WORKING PAPER 437

USEFUL PHILOSOPHY

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"... what psychologists and social scientists really do
need is not a technical language, nor - Heaven forbid! -
the philosophers' help in defining our concepts, but some
assistance in assembling a framework within which to
scrutinize the sorts of language we actually use; the
sorts of truth we try to grasp" (Liam Hudson [1]).

1. Approaches to philosophy

1.1 Introduction: what philosophy is about

Many people, even academics, go through their lives with little or no
contact with philosophy in any formal sense. From such a distance, it is
often perceived as "dry" and essentially useless - full of discussions of
apparently trivial examples. The purpose of this essay is to argue, from an
amateur's standpoint, that while this view is understandable - particularly
if the 'wrong book' was selected for initial scrutiny - it is mistaken. A
knowledge of what philosophers are concerned with is useful in that it can
sharpen modes of thought, it can lead to the development of critical
faculties - even if the gains seem intangible: as at the end of Wittgenstein's
Tractatus the ladder, when climbed, can be thrown away.

One of the problems in 'starting' is indeed the triviality of the
examples. It is more fruitful, therefore, to be able to relate the concerns
of philosophy to one's own field as a substantive topic. I first studied some
philosophy as a student in the 1950s and I was engaged by two things: the
apparent contribution to clarifying one's own thinking in a general way (and
I confess to not being too worried myself about discussions on whether the
present King of France was bald or not); and applications in my substantive
areas (mathematics and physics) through logic and the philosophy of science.
Not surprisingly, I brought myself up as a logical positivist - but more of
this shortly. My first recommendation, then, is to pursue philosophy through
other substantive fields. The substantive areas I want to keep in mind in
this essay range from science through social studies to the arts. I want to
argue, for instance, that all knowledge is essentially of the same kind across
this range of fields.

With this background, I now want to give a broad answer to the question in the section heading: what is philosophy about; and then I will explain the structure of the rest of the section. It can be argued that philosophy has three main branches: ontology, epistemology and ethics. Ontology is concerned with questions about the nature of reality: what exists? Epistemology is concerned with the nature of knowledge: how to acquire knowledge; truth. Ethics is concerned with value systems and what we can possibly mean by 'good' and 'bad'. As an ontologist, I want to start out at least as a 'naive realist'. That is, I will make the assumption that objects exist, that we all have some of the same kinds of characteristics as human beings even though we cannot 'know' other minds; and so on. I will largely postpone until a later section any discussion on ethics. Our search for immediate utility will thus be focussed on epistemology. The first subsection, therefore, is focussed on some traditional epistemological positions, and this serves to introduce some of the jargon. Then we explore some new routes into philosophy by investigating a series of linked propositions from contemporary philosophical and social research. This approach has the advantage that it does not necessarily force us into one of the traditional 'schools': we can rise above inter-school battles and concentrate on gaining the insights which each of the different schools has to offer. This enables me to offer a structure for the rest of the essay in this last subsection of this section.

1.2 Some epistemological positions

I will explore in turn three examples of a greater variety of possible positions: positivism, phenomenology and structuralism. They illustrate the adoption of different foci and this helps to support my ultimate proposition that we need insights from all of them, albeit with modifications which take into account contemporary philosophical discoveries — so we will not be seeking merely a simple synthesis.

Positivism has its modern origins in the 'Vienna School' of the 1930s and was further developed in Britain in the 1950s by such exponents as Karl Popper and A.J. Ayer. It is concerned with methods for determining the meaning of propositions or theories. In its purest form, it appears as *logical* positivism with a programme to relate propositions containing any theoretical concepts to ones containing only elements of an observation language by a

process of logical deduction. This presupposes the existence of an
unproblematic observation language describing the 'facts' of the world. A
subsidiary aim of the programme was the rejection of metaphysical propositions
as essentially meaningless. Once propositions had been established as
meaningful, then their truth could be explored through the process of relating
them to propositions of the observation language whose truth could be simply
asserted.

This programme had appealed to me in my student days partly because of
its contribution to the clarifying of thought in general; and partly because
of its more obvious applications in the philosophy of science: it could help
to give meaning to abstract and complex theoretical concepts in science. The
contemporary view of positivism is much less charitable. It is labelled as
being 'value-free' and 'neutral'; as implying that the only route to
knowledge is scientific; and that by focussing on 'observation', it neglects
deeper ideas. My own current view is that much of the critique is valid but
overstated. It is more productive to ask: what do the ideas of positivism
offer when perceived through contemporary filters? I would readily concede
that the idea of an unproblematic observation language - and we will return
to this later - is untenable but that by replacing 'observation' by
'experience', many of the benefits of positivism can be retained. This, for
example, allows propositions concerned with value to be meaningful, because
our concepts of value relate to experience. It also allows us to move beyond
a narrow conception of science. The notion that the positivist neglects
deeper ideas is simply wrong (and this critique in turn is probably based on
a mistaken view of science as essentially inductive): the hypothetico-
deductive structures explored by authors such as Popper can be used to help
to clarify 'difficult' propositions. To argue against this use of positivistic
thinking is to argue for maintaining muddle and mystique.

The second school is that of phenomenology. There is a shift of focus,
possibly of scale. The centre of the picture is the individual human being
and his or her experience. How do people really think and feel? Thus the
approach is more subjective, but also, phenomenologists would argue, more
important and real: an assertion of the primacy of experience against the
game-playing of more formalist philosophers. It is an approach which can
be seen as essentially humanistic; but to someone brought up as a positivist,
unduly subjective, even almost mystical, certainly obscure. It is worthwhile

to keep in mind in our general survey, however: partly because I too would like to be humanistic; partly because, as will be seen, whatever I can recover from the shreds of objectivity will be through the concept of inter-subjectivity and human experience.

The third school is 'structuralist'. This is really a label which can be used to characterise a variety of schools, but the feature they have in common is the argument that phenomena can only be explained by reference to deep structures rather than by 'surface' observation. The Marxian approach, which begins to mix inextricably philosophy and social theory, can be seen as an example of structuralism (though it was not, of course, a term available to Marx himself). More recently, literary criticism has been a centre of structuralist thinking and research. One of the most exciting ideas to be recognised as part of structuralist thinking is that language itself is a product of underlying deeper structures. There is a linguistic approach to this in the writings of authors like Chomsky and a social one reflected in literary criticism - by authors like Raymond Williams and Jonathan Culler. We will return to these and other structuralist approaches later.

It is easy to see how the protagonists of the different schools can criticise each other. Both positivists and structuralists can criticise phenomenologists for being too individualist and subjective; for not being able to develop the apparatus which can be used to build explanations of phenomena. Phenomenologists would argue that the practitioners of each of the other schools were failing to centre their work on the most important subjects: individual human beings. Structuralists would argue that positivists, rooted in scientism, inductive procedures and observation, cannot achieve depth of explanation, especially in the social field. Some positivists, at least, would simply respond that that is not the case and invoke their use of concepts like 'depth of explanation' to refute the charge. They would counter by accusing structuralists of falling into the trap of working with concepts which are meaningless or which cannot be adequately articulated.

It is at this point, therefore, that we need to seek alternative foci; and then argue that these provide a basis for enabling us to recover the best of all the 'school' positions.

1.3 Alternative foci: new routes into philosophy

I am going to make five linked assertions. The backing for these will come later; though (as with all good ideas?) much of what they assert can be seen as common-sense once their content has been admitted as part of the subject matter of philosophy.

The first proposition is that *knowledge is essentially a social product*. Epistemology cannot ultimately be divorced from society and social processes. This recognition provides ammunition for reconciling what appear as difficulties between the different schools of philosophy sketched earlier.

Secondly, *language is made up of elements whose meaning has evolved socially*. Since knowledge is formulated in language - or that part of it which we are discussing here is - this proposition can be seen as a corrollary of the first. But it is important in its own right. It means, for example, that we can no longer assume the existence of an unproblematic observation language.

Thirdly, *meaning is established as a consequence of communication between people*. This proposition begins to identify the social processes which produce the flesh of the first two. It also provides the basis for creating *relatively* 'objective' meaning from subjective experience: meaning out of inter-subjective communication.

Fourthly, *'truth' is not something absolute but the result of agreement, a consensus*. This idea is rather shocking at first, since we each tend to believe that we 'know' when something is true or not. However, once we get beyond the bounds of logical and mathematical tautology, a little thought shows this not to be the case. This idea also begins to provide the basis for putting scientific knowledge on the same footing as other kinds of knowledge without being narrowly positivistic. Most science is 'true' because in the processes of inter-subjective communication associated with scientific analysis and experiment, it is relatively easy to reach agreement about what is true and what is not. In other, arguably socially and philosophically more interesting, fields, this is not the case.

The fifth proposition is that *much language and discourse has an ideological content*. A belief as expressed in concepts in a language can be described as ideological if based on values, not universally held, which underpin a position unconsciously and implicitly. This is a corrollary of all the previous propositions. It is a warning that in all our scrutiny and use of language, we have to wear critical spectacles and to be continually aware of the possibility of accepting ideas at face value when they first need to be stripped of an ideological content.

1.4 Ways forward

In the previous section we have, in effect, created a circle: social processes are conducted through the medium of language and in relation to 'knowledge'; language, meaning and knowledge are products of social processes. As with all circles of this kind, there is no wholly satisfactory place to break into it. We proceed in the following order: language and meaning (Section 2); truth (Section 3); theory and explanation (Section 4); value, ethics and politics (Section 5); and some concluding comments in Section 6. We start, therefore, by trying to elaborate ideas in the philosophers' domain building on a common-sense knowledge of social processes; and we progress to sections which start to apply the concepts in the generation of deeper knowledge about those processes. In the end, the ideas which are developed can be related back to traditional philosophical schools; and we can apply them subsequently to more substantive examples.

2. Language and meaning

2.1 Introduction

We proceed in three stages. First, we examine some of the implications of the idea of language as a social product for the 'observation' language; and given the difficulties, we begin the account of how language can evolve at all. Secondly, we explore in more detail the processes of inter-subjectivity and its literary equivalent, intertextuality. These sections can be seen as a preliminary to a survey of various approaches to meaning. This both allows a substantive discussion and also facilitates the introduction of some of the more technical terms which inhibit the amateur in coming to grips with the literature. These include hermeneutics,

semiotics and deconstruction. It is in the context of the last-named of these that we can also keep track of the problem of ideology in language.

2.2 Beyond the 'observation' language.

We can begin by recognising the absurdity of the idea of an externally-given observation language. We can also note that common sense tells us that the meanings of many words change over time. With this background, one way to break into the problem is to ask how we *learn* a language. At the root of our learning is some kind of ostensive definition: a mental recording of association between a word and an observed phenomenon. This does presuppose the existence of a social environment in which a language has evolved. This at least gives us a starting point and it conforms with common sense. It is also not inhibiting: the social process of language evolution continues; mistakes could be made; and so on. We can now note that even when meaning is established by association, the concepts involved might have a 'theoretical content. The naming of objects will involve some sort of classification scheme, for example. This will be one of many possible schemes and the one adopted may or may not facilitate a greater depth of understanding. In some circumstances, 'problems' will bring about a shift to a new classification scheme. We will postpone a deeper probe into the way concepts relate to theory as well as observation to a later subsection.

Mary Hesse summarises the position which is reached in what she calls a post-empiricist philosophy - focussing on natural science - in the following five points. First, 'natural science data is not detachable from theory'; secondly, 'theories are not models externally compared to nature in a hypothetics-deductive schema, they are the way the facts themselves are seen'; thirdly, 'what counts as facts are constituted by what theory says about their interrelations with one another'; fourthly, 'the language of natural science is irreducibly metaphorical and inexact'; and fifthly, 'meanings in natural science are determined by theory; they are understood by theoretical coherence rather than by correspondence with facts'[2].

We will return to the issue of 'coherence' in our discussion of theory later. Meanwhile, we note the beginnings of an emphasis on metaphor and return to this in our subsection on meaning below. It is helpful in a sense that Hesse summarises the position in relation to the extreme case in the

study of the nature of knowledge: the natural sciences. What can be said in that context can clearly be said in others. It is the basis also of an argument that scientific knowledge is no different *in kind* from other types of knowledge. In her own summary, she argues for the kind of circles we have already sketched: '... the logic of science is *necessarily circular*: data are interpreted and sometimes corrected by coherence with theory, and, at least in less extreme versions of the account, theory is also somehow constrained by empirical data'[3]. We have begun to break into this circle by the emphasis on social process and we continue the journey in the rest of this section.

2.3 Inter-subjective communication; intertextuality

Our understanding of words and concepts is in the first instance an agreement between ourselves and a 'teacher' - whether an actual person or, say, a book - about what something means. This understanding will be rooted either in ostensive definition as discussed earlier or in chains of signs each element of which 'defines' or 'explains' the preceding one until we get to a point of understanding. It is straightforward to see how language has evolved through processes of this kind over a very long period. It is also probably of crucial importance for modern culture that these social agreements have been recorded in books, and hence the concepts of inter-textuality. Inter-subjective communication is a social process rooted in *experience*; intertextuality is a *record* of those processes, of agreements and disagreements, of experience.

This provides a powerful account of what language is. It has the advantage that its description of words and concepts in no way presupposes the existence of exact definitions and this is why much discourse consists of trying to establish and mutually agree about the terms to be used. Every social interaction is a translation from one individual's language to another's and back again. It is in this notion of translation that we can appreciate the difficulties of the picture offered, but also its power. Hesse notes that Quine and others have proposed a *principle of charity* for translation between languages: 'we try to translate the sentences of any alien language, particularly the observational ones, in such a way as to make as many as possible come out true in our language'[4]. We will return to this principle in the context of 'theory' below.

This picture also extends our concept of experience and helps us to connect the arts to social studies. Steiner, for example, emphasises the role of literature in extending our experience (of both actual and possible worlds): 'The writer in a high culture of received, challenged, unfolding genres will apprehend and filter fundamental responses to 'life' through othe works. He does not stumble on experience raw ... Such men live most intensely, most vulnerably, in the act of reading ...'[5].

2.4 Approaches to 'meaning'

We have offered the beginnings of an account of how we give the elements of language meaning. We now look at more formal approaches to this topic. It is also worth emphasising at the outset that there is perhaps a shift, reflected in a focus on meaning and related topics, in Anglo-American philosophy which builds on a longer-standing continental tradition - what Mary Hesse calls 'the hermenentic understanding of the human sciences as developed in Continental tradition from Dilthey and Weber to Gadamer and Habermas'[6]. Nozick, for example, now emphasises the importance of the study of meaning and explanation in philosophy rather than what he sees as coercive argument and a concern with proof[7]. Dilthey imported the term hermeneutics from theology to denote an emphasis on the interpretation and understanding of human experience. So both longer-standing and newer threads of thought join together in emphasising the importance of this kind of interpretation.

In the rest of this section we review briefly in turn the contributions of semiotics, structuralism and deconstruction to theories of meaning and ultimately to interpretive understanding. We then draw a number of conclusions.

Semiotics is the study of the interpretation of signs. It has its origins in the work of the philosopher C.S. Peirce who argued that all meaning is conveyed through signs. Each sign involves, he would argue, a triadic relationship between object, sign and interpretant - another sign. Meaning, therefore, is determined by a complex set of these relations. Potentially, there is an infinite regress, but this must be stopped by something like ostensive definition at the appropriate point. The most obvious application of these ideas is in the field of language, but they can also be applied to any sign systems. Even phenomena in some circumstances can be represented as signs, and in that sense semiotics represents one of the beginnings of structuralism.

The other root of structuralism is in the work of Ferdinand de Saussure in linguistics. He made the distinction between *parole* and *langue*: the speech act, and the *system* of elements of the language, including its rules. The simplest speech utterance, the phoneme, is defined in terms of the *differance* between it and other phonemes (which is an interesting definitional idea) and the structuralists task in the analysis of language can then be seen as twofold: the articulation of this set of 'differences' to define the elements; and the understanding of the set of rules.

Both attempts, Peirce's and Saussure's, to articulate meaning in language involve circularity. Peirce's system of signs makes it clear that all language is metaphorical. In the context of literature, Jonathan Culler writes: 'semiotics is a metalinguistic exercise. It attempts to describe the evasive, ambiguous, paradoxical language of literature in a sober, unambiguous metalanguage. But ... [the] discourse which attempts to analyse the metaphor does not itself escape metaphor. There is a metalinguistic function - language can discuss language - but there is no metalanguage, only more language piled upon language'[8]. And on Saussure: 'Discursive conventions can only originate in discourse; everything in *la langue* as Saussure says, must have first been in *parole*. But *parole* is made possible by *la langue* ... it is in the nature of codes to be always already in existence, to have lost origins'[9].

Deconstruction takes the structuralist argument further and, indeed, some would argue, takes us into the realms of post-structuralism. Originally associated with the French philosopher-critic Jacques Derrida, deconstruction has been defined as 'the teasing out of warring forces of signification within the text'[10]. Derrida builds on Saussure's notion of meaning being determined by difference, but takes the argument a step further. By explicitly exploring the 'opposite' of the concepts in a text, it is often possible to say something about power relations implicit in a text. An example is the way in which much writing about men presupposes the existence of women, in their absence, as an inferior supporting class. Deconstructionist criticism, therefore, takes us to the last lap of our argument by relating meaning to ideology.

In this section, we have shown how to begin to develop the idea that knowledge is a social product by moving beyond those words which can be

defined ostensively to exploring systems of relations between concepts, and also the notion of the set of rules which determine the structure of the language. We should bear in mind, of course, that this will not be a *fixed* set of rules any more than the meaning of words is fixed.

3. Truth

3.1 Beyond the correspondence theory: truth as consensus

When we use, work with and analyse propositions, we not only want to understand the language and that they should be meaningful, but also to be able to investigate whether they are true. The traditional model of truth lies in the correspondence theory: deductions can be made from propositions until they can be related to 'facts' in the observation language and then we can compare the *correspondence* of these propositions with those facts. This kind of reasoning lies behind the so-called hypothetico-deductive method in science. It has already been implied in the discussion of language above that doubt must be cast on this picture because there is no such thing as an independent objective observation language. However, the notion of feedback implied by the hypothetico-deductive method can in some way be retained. We still want a procedure which will investigate 'truth'.

Before proceeding, we must also confront another difficulty which dates back to David Hume in the eighteenth century: the problem of induction. This is the observation that no number of particular instances can establish the truth of a general proposition. The next one may turn out to falsify it. This alone takes us away from the idea of any absolute kind of truth (except in the special tautological case of logic or mathematics). The hypothetico-deductive method does not escape: a test of a theory is still with a particular instance. Karl Popper went some way to resolving the difficulty in a practical way by putting the emphasis on falsification rather than testing for truth in his philosophy of science. This in effect is a description of the scientists' procedure: he or she seeks tests which might falsify a hypothesis. If the hypothesis stands up to this kind of testing, it becomes a well-tested hypothesis, but never a law. Popper, of course, relies on the asymmetry of the true and false relations with respect to induction: no one instance will establish a general truth, but it could prove falseness.

We can now move towards an alternative picture of 'truth'. We embed this in the notion already established above of meaning being established through intersubjective communication. At the same time that meaning is (albeit approximately) agreed upon, then so also could we determine 'truth'. Thus, a proposition is, broadly, true, if the social consensus agrees that it is true. This is a powerful and effective practical idea. There is no difficulty in giving an adequate account of scientific truth in this picture. It is more straightforward than in other areas to agree about meaning (partly because terms can more often be related to experiment and therefore ostensive definition) and equally straightforward to agree, in a Popperian sense, about truth. As we move away from science into more controversial areas, again the picture reflects what happens. If there is disagreement about whether a proposition is true - like: 'Keynsian economics leads to good economic policy' - then this will be because of disagreement about meaning or interpretation (either in relation to theory or 'observation') or because the theory is underdetermined anyway. We can also possibly extend the picture further and recognise that some propositions may be accepted as true by large sections of a society (but not, explicitly, by all) which have a substantial ideological content and which reflect the power relations of that society.

The consensus theory of truth has its origins in the work of the pragmatist philosopher, C.S. Peirce; and indeed has some of the popular connotations of 'pragmatism' about it. Its most sophisticated contemporary variant is in the work of Jurgen Habermas. Hesse's account of the relationship of these ideas is interesting: 'Science is a necessarily cumulative process, defined by the goal of successful prediction which is ensured by its method of feedback control ... questions arise about truth and reality, and here Habermas finds that Peirce's account is ambiguous. On the one hand, Peirce defines 'truth' as the ideal permanent consensus of scientists at the limit of the application of their method of testing and self-correction, and defines 'reality' as the totality of possible true statements. On the other hand, Peirce wants to retain some notion that this set of true statements 'corresponds' to an external reality ...'[11]. In this argument, I started by saying that I accepted the ontological position of a (sophisticated!) naive realist; so I am more concerned with truth than reality. I have also tried to argue that scientific knowledge was not different *in kind* from other kinds of knowledge. An emphasis on science is now creeping back. It is now, therefore, appropriate to pursue this and some related topics by exploring the ideas of Habermas in a little more detail.

3.2 Habermas and the three cognitive interests

Habermas argues that an individual's subjective knowledge can be characterised in terms of three kinds of cognitive interests: technical, practical and emancipatory. Technical interest he sees as related to 'work' and the 'empirical-analytical' sciences; practical interests to interaction; and emancipatory interests to power. He argues that these play different roles, but are also related. It seems to me that these interests can be related to our earlier discussion in the following way. The 'technical' relates to the end of the knowledge spectrum where meaning and truth are relatively easily handled most of the time; practical and interaction correspond to intersubjective communication; and emancipatory interests relate to ideology and power. In one way, the singling out of the technical-scientific goes against our argument for the unity of knowledge, but this is not a serious difference of opinion. Habermas recognised that some kind of intersubjective communication is needed to establish the language of science (and that it is not 'absolute' - we will mention change in science in relation to Kuhn in Section 3.4 below). His distinction, given the relationships, is useful in that he is naming different kinds of enterprises. Indeed, there is some correlation between his three interests and the subdivision of knowledge into science, social science and arts which we used earlier and will continue to use. The distinction is positively useful in two particular ways: first, Habermas, unlike some other social theorists, is at pains to emphasise that he is not setting out to attack science; and secondly, it does emphasise that there are subjects - say social studies and the arts - whose main goals are interpretive.

It is relatively clear now how we can use a consensus theory of truth to give an account of science - and this indeed is not far removed from that offered by some scientists such as John Ziman[12]. We must not lose sight of the issue of truth in relation to the other kinds of knowledge. Here, we can follow Habermas himself, as quoted by Bernstein: 'The *historical-hermeneutic* sciences gain knowledge in a different methodological framework. Here the meaning of the validity of propositions is not constituted in the frame of reference of technical control ... For theories are not constructed deductively and experience is not organised with regard to the success of operations. Access to the facts is provided by the understanding of meaning, not observation. The verification of law-like hypotheses in empirical-

analytic sciences has its counterpart here in the interpretation of texts.
Thus the rules of hermeneutics determine the possible meaning of the validity
of statements of the cultural sciences'[13].

In the light of the earlier section on language and meaning, I would have
to qualify this account in one instance, and to note a grey area in another.
First, while it is appropriate to give emphasis to the interpretation of texts,
it could also be re-asserted that meaning, through this route and other forms
of social interaction, will be determined by experience. Secondly, it is not
clear to me (especially perhaps as an ex-scientist working in social studies)
that the demarcation between the empirical-analytic sciences and historical-
hermenentic disciplines is as sharp as it sometimes appears. Economics, for
example, has a substantial element of both a technical content in relation
to production processes and a social content in relation to, say, the
distribution of wealth. There is an intersting grey area where ideas from
the sciences can be usefully deployed within an essentially interpretive
discipline.

It is valuable to have the recognition of ideology in our earlier argument
articulated more constructively in terms of emancipatory interest. Again,
Habermas himself, as quoted by Bernstein, provides a suitable summary: 'The
systematic sciences of social action, that is economics, sociology and
political science, have the goal, as do the empirical-analytic sciences, of
producing nomological knowledge. A critical social science, however, will
-not remain satisfied with this. It is concerned with going beyond this goal
to determine when theoretical statements grasp invariant regularities of
social action as such and when they express ideologically frozen relations of
dependence that can in principle be transformed'[14].

This, in turn, is a partial response to the previous comment: economics
is located among the 'sciences of social action'. In general, however, we
can expect disciplines like economics to have components from all three
branches of Habermas' 'sciences'.

3.3 Truth and literature

Since emphasis has been given above to science and social studies, it is useful to pick out literature as a representative of the arts as a different kind of example. To fix ideas, let us focus on the novel. In a section on 'truth', the glib start would be to dismiss novels as 'fiction'. Liam Hudson shows us very clearly, as also does our intuition, that novels represent a different way of recording knowledge. He notes that the scientist typically works within the tight confines of, say, an experimental method; and only when he has finished presenting his results is he free to speculate. Then: 'In writing a novel, though, this pattern is neatly reversed. You are required to invent characters and plot, and are subject only to the constraint that these should be very approximately lifelike. But once launched, your characters begin to dictate their own terms; and if you write with any seriousness of intent, you are forced to 'consult' them - as Thakeray pointed out. Will Jill accept a particular overture from Jack? The answer cannot be capricious. The novelist must *unearth* it as he polishes and revises, and do so not just as a broad approximation, as is so often the case in science, but accurate to the smallest nuance'[15].

We return again to issues of language, meaning and truth. In fiction, we are simply dealing with a different language to the scientific one; one which may be much more appropriate for the representation of certain kinds of truth. This focus on literature also allows us to tackle a different problem of 'language translation' - that process which relates writer and reader, and we return to this shortly. We should also remark that the novelist does not simply have to be 'true to life' in terms of direct experience. The artist in general can play a major emancipatory role both by exposing the 'real' underlying nature of the world, but also by exploring possible as distinct from actual worlds. As a final preliminary, we should note that at particular times, there may be rules or conventions of writing, and one of the elements of the structuralist programme in literary criticism is to 'decode' these.

The task of writing, reading and criticism can be seen as language encoding to represent 'something interesting' about life, and various kinds of decoding or 'translation'. The readers' ability to translate may be as important as the writer's to encode if mutual understanding is to be achieved.

Fortunately, all this activity takes place on the foundation of all previous activity of this type - essentially what we have called intertextuality. The critic may have been able to add to this a theory of genres or of the conventions which the reader is expected to adopt for a particular genre: 'The meaning of a work is its answers to the questions posed by a horizon of expectations. To understand the interaction between a work and the reading public we must reconstruct this horizon ...'[16]. Fish goes, if anything, further and presents reading as an active and creative process rather than a state of passive receptivity.

If the understanding between writer and reader can be achieved, then this process has generated some kind of truth. Culler, for example, writes: 'The writer produces truth - the artistic analogue of a scientific law - by metaphor, bringing together two objects of sensations and identifying their common quality'[17]. This sentence would stand some analysis and elaboration in the light of our earlier arguments, but it does give an idea of what a critic sees literature as being concerned with.

3.4 Concluding comments

We have explored briefly different approaches to 'truth'. In the end, the meanings and implications associated with Habermas three kinds of cognitive interest seem to demonstrate most effectively the different kinds of truth, and he begins to offer a picture of the kinds of relationship between them. There are, ultimately, tests associated with experience; but the more significant tests rely on the meaning and coherence of propositions in relation to accummulated knowledge - a social product founded on centuries of intersubjective communication and intertextuality. But there are traps: the possibility of new concepts being developed which are much more powerful than the current ones. This last case invovles the creation of new elements of the 'language', even a new language. If it is effective, it will be adopted through the consensus unless held back by some kind of ideological pressure. This then takes us near to exploring the dynamics of knowledge creation, Kuhnian revolutions and the like.

Meanwhile, we recognise that it is helpful to move beyond language as words and propositions to more complex structures which we might call theories. We proceed to this investigation, with the elements of language and their meanings, with concepts of truth, as building blocks, in the next section.

4. Theories: representations of 'knowledge'

4.1 The nature of theory

Mary Hesse, in a different context, notes that she has tried to avoid the word 'theory' but by talking about laws and lawlike implications has, in effect, given an account of theory: '... a theory *is* just such a complex of laws and implications, some of which are well entrenched, others less so, and others again hardly more than suggestions with as yet little empirical backing'[18]. I have taken a similar path by focussing on language and meaning and the nature of truth, but I end by making the same point. A theory is a complex of propositions related to each other through subject matter or a process of logical deduction. In principle, there will be many different formulations and interpretations of theories in a particular area, but, given 'charitable translation', it is convenient to define a whole set of these as 'the same theory'.

The object of a theory is to provide an explanation of a set of phenomena, historical or anticipated in the future. A significant test of many theories is whether they have any predictive power. But this is not the whole story; there are phenomena which are explainable - one can give an account in terms of higher level concepts? - but which are inherently unpredictable. It is helpful to introduce immediately the idea of level of explanation (or depth). Intuition suggests that there is a spectrum ranging from what would be colloquially called 'description' - though we now recognise that description will include 'theoretical terms' - to accounts which involve higher level and more powerful concepts. One test of level is this: the higher the level, the more possible is it for the propositions at that level to be false. So to be more ambitious, we must continually seek deeper levels of explanation.

With this general background, we can now consider two particular features of theories - their network structure and, typically, their under-determination; and then we draw some conclusions.

4.2 Theories as networks of relations; coherence

A characteristic of a theory, it has been argued, is that it is a *complex* of propositions. In practice, there is a high degree of relationship between many of these, forming a network of relations. Within this network, there will be concepts at different levels - roughly corresponding to the notion of levels of explanation introduced above: the higher the level of the concept, the higher the level of explanation with which it is associated. If we readmit, for the moment, the possibility of observation statements, then we can usefully follow Hesse on Quine: what she calls 'a Quinean theoretical network'. She goes on: 'At the periphery will be singular observation sentences of some kind which are given probability 1. Lower level generalizations of which these observation sentences are substitution instances have probability, conditionally upon these sentences, less than 1... Inference relations, which take us from the periphery to the highest level theoretical generalizations *at the core of* the network, are not only inverses of deductive inferences ... but also include whatever inductive links may be acceptable ... and arguments from *a priori* preferences between hypotheses, for example in terms of their simplicity or analogy with other highly probable hypotheses'[19].

This is a useful account - and at the end even offers some clues about the nature of theoretical development. We can even loosen it up by recognising the theoretical content of observation sentences and then adding links of a different and possibly more direct kind from the periphery to the core.

A striking feature of the evolution of the theoretical network over time is that it acquires increasing degrees of *coherence* and so additions from research must satisfy coherence conditions as well as other kinds of tests. This is not to say, of course, that in some kind of revolution, the whole structure may not be overthrown.

Hesse also draws attention to what she calls '*value-determined* coherence conditions'[20]. She argues that while the sciences largely outgrow these, it is likely that such conditions are an inherent part of social science. This is another way of approaching the notion of ideological content in social theory.

It is a useful step to relate the notion of coherence conditions with intersubjective communicative processes and intertextuality. In this way, we can make connections with Hesse's valuable approach and more conventional social theory.

4.3 Underdetermined theories

We can put together from our earlier analyses a picture of how theories can be 'compared to' experience and, in conjunction with the use of coherence conditions, it is possible to see how theories can be tested. A striking feature of most theories, noted by Hesse, is that they are in fact typically underdetermined: there will be more than one theory which is consistent with the set of available 'tests'. A simple-minded view might be that, then, new tests could be devised; but this fails to take account of the network structure of theories and the coherence conditions. It is also useful to bear this in mind when thinking about Quinean charitable 'translation' between theories.

This leads to the notion of theories not so much being *determined* by whatever tests we can make, but rather being *constrained* by them.

4.4 Concluding comments

By way of summary, we can paraphrase and adapt Mary Hesse on theories. They are constrained by experience; but underdetermined. They should be plausibly coherent. They are subject to revolutionary change and this even involves statements of fact. There may be additional requirements - for example of simplicity. In natural science, value judgements are eventually filtered out and this is one feature which differentiates natural science from social studies. Finally, the driving force of natural science has been successful prediction and control of the environment - what Hesse calls the pragmatic criterion. It would be interesting to explore the extension of this criterion beyond the natural sciences.

In the end, what we seek is better understanding of the framaworks within which we locate our own theories - our own research. In this section, as in previous ones, it is hoped that this understanding can be both constructive and critical.

5.   Values: ethics and politics

5.1   Introduction: building on the earlier argument

This is not the place to attempt to review theories of ethics or politics.
We proceed, rather, by building on the previous arguments and showing how they
relate to the language of value. In Section 5.2, we briefly consider some
implications for the development of theory and in Section 5.3 we consider some
related practical and pragmatic ideas.

How do we begin to explore the language of ethics and politics. It
suffices for present purposes to keep in mind basic concepts like 'good',
'bad', 'freedom' and 'equality' and to bring the previous argument to bear on
elements of language of this kind. We make rapid progress by noting that such
terms are social products and have no absolute meaning. They are given
varieties of meanings in many different circumstances. Much of this meaning
will evolve as the interpretation of experience. In the same way that
scientific propositions can be related to (theory-laden) 'observations',
ethical terms can be related to (theory-laden?) pains and pleasure in
individual experience. There will be some roots here, but this could be
taken as an account of opportunistic hedonism. Our interpretation also
relates to more complex social relations, and then two notions seem plain.
First, it will be valuable to seek a structuralist interpretation of ethical
terms and their use; and secondly, we can expect many propositions involving
these terms to have an ideological content.

But this brief analysis does show that there is, in this account, nothing
intrinsically different about value-terms. They can be related to experience;
they can be interpreted in relation to structuralist theories; particular
attention must be paid to ideology. Analyses will focus on meanings for
individuals, social relationships and, ultimately, power.

5.2 The development of theory in relation to value-terms

As noted earlier, we arrive at a not-wholly-clear dividing line between
science on the one hand and social studies and the arts on the other in
relation to the absence or presence of value-related terms in theories. In
social studies and the arts, the adequate development of theory is made
particularly difficult for two reasons, one already noted. First, meanings
evolve socially as part of a complex shifting social net; and they usually
occur in propositions with a high ideological content. Although inter-
subjective communication plays its usual role, the results will be less clear
than in some other fields. A consequence of this is that meanings will be
different for different groups of people.

The second complicating feature is that among the groups for whom
meanings will be different will be the social scientists and artists who are
involved in theory development and interpretation. They may not agree with
each other and may be using terms which have a different meaning for their
subjects.

It is little wonder that in the fields where we expect to find suitable
foundations on this topic, what we discover is an often-bewildering variety
of theories and approaches: psychology, sociology, economics and politics
for example. All we can do now is to encourage the critical scrutiny of what
is available, trying to absorb good (!) ideas where we can, and recognising
that concepts such as 'power' should be playing a crucial role in any
valuable theory. What contemporary philosophy is offering in this context
is the tools of criticism which immediately serve to demolish (or at least
demand the extension of) what is on offer. Lest progress should seem too
difficult, however, we do conclude this section on a more pragmatic note.

5.3 Policy studies

Suppose public policies are to be developed for the 'public good'. Then
obviously even the brief discussion so far demands a detailed articulation of
the idea of 'public good' and its theoretical, structural and ideological
basis. But this, while a desirable target which should generate
support for research, can actually be a disabling target in the short run.
What needs to be added to the longer-run research programme, therefore, is

a more pragmatic short-run procedure to see if agreement can be reached for achieving 'obvious' improvements; or at least to clarify the area of debate if there is fundamental disagreement.

Consider alternative sets of policies. For each, it is necessary to *measure* their impact; their *incidence* on different kinds of individuals; and two kinds of *weightings* - between different elements of policy and between different kinds of people. Even to attempt all this in the policy arena is to attempt much more than the usual intuitive, subjective (i.e. not genuinely inter-subjective) and ill-informed debate. What can 'useful philosophy' then add to it? First, it should be recognised that the measurements are themselves probably theory-laden. How often, for example, are the assumptions of neo-classical economics accepted implicity and uncritically? Secondly, an emphasis on incidence implies a need to relate the human and social scales. Thirdly, two questions on weighting emphasise that policy decisions will be taken in relation to relative power; and presenting the calculus in this form at least shows this in an elementary way. In all cases, this proposed short-run procedure is only a lead in to deeper research.

6. Concluding comments

The argument can only conclude with a reiteration of the points made in the introduction in the hope, how, that they have at least the beginnings of substance to back them. What is on offer is an account of science which is somewhat looser, but also richer, than the traditional 'compare-theory-with-the-facts' position. The emphasis on 'networks of coherence' and such concepts provides a better description of what science is and therefore a better account of our activities for those of us who claim to spend some time practising as scientists. But this argument can be extended in the direction of social studies and the arts. Theories may be more difficult to formulate but they are essentially of the same 'type' with the additional complication of issues of value, social relations and power. In all cases, what we gain is a much more highly-developed critical faculty and possibly also a better basis for creative work. The argument for the latter rests on there being a better account of the nature of knowledge and a release from what can be a restricting portrait of 'respectable' academic activity. A particular argument

of this paper is also that it is possible to be eclectic; and by implication
that is not usually fruitful to seek to be a member of one particular
philosophical 'school'. It is hoped that the sketches offered will lead to
further reading and ultimately to deeper insights into a range of activities.

Footnotes

(1)	Hudson (1980), p. 452.
(2)	Hesse (1980), pp. 172-3.
(3)	Hesse, op cit, p. 173.
(4)	Hesse, op cit, p. 146.
(5)	Steiner (1972), p. 176.
(6)	Hesse, op cit, pp. xiii-xiv.
(7)	Nozick (1981).
(8)	Culler (1981), p. xi.
(9)	Culler, op cit, p. 103.
(10)	Culler, op cit, p. ix.
(11)	Hesse, op cit, pp. 208-9.
(12)	Ziman (1968).
(13)	Habermas (1971), quoted by Bernstein (1976), p. 198.
(14)	Habermas, op cit, in Bernstein, op cit, p. 199.
(15)	Hudson, op cit, p. 456.
(16)	Culler, op cit, discussing Jauss (1970).
(17)	Culler, op cit, p. 194.
(18)	Hesse, op cit, pp. 94-5.
(19)	Hesse, op cit, p. 148.
(20)	Hesse, op cit, p. 133.

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