultural
factors and so on, are all necessarily involved in the explanation of human functioning and behaviour.

A systemic ontology (and the subsequent particular research programme derived from it) is able to account for the interaction of the "mental" and the "physical" without reducing the former to the latter. Since psychological processes emerge from C.N.S. processes, they have some degree of autonomy. However they are also influenced, as interacting systems, by other biological and chemical (etc.) system processes.

Because this is an emergent materialism there is no ontological gap between the mental and physical. Thus it avoids the reductionism of atomism and the dualism of idealism.

Since the systemic view of the world is dynamic, the same must hold for human nature. We are active creative beings, who continuously exchange information and energy, with our environment. In a sense we are "open-ended", by virtue of being open systems, and evolve because of our receptiveness to the influence of other systems. This view coincides with the intuitive truth of existentialism: we create our own nature (Shetter 1975, 1980).

(2) **Fertility**

The unified view of the world and people of the systemic metaphysical theory is immensely fertile.

The research programme in psychology generated by such an ontology is correspondingly rich. By virtue of its emphasis on the organization of a system, it is able to accommodate such humanistic notions as purposive (goal seeking) behaviour. The agent, as a complex information processing
being, interprets and evaluates the incoming data "against" his/her values, beliefs, attitudes, world view, etc. He/she adjusts his/her behaviour or interpretation accordingly by a process of positive or negative feedback.

At one level, within the human system, an agent's reasons and intentions are important determinants of his/her behaviour and therefore must figure in an explanation. However other factors also enter into the control of behaviour and on occasion may totally do so. An individual is also a member of a group or social system and sometimes may be so strongly influenced by them that they effectively control his actions.

Sometimes the systems at one level dominate another. Thus both the humanist stress on agent control and the radical behaviourists on environmental control, can be accommodated within a systems framework.

It may also be possible to integrate some of the concepts of "depth" psychology within a systemic psychological model (Nisbett & Ross 1980). If one accepts that a certain degree of information processing is unconscious, then it may be possible to accommodate such psychodynamic (Hall & Lindzey 1970) concepts as "projection" or "denial" or even "self-deception".

This becomes a more promising research programme if cognitive structures incorporate both affective and "cognitive" elements (Hollon & Kriss 1984).

For example, rather than describing someone who makes pejorative remarks about a minority group as harbouring all sorts of unconscious conflicts and fears, it may be possible
to reinterpret this from an information processing perspective. That is, translate such "motivational" talk into talk about an inaccurate use of the representativeness heuristic (Tverskey & Kahneman 1974). It is not that the above individual really hates certain groups or whatever, but rather that in conditions of uncertainty he/she has made a false social judgement. That is, used a global category unwisely, and so on.

A systemic ontology encourages and allows for such a synthesis and promotes exciting research possibilities. For example, locating the exact neurological systems involved in certain psychological processes or exploring the relationship between social cognition and ideology.

(3) Internal Consistency

A systemic metaphysical theory appears to bypass many of the difficulties that atomism and Holism incurred.

Although it stresses the lawfulness of system functioning it does allow for reasons to play an important causal role; that is, reasons can be causes.

However reasons are not always the causes and on occasions the person's environment or certain physiological processes may effectively control behaviour. For example, a malfunctioning endocrine system may cause a person to behave in certain, unadaptive, ways. True to its naturalism and evolutionary epistemology, just what behaviours are controlled by what systems under what conditions is not decided a priori. It is decided by research, although because of the fallibilist nature of the knowledge yielded by theories, it is provisional.
The problem of free will has caused some difficulty for radical behaviourists and humanists.

The former because they refuse to allow "inner" processes a causal role. The latter because of the opaqueness of the link between an agent and his act.

The systemic view places the emphasis on the relative autonomy of the system rather than on free will (Harre 1979). Given that psychological processes have a certain degree of autonomy and that a person is able to monitor, control and (sometimes) change acts (switch cognitive routines) he/she has "free will". He/she is able to change or alter his/her behaviour upon the basis of reasons as well as do certain things because he/she wants to, etc. If a person is not coerced by others, is able to change or to act in a certain manner, then for all intents and purposes he/she has "free will" (Davis 1979). The fact that people's reflectiveness or evaluating is rule or law governed does not imply that they are not autonomous. For the very rules, etc. they are using to actively interpret the world and to make conscious decisions, constitute for them reasons for acting in certain ways.

Another point to consider is that human beings are open systems and therefore there is a certain degree of randomness (relative to the individual) inherent in individuals' lives. Unexpected events, new information, changing social circumstances, can all contribute to changing their particular nature. That is, their beliefs, behaviour, cognitive strategies and so on.

By way of example, Prigogine and Stengers (1985) argue that in far from equilibrium conditions, a systems functioning
becomes increasingly vulnerable to input from "chance" factors and these "chance" or arbitrary factors can initiate a process of self-organization and change in "nature" of a system.

I have discussed the systems view of agency in several places above. The key point is that a person can act according to reasons (as an information processor) and that these reasons can function as causes. What people think and feel, therefore, is important, but it is not the whole picture. The other levels and systems involved in human functioning also contribute to, and at times control, behaviour. An added advantage of the systemic view of the agency is that it ceases to be mysterious. The concepts of "self" or "agent" are explicated in information processing terms, without thereby being reduced to simpler functions (De Mey 1982). Although the whole is not reducible to the functioning of its components, it is influenced and constrained by them. That is, the properties of agency, etc. or the self, have emerged from simpler components.

The systemic ontology permits a rich epistemology, view of causality and thus concept of science. As we are evolving beings we do not decide a priori what we can know. We depend on science to tell us what our current limits are (fallibly). Our metaphysical, ethical, philosophical theories are important and also answer to the "facts". In the case of the social sciences, science is not restricted to using a quantitative methodology. The reasons and intentions of a person are as important as biological, social and psychological mechanisms when explaining behaviour.
It is up to us to decide what methodology is appropriate under what conditions. Of course any answers to this question will be conjectural; theoretical speculations that in turn are testable and revisable.

(4) Smoothness

Because of the general nature of its concepts, and its relative newness, the systemic metaphysical theory is rather vague and loose. This is also a consequence of its immense fertility.

However, in principle, it is able to accommodate data from any source, facts, values, theories, theories of theory and so on. Because of its flexible epistemology and rich complex world view, its ability to make adjustments in the light of conflicting data is promising.

(5) Simplicity

I argue that the systemic metaphysical theory outlines a unified and elegant ontology that, in principle, is able to accommodate the multi-faceted nature of people and the world. It is simple, but not simplistic.

In conclusion, a systemic ontology seems to escape the incoherencies and difficulties that accompany atomism and Holism. In addition, it is an extremely fertile theory and is able to suggest interesting research possibilities within and between (via its inter-disciplinary stress) the various sciences. And by virtue of its epistemology and naturalism, it has an inbuilt flexibility and openness to new ideas. It seems to capture in a general framework the kind of world
described by modern science. However it does not impoverish or alienate people. As agents we have some control of our actions and our lives, although we are not transcendental beings. We are material beings of incredible complexity, in a continual dynamic interchange with our environment. We are creatures of meaning and lawfulness, chance and order.
I argue that the issues discussed in this thesis are important and relevant to all fields of psychology, whether experimental, "theoretical", or applied. This claim follows from my earlier argument that all areas of psychology, by virtue of being concerned with or utilizing people, necessarily involve the models debate. In doing so, they also involve themselves in the broader issues arising out of the metaphysics of models of human nature. The failure to recognise or acknowledge this, I claim, is due to the dominating influence of empiricism or positivism in modern psychology.

In this chapter I intend to concentrate purely on the implications for clinical psychology. I have two major reasons for doing so.

(1) Clinical psychology is an important theoretical "target" by virtue of its uncritical acceptance of empiricist metaphilosophical principles and its influence (in therapy, etc.) on the lives of people. This bias reflects itself in clinical psychology's tendency (I argue) to drive a wedge between theoretical and practical or therapeutic issues. That is, the methodological imperative reigns supreme: concentrate on technique or method. This reflects the empiricist attitude toward the relationship between "theory" and observation.

(2) Models of human nature affect the way psychologists interpret and intervene in people's lives. This is a
serious enterprise, possibly even a moral one. Therefore if there are issues and doubts relating to models of human nature, I believe it is important to relate them to clinical psychology.

I will now discuss the implications of the metaphysics of models of human nature for clinical psychology.

A first point concerns the problem of eclecticism that faces many practising clinicians. On the one hand their academic training has stressed the importance of such epistemic values as logical consistency, justification, coherence. On the other, the practical demands of dealing with a wide variety of clinical populations and problems seems to require a therapeutic eclecticism. The difficulty is that many of the different techniques are derived from different theoretical assumptions. And given the arguments outlined earlier, this seems necessarily to be so. Thus the clinical psychologist appears to be in the unenviable position of embracing different and frequently incompatible theories by way of using different techniques. In a nutshell, a clinical psychologist is in danger of becoming a therapeutic entrepreneur.

The systemic metaphysical theory, by providing a unified multi-faceted model of human nature, provides a means of integrating a clinician's work. It encourages the use of a variety of therapeutic and research strategies that reflect the systemic and multi-level nature of people; we are social, behavioural, cognitive, affective and biological beings. Each of these levels contains relatively autonomous systems and subsystems that contribute to the control and initiation of human functioning and action. Thus each needs to be taken
into account. It is legitimate and necessary to match the techniques, assessment instruments and therapy with a particular level or system. And in general, an adequate assessment will need to take account of all these levels. A clinical psychologist can therefore embrace a technical pluralism without being in danger of implying a muddleheaded theoretical eclecticism.

A second point emerges from the first. The problem with utilizing humanistic, behaviour or psychodynamic (etc.) techniques exclusively, is that it tends to make therapeutic observation unhealthily theory laden. That is, what is considered symptomatic of a particular disorder depends upon one's theoretical bias. Additionally, what counts as successful therapy also depends on the particular model of human nature presupposed, and therefore, the broad metaphysical theory underlying the psychological theory.

For example, for a humanist psychologist a healthy individual is (roughly) one who is able to spontaneously express his/her feelings and (intrinsically good) drives. The repression or suppression of drives and needs would be unhealthy and probably (ultimately) lead to psychopathology.

However for a psychoanalytically orientated practitioner a person is not viewed as essentially good or non-destructive. That is, people are thought to necessarily harbour destructive forces. In order to ensure the continued existence of civilization, it is believed necessary to teach people to suppress or control some of their drives and impulses. We are necessarily beings in conflict and there is a gap between our primitive impulses and the rational values of the (mature) ego:
The fateful question for the human species seems to me to be whether and to what extent their cultural development will succeed in mastering the disturbance of their communal life by the human instinct of aggression and self-destruction.¹

Thus a model of human nature places theoretical constraints on what constitutes successful therapeutic intervention. And given the associated epistemology of the metaphysical theories on which (for example) humanistic psychology and radical behaviourism are based, they do not have the conceptual means to rectify the situation.

Radical behaviourism because its empiricist epistemology refuses to recognise the theory ladenness of observation and methodology. Humanism because its existential and phenomenological strands leads it to postulate a radical dualism between explanation in the social and natural sciences. There is no room for a modification of theory in light of the data.

However a systemic ontology with its associated naturalistic realism and evolutionary epistemology does not fall into the same trap. Although recognising that a theory and its methodology are internally related, it allows for the possibility of testing a theory within a specific framework. There is some kind of theory neutral language: observation terms are conceptually not (necessarily) theoretically laden (Hooker 1974).

Thus one's model of human nature is testable by reference to the facts yielded by particular scientific

¹Freud, Civilization And Its Discontent, p. 92.
theories, and is revisable if "refuted" by the data. This is possible because a metaphysical theory is viewed as a theory (and therefore explanatory), not as a set of conventions or unassailable assumptions.

Although there is still a theory-ladenness about one's methodology it is not "vicious"; theories are still testable, revisable (Boyd 1983).

This, in conjunction with the multi-faceted systems view of human nature, suggests that a psychological research programme based on a systems ontology is able to bypass these difficulties.

In conclusion, when practicing therapy or involved in assessment, it is important for psychologists to remember they are not engaged in a theory-neutral or metaphysical neutral enterprise. The observations they make, the test instruments used, the way data is analyzed, the way a person is conceptualized, all depend directly on the particular psychological theory presupposed and ultimately, the underlying metaphysical theory.

A second point is the essentialness of a multi-modal and inter-disciplinary approach in treating and assessing clients. Because we are complex systems, composed of various levels and sublevels, there are numerous strands to our nature. It is important to keep this in mind.

A systems ontology generates a pluralistic, though unified, practice in clinical psychology.


106.


