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VARIETIES OF STRUCTURALISM

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1. Definitions; origins and chronology

A general definition of structuralism is something like: 'particular events can only be understood (explained, given a meaning, interpreted) if related to a broader structure (which in some sense has generated them)'. At this level, it is similar to systems theory and perhaps other approaches which incorporate interdependence, the importance of relations, or the like. The purpose of this essay is to pursue some more restricted ideas of structuralism, together with this more general idea. The linkages between particular approaches and the general idea (in different terminologies and manifestations on both sides) themselves turn out to be interesting and to be of crucial importance in evaluating any species of structuralism.

The particular definitions stem from the work of C.S. Pierce in philosophy and Ferdinand de Saussure in linguistics. Their ideas, particularly Saussure's, have been applied across a wide range of disciplines in a variety of ways. It is also useful to note at the outset that some work in particular disciplines either contemporary with, or even pre-dating, that of Pierce and Saussure can be reinterpreted, with hindsight, as essentially structuralist in the general sense and for both completeness and their inherent interest, these need to be added to this review.

It seems best, therefore, to start by tracing the development of structuralist ideas more or less chronologically, but starting with the particular forms of Pierce and Saussure. These forms are then related to the evolution of the general idea - all this in three subsections of section 2. We then proceed to a wide-ranging sketch of applications of both particular and general ideas in different disciplines, beginning with linguistics and proceeding via psychology, anthropology and social theory to literary criticism (which is where, in the so-called Cambridge English debate, much of the current public controversy about structuralism is to be found). This is all done in section 3. In section 4, I indulge myself by exploring the possibilities of using structuralist ideas in my own discipline of human geography. In the concluding section, I try to draw the threads together and to make some concluding (and evaluative) comments.

A rough sketch of the chronological-disciplinary approach taken in sections 2 and 3 is offered in figure 1. I have tried to distinguish applications of the general idea (G), semiotics (S), the linguistic model (L) and the 'informal' linguistic model (IL).

2. Structuralist ideas

2.1 Pierce and pragmatism; towards a theory of signs

The essence of Pierce's pragmatism is the view that the meaning of a concept or a proposition is determined by its consequences (or, might one add, potential consequences?). But Pierce tried to take this idea much further by articulating the way in which thought processes worked and how meaning was communicated. He introduced

the concept of 'thought-signs', and it is his theory of signs which connects him to modern structuralism.

We can follow Gallie[1] and note four properties associated with Pierce's theory: (i) meaning is conveyed through signs (which are usually arbitrary in nature); (ii) signs involve essentially triadic relations between sign, object and interpretant. The interpretant in this case is *another sign* - not, as many have reckoned, the listener or reader; (iii) every sign needs another sign to interpret it - but the infinite regress is to be avoided pragmatically (including the acceptance of someone else's authority in articulating meaning); (iv) the meaning of signs arises from a complex set of relations. Gallie writes:

> "... the meaning of any sign - the way it stands for its object - can be understood only in virtue of the ways certain other signs point to, represent, or more generally bear on, the object of that original sign ... meaning ... (cannot) ... be fully grasped ... before or unless its 'consequences' are appreciated."

Later, he emphasises this point further by writing:

> "... all properties are relations; only understood in the context of some law ... their 'regularities' ... ."

In this last case it is perhaps also worth bearing in mind some connections to Russell on definitions. The infinite regress would be stopped, I suspect, in his work by ostensive definition at some point in the chain; and the notion of 'regularities' probably connects to Russell's set-theoretic ideas of definitions: the set of all things of a type essentially defines that type of thing. The apparent circularity here can be avoided, as in Russell's and Whitehead's definition of a number[2]

The study of the theory of signs is called, by Pierce, semiotics. Since the meanings of signs (which are also the only means of thinking and communicating) are determined by their relationships with other signs, the connections of Pierce's work to the general idea of structuralism is clear. Since language provides the most obvious instance of a set of signs, it can also be directly studied using the discipline and concepts of linguistics, the study of language, as well as in philosophy. However, Pierce's semiotics also has a potential usefulness in relation to other sign systems and then seems to be close to the 'general idea' and in this sense to have some advantages over Saussure's linguistic framework. This is something to be borne in mind for later.

2.2 Saussure and the founding of structuralist linguistics

Saussure's *Courses generales de linguistiques* was taken from the notes of his students and published posthumously in 1916. It shifted linguistics from a diachronic stance to a synchronic one: essentially from a concern with the history and evolution of a language to the study of the structure of one language at one time. (This introduction alone illustrates one of my favourite themes: that when there is a major shift of stance, in practice, at least for a time, it is a complete one rather than an eclectic synthesised one; and this causes a problem for later in this instance as it has done in a number of other fields.)

We will outline most of Saussure's contributions in the context of later developments in the discussions on linguistics in section 3 below. Here we introduce only the most important ideas in their barest detail[3]. First, there is a crucial distinction between

parole and *langue*. The first is a speech act; the second is the system of elements of the language including its *rules*. (The latter is one of the most important concepts of structuralism; more specific than 'relation' and something to which we will return.) Saussure argues the need to focus research on the understanding of the language. But the approach is a mixture of reductionism and structuralism. There is an emphasis on the simplest speech utterance - the *phoneme*. A second major idea is then that a phoneme is recognised in terms of the difference between it and all other phonemes - so that even at this level, a relational perspective has to be adopted. It could be said that, from this basis, linguistics is seen as having two main tasks: understanding the system of phonemes and their meanings; and articulating the set of rules which determine the grammar of the language. The first kind of study takes us towards understanding words, and the second, sentences. This is worth spelling out because it shows the implicit hierarchical structure of linguistics even in relation to these simple, but obviously important, concepts.

It is also worth noting for a later part of the argument that the early structuralist linguists were essentially *functionalists* in the sense that they accepted the phonemes at a particular time as given and sought their meanings in terms of their functional relations with each other, particularly functional differences.

2.3 The 'general idea' of structuralism

As many authors point out, if structuralists are concerned with 'form', then the subject is as old, at least, as Plato and Aristotle. However, even in terms of the 'general idea', we restrict ourselves here to more modern history, initially following the argument of Williams. This enables us to work towards an important distinction which is not always stressed between (in this case structuralist) *method* and *theory*.

Williams[4] notes the early notions of 'structure' or 'structural' were concerned with 'the mutual relation of constituent parts or elements of a whole as defining its particular nature ...' and he writes of structure as 'the internal framework'. He notes that this can be applied either to, for example, engineering structures or to language, but that in the latter case, the concern is with a living process.

He also notes the distinction between 'function' (performance) and 'structure' (organisation) in anthropology and sociology. The difference in emphasis between functionalist and structuralist accounts is of the greatest importance. But this is to do with the hypothesis which is being made about the society which is being studied - about what is *determining* (or at least predominating, since two ideas like this are sometimes compatible to a degree). He notes the point made above that early structuralist linguistics was essentially functionalist - the study of a particular language at a particular time - and had much in common with functionalist anthropology.

Williams is explicit on the close relationship between the ideas of structuralism and those of systems theory. It is useful to have him as an ally as we begin to try to disentangle what is useful about structuralism (or systems analysis, say) as a *method* as distinct from the rightness or wrongness of particular hypotheses about substantive systems (which, in particular cases may or may not use the ideas of structuralism). This kind of question is also tied up with the use of analogies across theories and between disciplines, and there is some sorting out to be done in that context too. We begin this sorting out by looking briefly at some of the fields which have used 'systems' concepts, and we note the timing of these contributions and their influence on each other.

One obvious starting point (which also offers a useful contrast because it is 'natural' science) is the use of systems concepts in biology. These were introduced in the 1930's by authors like von Bertalanffy[5] (who also sketched a general systems theory) and Woodger[6]. There were similar developments in ecology in the study of plant and animal communities with stress being laid on the consequences of interdependence through competition for resources and prey-predator relationships. Overall, at that time, the ecologists were probably more successful than the biologists: they could produce results which could be seen to work. In the biology case, it was not that there were not 'systemic' problems, but probably that they were too difficult and there were too many 'simple' problems still available for conventional biologists to continue to work on. But the notion of an 'organism' and the concepts of ecology

offered some attractions to those in other disciplines who had 'structural problems' - by which we mean phenomena apparently 'governed' by a high degree of interdependence. It is to some of these that we now turn.

Sociology offers an interesting starting point. Bottomore and Nisbett for example (together with Moore in the same volume)[7] note the introduction of systems' theoretic or structuralist ideas from the time of Comte (or, indeed, Vico) and progressing via Durkheim to Spencer, Park, Burgess and Talcott Parsons. But, and this is the essential point here, the underpinning hypotheses of these different authors were typically disparate. Comte was essentially a positivist systems theorist, much ahead of his time but easily criticisable now; Durkheim, as we will see later, was the nearest to a genuine structuralist in the usual sense; Spnecer used the biological analogy of the organism; Park and Burgess used the ecological analogy; Parsons was concerned with large systems and the interdependence and *functions* of their elements. Those authors using analogies have done so too crudely; those using the concepts of systems theory, Parsons in particular, have added particular hypotheses about societies - in Parsons' case, functionalism - which are not wholly acceptable[8]. There are also differences according to whether the treatment offered is static (synchronic) or dynamic (diachronic). The analogies have persisted to the present day - in socio-biology, and in some instances of systems theory which still use a functional framework as in some schools of political theory.

What we need to do is to be able to sort out what is distinctive and useful about the structuralist method (and indeed the methods of systems theory and those of other adjacent fields) from the particular hypotheses and frameworks (sometimes analogies) which may distinguish (or condem a particular school. Systems analysis (as a method), for example, should not necessarily be thrown out of the window because Talcott Parsons used some of its concepts in a functionalist theory which is now discredited. One step towards this goal rests on the observation that the successful use of analogy in the development of theory can be said to turn on the existence of a higher level idea, or concept, or method, which is applicable in each of the two particular instances (even though the thought processes which generated the use of the analogy may not have operated in that way).

There is another dimension which can be used to give insights into different forms of structuralism. I have called this, in another context, the partialness-comprehensiveness of an approach(9). In the structural case, we can ask the question: how much of the system's behaviour - or the behaviour of the system's elements - (phenomena, events or whatever) are determined by structuralist hypotheses? In the (usually unlikely?) cases where comprehensiveness is claimed, there will be little or no 'freedom' for the elements of the system. In this sense structuralist thinking can be seen to 'attempt to eliminate people' (as a 'free' element - behaviour becomes wholly determined by structures). This is illustrated in the work of Foucault for example(10). But what needs to be borne in mind in relation to the examples below is that it is possible, fruitfully, to be partially-structuralist in

approach. If we add further to this the possibility of dynamic analyses instead of just static ones (diachronic linked with synchronic), we can also usefully note Williams' distinctions between orthodox structuralism, where there exists structures which determine outcomes and which are '*permanent* constitutive human formations' (my italics), and genetic structuralism (following Goldmann) 'which still emphasises deep constitutive formations, of a structural kind, but which sees these as being built up and broken down at different stages in history ...'. The second notion seems much more attractive than the first, particularly since the first can be taken as a special case the 'truth' of which is a matter of empirical investigation.

Three more remarks can usefully be added at this stage so that the ideas are lodged in our minds to be related to the various examples as we proceed. These are concerned first with Weaver's classification of systems; secondly, the possibilities of applying some exciting new results from mathematics (even in fields which are not, at first sight, mathematical); and thirdly, the relation of structuralism to some particular ideas from related fields such as Marxist theory, particularly in relation to ideology and the perception of reality.

Weaver's ideas arose in the context of funding scientific research[11]. He argued that there were three kinds of problem in science (or, I would argue, types of system): simple, of disorganised complexity and of organised complexity. The first type is characterised by a small number of variables being needed to describe the system and was typical of Newtonian science. The

second involves complexity and therefore a large number of variables but with the elements of the system not being strongly linked. General methods were evolved for solving these analytical problems, first in physics, and later in many other disciplines. The third category - organised complexity which involves large numbers of variables and strong interactions or interdependencies - can, in the light of the first two, be now seen as essentially structural in the general sense. Weaver argued that the problems in this third category constitute the most important and difficult problems in modern science, and that no general methods are as yet available for solving such problems. This is an observation to which we shall return.

In recent years, a field of mathematics has developed which is concerned with change in complex systems[12]. It can be shown that if there are many interdependencies in a complex system, and some nonlinearities - such as the existence of scale economies for example - then there is the possibility of discrete change (at certain critical parameter values) in the form (or structure even) of the system. This is a particularly important general contribution to the theory of evolution of complex systems and in principle is relevant to most systems for which the concepts of structuralism are relevant. This is another subject to which we shall return.

Finally, it is worth noting at the outset that Williams[13], in his review of the Cambridge structuralism debate, gives much attention to the relationship of structuralist ideas to other stables, such as Marxist theory. This is important in relation to the way reality is percevied in a structuralist analysis - particularly

in relation to the significance of 'ideology' in this respect. We will return to the substantive issues involved later, but the point is worth noting early because it is relevant to the discussion of some examples.

At the end of this rather long introduction to the 'general idea' of structuralism, we can note, following Weaver, that we can expect the problems tackled by these kinds of ideas to be important ones; and we can expect there to be, at least at first sight, a great variety of possible approaches (some incompatible with each other for reasons which have nothing to do with structuralism *per se*). It is hoped that the length of the introduction can be justified as providing a framework for the critical but constructive analysis of the examples which follow. There are then a number of broader issues to return to in the light of the general framework and our experience with the examples, and we do this in section 5.

3. Applications of structuralist ideas

3.1 Introduction: another look at disciplines, methods and theories

In this section, we proceed mainly by example through a range of disciplines within which structuralist ideas have been applied. We presented a map of these in section 1 as figure 1 within which we distinguished different breeds of structuralism: linguistic (L), 'informal' linguistic (IL), semiotic (S) and general (G). In practice, there is relatively little of the semiotic in a general sense; there is a lot of the linguistic, and some of the general (though we cannot consider all varieties here). Because all

disciplines use language as a means of communication and for the formulation of theory, and because the linguistic structuralist model has been used, directly or indirectly so often, it is appropriate to begin with linguistics and to give it a special position on the map. It is also perhaps useful to begin to think of mathematics as an alternative *language* to help us handle complexity in certain circumstances, and this in a sense, bears a similar relation to other disciplines as does linguistics. These can then be seen as the top part of a redrawn map which is shown as figure 2. The remaining disciplines are seen as concerned in a fundamental way with individuals and societies, and we distinguish them by scale, working from left to right. Literature and history are exceptions to this since their subject matter can, in principle, operate at all scales. There is a sense in which the writer (or the historian) is contributing a view of society which mirrors, in its potential subject matter, all the material of the human and social sciences. (In figure 2, we distinguish a concern for individuals, for groups, and for societies, though, as we have indicated, there are strong interdependencies between the scales. Literature is probably at its strongest for essentially technical reasons at the individual or group scales but this is not an inherent limitation.

It would obviously be possible to add other disciplines from the arts to which structuralist ideas have been applied: fine art and music would be obvious examples. However, this takes the author more obviously than in the case of literature beyond his competence and so they are pursued no further here.

We then add to the map the basis of the idea outlined in the previous section: that it is useful to distinguish *method* from *substantive theory*, at least as a first approximation. In the figure, a range of alternative (mainly structuralist) methods are shown together with a range of alternative substantive theoretical positions. The latter group has been chosen on the basis of fairly wide applicability. In each case, we have a box of 'other methods' and 'other theoretical positions' to indicate that we are using particular instances to illustrate potentially more general ideas. It is also necessary to say what is meant by a substantive theoretical position which has wide applicability. A working definition is that it is something which runs across disciplines as usually defined. This then excludes very specific theorising which is peculiar to a particular context (defined in relation to a particular discipline's subject matter, to its substantive systems of interest).

Usually, a particular piece of analytical work will then be made up of a contribution from the ideas of a particular discipline, a method, and a theoretical stance. Some of these elements may be missing in particular cases. If a practitioner within a specific disciplines, for example, does not engage him or herself with general methodological or theoretical positions and ideas (which will usually mean that the work is impoverished in this respect), then there is only one dimension to the classification of the 'type' of work; similarly, there may be a two-fold classification. We will see examples as we proceed. To fix ideas, we can indicate the notion of a niche within this general field of study by taking, say, anthropology × structuralist × functionalist and identify work

from the school of Levi-Strauss. The advantage of this kind of exploration is that it shows immediately that there are a great many positions which can be adopted. In relation to each contribution to the examples below, therefore, it will be a useful exercise for the reader to attempt to classify the contribution in this way. This will help to build up a more structured(!) picture of what is meant by 'structuralism'.

3.2 Linguistics

There are many presentations of the ideas of linguistics and their wider applicability. A good author to follow initially is Jonathan Culler who maintains his critical sense while seeking the maximum advantage from the ideas he is presenting. In this introduction, therefore, we follow Culler and his book *Structuralist poetics*[14].

Culler begins by pronouncing himself not very interested in what I have called the 'general idea', saying that it is too vague. This view can be countered, but it is useful to have a presentation of linguistics from the viewpoint of someone who wishes to explore the application of that particular model more widely, and that is Culler's starting point. He offers us, usefully, another definition of structuralism which fits the linguistic model better than the more general definition. He sees the basis for applying the linguistic model more widely as resting on the ideas that 'social and cultural phenomena are not simply material objects and events but objects or events with *meaning*, and hence *signs*; and ... they do not have essences but are defined by a network of relations both internal and external'. The second part seems to be more

concerned with the way in which 'meaning' is constructed rather than a more general concept of 'relation'. And this exposes what seems to me the weak part of this kind of argument: the focus on 'meaning'. This concept seems to be overworked once it moves beyond linguistics and the interpretive part of literary criticism. (In fact, later, Culler does argue that the objective is to *understand* social and cultural phenomena better. But the stance is clear: phenomena can be taken as signs, and these can be treated as though they were part of a language.)

In the rest of this subsection we discuss critically the 'key' concepts of linguistics identified by Culler.

(1) Langue/parole. These terms were defined earlier. Culler introduces them here with the emphasis on *rules* rather than behaviour. This emphasis, of course, is also useful in relation to the general idea of structuralism. It is also helpful to insert here, because it is relevant in a number of contexts later, Chomsky's notions of *competence* and *performance*[14]. The first of these is particularly important because it involves a deep and unconscious understanding of the rules, the grammar, of the language which makes the competent individual able to understand sentences he or she has never heard before. This provides a basis for exploring the meaning of 'competence' in this sense in other fields of application, for other 'languages'.

(2) Relations. It is the *differences* between objects 'which the system employs and endows with significance'; these are the functional differences. Culler writes:

> "... relational identity is crucial ... because in formulating the rules ... one must identify the units on which the rules operate and ... discover when two objects or actions count as instances of the same unit ... (and) also ... it constitutes a break with the notion of historical or evolutionary identity ... structural analysis does assume that it will be possible to break down larger units into their constituents until one eventually reaches a level of minimal functional distinctions".

This is all helpful, but there are at least three comments to make on the position which is revealed by these quotations so far - not necessarily as a criticism of Culler, but of the position he is presenting. First, I cannot understand the need to argue for an *absolute* focus of synchrony. Secondly, there is an interesting reductionist element in the argument in the search for the smallest unit. This is the contrary direction to most systems analysis but can be made compatible if it is recognised that a hierarchical structure can be introduced to relate 'units' at difference scales - and hence also, sets of rules at different scales. Thirdly, there is an emphasis on 'functional' units which, together with the absolute focus on synchrony, seems to close off the investigation of the evolution of new functions. This may be acceptable in linguistics but, as we have already hinted, is not an attractive proposition to many social scientists.

There is also an emphasis on 'the reduction of the continuous to the discrete (as) a methodological step of the first importance' and this is extended to an emphasis on 'binary opposition ... as a fundamental operation of the human mind'. This seems to go further

than is necessary, but is an issue to be borne in mind. It does begin to indicate how structuralists, particularly as we can imagine and will see in psychology, sometimes begin to make inferences from signs about how the human mind works; but there is perhaps a danger in a limited structuralist model here.

(3) The theory of signs. Culler follows Saussure as developed by Levi-Strauss. He argues against a simple 'decoding' theory of signs and recognises the problems of complexity, following Pierce in this respect.

(4) Discovery procedures. There is an interesting discussion of the extent to which linguistics offers a general method for 'discovering' the underlying structure or system. he argues that, in general, attempts have not been successful. (There is an interesting exception: Saussure's ideas were picked up and developed by American linguists who were interested in Indian languages which had never been translated. Only by using structuralist synchronic methods could they be 'decoded'). There are some interesting implicit questions here about whether the procedures sought are inductive or deductive - in effect, whether they are a set of general (discovery) rules or not.

(5) Generative and transformational grammars. The 'rules' in linguistics are the 'grammar' of the language. A grammar (or, in other disciplines, some other underlying structure or rule system) has to be generative in the sense that it can be used to provide meaningful sentences not previously thought of (and such sentences can be understood by 'competent' linguists). It is *transformational* if there is a kernel of sentences (or whatever) at some level of

deep structure which, on transformation, produce a greater variety of sentences in surface structure.

We will use these kinds of concepts in the applications of the linguistic model in other disciplines at various stages below.

3.3 Psychology

We take Freud as an example of a structuralist psychologist, though this is a post-hoc interpretation. His work is structuralist in two senses. First, his theory of individual behaviour is based on concepts associated with the unconscious mind - sex drive, death wish, id, ego, superego, libidinal energy budgets and so on. Together, these constitute a structure which, he argues, determines much behaviour. So this is an example of a structuralist theory in the sense that a model of underlying structure is assumed (when mixed with 'experience') to *determine* behaviour.

Much of the evidence offered by Freud and his followers for this theory rests on the interpretation of dreams. The elements of dreams are 'signs' to be 'decoded' the meaning of which reflects the structures of the unconscious mind. This particular task is close to that of the linguists' in attempting to decode an unknown language. So Freud's work on the interpretation of dreams can be seen in this light though, to my knowledge (and oddly if this is the case), no one has attempted to apply *formally* the linguistic model in this context.

Freud is thus a structuralist in two ways. His overall theory is so in that it is built using structuralist ideas - though not using the linguistic model, nor indeed any other general structuralist model. Secondly, he has a 'language' decoding problem in the interpretation of dreams. We have structuralist substantive *theories* but no emphasis on the development of, or use of, general structuralist *methods*.

We have already noted that the issue as to whether Freud's theories can be tested adequately - or indeed at all - is a live one in the hands of such authors as Melpham[17], Farrell[18] and Keat[19]. This is essentially because of the nature of the evidence. If a linguist decodes an unknown language, there are reference points, such as corresponding meanings in another language or ostensive definition by practitioners, which demonstrates the truth or otherwise of his results. (This is all tied up with general notions of interpersonal communication and truth.) The psychologist does not have this kind of direct test: only interpretations and a degree of coherence which has to be convincing in itself. Can it be so?

At the end of the day, one has to argue that the specific theory (of Freud's in this instance) may be wrong. The structural concepts seem rather odd. There may not be a convincing coherence in the overall account. But this is not to say that the overall attempt at structuralist analysis of the mind is not worthwhile. It may be the Freud's theories, based on much observation, *reflects* much truth; that the real structures are similar, are indeed transformations of Freud's. And it may be that ultimately forms of test can be devised which will effectively distinguish one psychological theory from another.

3.4 Anthropology

Perhaps the 'structuralist' par excellence has been Claude Levi-Strauss[20]. He attempts to follow the linguistic model exactly in anthropology, for example in the study of myths or kinship systems. The elements of a word in linguistics are phonemes. In the same way, Levi-Strauss defines units within myths which he calls mythemes. The method then applied is essentially transformational in that it consists of attempts to identify the underlying deep structures which 'explain' a wide range of myths. It is difficult to assess the validity of this approach in anthropology. It probably has the same sort of status (and hence difficulty in evaluation) as Freud's work in psychology.

It is perhaps useful to present an example, and this can most easily be taken from Levi-Strauss' work on kinship systems, where we have a symbolic representation of deep structure[21]. The Kachins in North Burma are a patrilineal society in which men marry their mother's brother's daughter. The Garo in Assam are matrilineal, and men marry their mothers-in-law. There seems to be no apparent connection between these systems. However, consider the representation of these structures in figure 3. It is claimed by Levi-Strauss that these represent *similar* structures. One is tempted to say: so what? Or that the correspondence is merely formal. Or, more sympathetically, that this is interesting, but not as interesting as the study of the sorts of lives people lead within these different kinship systems. In this sense, the *general* thrust of Levi-Strauss' argument, that structures determine everything, may not be true,

though the particular analysis may be vindicated. The response which one is likely to get from a supporter would run something like this: kinship systems and marriage rules reflect something deep in the unconscious of individuals so that it is not surprising that similarities in structures are discovered if one digs sufficiently deeply. And is there also a functional justification in terms, for example, of the need to maintain incest taboos.

3.5 Social science

We use some social science examples to illustrate notions on the 'general idea' of structuralism in section 2.3 above and we develop those briefly here rather than repeating them.

It almost goes without saying that social systems of interest are large and complex and have many (often interdependent) elements. It is also clear that there are organisations and 'rules' of different kinds which constitute social structures and that the nature of these structures determines (at least to some extent) how societies 'behave', develop and evolve, and how individuals behave within such societies. There are also issues concerned with evolution and change of the anderlying structures themselves. All this suggests that, in some obvious (but 'general') sense, 'structuralist' theories should be sought in the social sciences. It is interesting here to try to articulate some of the debates about theory in social science and to interpret them in the broad context of structuralism.

It is useful to get one preliminary point out of the way. Much research in the social sciences is small-scale, concerned with elements of the system 'carved out' by the researcher. Much of this is useful in its own right; and it sometimes serves as building bricks within a broader framework. This is the practice because of the way much (academic) research is organised. It has to be carried out by individuals or very small groups. There is, of course, an interesting structuralist question as to why this is the case, but we let that pass for the time being! This bulk of social science research is neglected in the discussion which follows; we will concern ourselves only with the broader scale and more ambitious type of theorising.

It is perhaps useful to begin with some distinctions of scale. At the micro-scale, individuals and organisations are distinguished and theory focussed on them; at the macro-scale, the emphasis will be on broader social structures - for example, an 'industry' in economics or 'class' in sociology. It seems reasonable to assume that comprehensive theories will contain both micro- and macro-scale components and that these will be interdependent in some way; but this is already to take up a *genetic* structuralist position rather than an orthodox one. It should also be added that the issue of scale is not as dichotomous as implied by micro-macro. Much geographical theory, for example, can be usefully described as relating to a 'meso' scale.

The next step in the argument is to review a variety of approaches to social theory and to seek to classify them in terms of microness-macroness and degree of structuralist content, and then to progress towards an evaluation of these.

Some theories, usually those whose roots at least are at the micro-scale, are largely non-structuralist. A good example is provided by neo-classical economics[22]. The main units are individuals and firms who are assumed to exercise almost total freedom of action (voluntarism) constrained only by market price - fixing and market imperfections. The structuralist content of the theory is relatively small. Further, many of the *functions* of units within the economy are taken as given and not requiring explanation, and so there is little or no investigation of the infrastructures which do exist. In this sense, the theory is also functionalist. From the perspective of another discipline, sociology, Parsons could also be said to attempt to handle inter-dependence and complexity but within the framework of voluntarist and functionalist assumptions[23]. There is a presentation of structure, but no investigation of its nature. (And, interestingly, this kind of work is essentially static and synchronic rather than dynamic and diochronic, bearing in mind the idea already mentioned that structuralist linguistics - which is synchronic in the same way - is essentially functionalist.)

Structuralist social scientists would argue, in varying ways, that it is important not to assume that individuals and organisations are largely unconstrained; but that structural constraints are of the greatest importance. And that it is vital to focus research on structures since it is these underlying, deeper, structures which determine the outcomes we perceive as 'choices' or whatever. There are also some political consequences of these different views. It can be argued that a voluntarist-functionalist approach is more likely to produce evidence favouring the status quo

(in part because *only* the status quo is being studied, not alternatives; and in part because of the masking both of structures and alternatives, by ideologies).

We can start to illustrate structuralist approaches by noting Durkheim's assertion that

> "if social science is really to exist, societies must be assumed to have a certain nature which results from the nature and arrangement of the elements composing them, and which is the source of social phenomena."(24)

Much of his work then focussed on the *rules* of the social system, such as the nature of contracts as social exchange in *The division of labour* or incest taboos and kinship structures in relation to societal stability. A much cited example of early structuralist research in sociology is that by Mauss (a nephew and pupil of Durkheim) in *The gift*(25) - 'the obligation to give, to receive and to repay'. It is interesting that these examples begin to verge on anthropology - with the possibility of uncovering deep structures but without the hindrances of the linguistic model in the work of Levi-Strauss.

For another example, with impacts in economics and sociology and beyond, we can turn to Marx(26). Most of his explanatory concepts in his analysis of capitalism are at the macro scale: that the capitalist mode of production engenders necessary social relations between classes; and that class struggle in the economic base determines societal development. And, of course, much else! The result is obviously structuralist *theory*, less overtly a concern with structuralist method - indeed his focus in the latter respect is on *dialectical* method, which is something entirely different.

Marx's work provides a well-worked out alternative to neo-classical economics. It may be that the 'true' economic theory will turn out to be some sort of mixture with as yet unforeseen developments added.

It does seem clear that theories in social science should have structural components though there may be much disagreement about the specific forms these should take. It is also notable that there is relatively little attempt at new synthesis, though Giddens' work is a notable exception to this[27]. The structuralism which seems relevant seems to be of the 'general idea' species. (Goffman's *The presentation of the self in everyday life*[28], where he interprets one sigh system in terms of another - a 'theatrical' analogy - and Barthes' analysis of the language of fashion may be exceptions[29]. It is perhaps significant that each of these authors is concerned with properties exhibited by individuals - their scale is relatively micro.)

Structuralism in geographical theory has been omitted from this account because it will be taken up separately in section 4 below. Two topics with more general application will be taken up in the section which are briefly noted here as a forward reference: the first is the status of theoretical work in systems theory and mathematical modelling; the second is the possibility of a structuralist analysis of social science *writing*.

3.6 Literature and literary criticism

Although the debate about structuralism and literature is focussed primarily on criticism, it is perhaps necessary at the outset to take a stance about literature directly. It can be argued, as was hinted earlier, that literature has the broadest field of all the disciplines considered here and that in one sense our prime interest in this context is the ability of the novelist (for example) to function in the same domain as the social scientist. It also has to be recognised that there is an aesthetic dimension to literature, though there are interesting questions, and one of the functions of criticism is to grapple with these, about the nature and sources of aesthetic judgements. Thirdly, a work of literature often invokes an emotional response in the reader - empathic, energising or whatever - and this may be something different from, or overlapping with, the first two headings. Here, we will mainly be concerned with the 'novelist as social scientist' perspective[30], and we examine literary criticism in its role in the elucidation of literature. This also means that we have to engage at the outset of the argument with the issue as to whether art, in this case literature, should in some sense mimic the world or whether it has some kind of autonomy. Lodge, for example, argues that the main distinction between modernist and anti-modernist writing is that the former is consciously autonomous - essentially possibilistic, exploring alternative worlds - while the latter is realistic and mimetic[31]. (In my case, this also explained a taste for the latter rather than the former!) In the present context, we are mainly interested in

the realist position, but not entirely: the structuralist argument would in principle provide the basis for assessing the deeper meaning (and contribution to a realistic perspective) of, say, modernist literature.

It is also useful, especially given the Cambridge controversy, to relate structuralist criticism to more traditional forms. At the beginning of the century, much criticism was concerned with studies of authors' biographies and with literary history. Then came the Anglo-American 'new criticism'[32] (together with Leavis in Cambridge[33]), building on the work of Richards[34] and followed in this country by critics like Empson[35]. Its focus was the interpretation of particular texts; and a regard for the autonomy of the text with little concern for any background information (such as stated 'intentions' for example) on the author. Critics were particularly interested in ambiguities in texts and the richness of meanings which could be teased out of them. A structuralist analyst, on the other hand, wants to relate texts, or literature as a whole, to deeper structures; to see meaning established through a theory of signs; and in some cases at least, to see the author as insignificant in another sense - as a mere vehicle for reflecting deeper structures in society as a whole. However, as is already evident, there are many different forms of structuralist criticism and to begin to understand it, and then the nature of the controversy about it, it is necessary to explore this variety. This we now do.

Two main texts are used as the basis for this exploration. Its main structure is provided by Williams[36] article on the nature of the Cambridge structuralism debate; much further insight is added to this framework from Culler's *Structuralist poetics*[37]. The Williams argument is a complex one, proceeding in six steps but with many subdivisions in each. In the intrests of clarity therefore, the main steps are numbered and labelled below, and we try to identify the subarguments within each step.

(1) What is literature?

The ruling paradigm *defines* what constitutes *English literature*. There is an implication that if we can escape from this paradigm, whether via structuralism of whatever, this will be a move towards freedom and away from restricting conventions.

(2) Contributions from Marxism

Williams has an advantage in taking a broader view than merely 'structuralist' and a corresponding disadvantage in introducing new and complex ideas which, to some, may be peripheral to an attempt to understand structuralism *per se*. He takes a much wider stance than, for example, Culler. The first major step away from the 'new criticism' in Williams' argument, therefore, is from the direction of Marxist thought. This means: contributions related to a particular picture of how the world works and the place of literature within that picture.

He begins by saying that most Marxists use some notion of 'reflection theory', and there are three forms of this. First, literature is a resonance of distant conflicts being fought out -

the class struggle, say, in the economic base. Or secondly, it is mimesis 'in an active sense - grasping, interpreting, changing'; literature reflecting social reality. Or thirdly, there is the argument of Lukacs that immediate perceptions of reality can be insufficient or illusory, and that the task of literature is to model movements.

The second kind of Marxist contribution is the notion that literature *mediates* reality. In effect, what might be called 'indirect reflection'; a correspondence of *form* and not content (Lukacs); that there are correspondences between literary activity and the nature and form of contemporary practices (Benjamin).

There is also a third, and possibly the most important contribution - a continuation of the second above - which is concerned with the role of ideology in masking reality; but Williams presents this mainly in the context of structuralism, and so we stick to that plan and return to it below.

(3) Contributions from the Russian formalists

This is usually seen as one of the important preliminary steps in the embracing of structuralism by literary critics. Williams sees it as an investigation of 'the nature of literary language' and quotes Volosinov as arguing that 'language is at once a system of signs and a *socially-produced* system of signs' (my italics). Interestingly, Williams, argues that this involves a rejection of the conceptions of a system offered by structural linguistics or psychoanalysis because, in essence, the rules which produce meanings and forms in such a model are too fixed. He also cites Mukarovsky on the social production of aesthetic values. So this is Russian formalism with a Marxist face.

Culler, on the other hand, uses Jakobson as his example of formalist work, concerned with the explorations of pattern in poetry. Culler argues, convincingly, that there are many more patterns to be found in the poems used by Jakobson, and that it is difficult to give much significance to the results. The Williams-Culler comparison is interesting here. Culler probably produces the right conclusions about strictly formalist work. Williams has found other and more useful currents in other representative authors of that school.

(4) Structuralism

Williams sees the impact of structuralism in criticism as dating from the 1950s, but the early applications were

> "the most limited kind of formalist analysis ... as practised in anthropology, linguistics and psychoanalysis."

This is the application of the linguistic model directly. But there are also two elements even to this kind of work: whether the text is taken as the corpus of investigation (or say the works of a single author) - that is, whether a text is to be taken as the equivalent of a language in linguistics; or whether the whole of literature is to be so taken. If we call these positions T and W for text and whole, and we call the range of methods to be applied, in our earlier notation, L, IL, S and G, then this gives us $2 \times 4 = 8$ positions. It is this, among other things, which makes the task of reviewing structuralist approaches in literature difficult. We start at the general level and then pursue some of these different positions in more detail.

Williams' definition of structuralism is similar to our earlier one: that events, relationships and signs are to be seen as part of a whole signifying system, and that the sign has to be located in that system. The particular uses of it relate to the position taken. We proceed in five substeps within this part of Williams' argument.

(i) There is some direct and useful transfer from structuralist linguistics; but the techniques are 'fairly ordinary'.

(ii) There are some applications of the more general notion of 'an internal rule-governed system ... a position reached with reference to structuralism in literary studies' (as it had been reached, for example via systems theory, without reference to structuralism, in some other fields). The example of Frye and his study of plot is cited, but I don't find that very convincing: any plot as one of the four seasons?

(iii) Structuralist ideas can be applied to single text. Williams judgement of the examples available is that

> "In its usual forms it is so obstinately local and technical, so little concerned with any wide or general systemic properties, that it barely deserves the name ...".

Culler devotes considerable attention to this part of the structuralist argument, though with similar conclusions. He cites Todorov on Henry James' short stories (and indeed this can be read directly in Todorov's essay in Robey's book[38]). It provides us with an explicit example:

> "James tales are based on the *quest* for an absolute and absent cause ... a cause ... is often a character, but sometimes also an event or an object. The cause is absolute: everything owes its presence, in the last analysis, to it."

Culler argues that the analysis is not very different to that which could have emerged from conventional criticism.

(iv) The next step is to tackle literature in general; or at least this is how I interpret Williams: "... the necessary way of analysing, and thus distinguishing, specific or systemic forms"; though at this point we can derive more insight by following Culler.

We begin, however, with part of a definition of structuralism by Abrams[39]: that, if the linguistic model is being applied to literature as a whole, then literature is being treated as a language - *but in a second order sense* since, at a first order level, it uses language as a medium. It is in this sense that Culler sees structuralism as potentially providing a 'poetics' for literature which is what linguistics is to language. This gives an interesting picture of the overall structuralist enterprise in literature.

One of the most useful starting points offered by Culler turns on the notion of *vraisemblance* - the way a work "attempts to make us believe that it conforms to reality". A particularly fascinating aspect of this part of Culler's argument is that while it is not wholly central to his own overall structure, it is here that it connects most directly to Williams, and, particularly interestingly, to much of Hesse's work on the theory of knowledge in relation to science[40]; many of the same concepts (coincidentally) keep turning up and the overall picture of a structuralist analysis of literature which arises out of this conforms quite closely with a more general theory of knowledge - and, for example, to Habermas, who is not an author who is much cited in structuralist discourse[41].

One of the benefits of taking literature as a whole is that the meaning of a text (in the sense of vraisemblance) is in part established by its relationship to other texts. And this argument can be taken further. Culler writes of

> "a problem of the same order - as its relation to the interpersonal world of ordinary discourse. From the point of view of literary theory, the latter is also a text."

This formal connection of literary knowledge to, in effect, all other kinds of knowledge, is particularly exciting. It ceases to make literature special in the old 'Eng Lit' sense and allows it to compete as the more or less efficient receptacle of knowledge in different circumstances. It is important to present this part of the argument in some detail therefore so that the connections to Hesse's work can be made explicit.

We have the concept of intertextuality (in Kristeva's work for example) and its connection to the more general notion of intersubjectivity (and hence Hesse). We have in the search for meaning, following Greimas' view of semantics, a 'cultural grid'. An *isotopy* is a relationship which he uses to define meaning and we have a 'level of coherence' which helps to achieve this.

The vraisemblance concept also stresses the role of cultural models in establishing 'meaning and coherence' - and hence the connection to Williams as well as to Hesse. Five kinds of connections are discussed: (a) a 'socially given text', taken as the real world; (b) a 'cultural text', 'shared knowledge'; (c) texts or conventions of a genre; (d) natural attitude to the artificial; and (e) intertextualities - other texts which are needed to give meaning.

An important part of this argument can be made to turn (though isn't usually presented in this way) on the notion of the world of ordinary discourse being allowed to count as a text. That is, the reader plays a major role in the generation of meaning in the act of reading, and there are whole subschools of structuralist criticism devoted to this exploration - the work of Fish, for example discussed in Culler's second book *The pursuit of signs*[42]. It is also possible to pursue here a literary version of Chomsky's linguistic competence: that is *literary competence*. The competent reader has an intuitive or unconscious understanding of the (second order) literary language. (It could perhaps also be argued that one of the functions of teaching literary criticism is to help people to acquire this competence.) It can be argued that authors can operate because competent readers exist. Even if they (the authors) are trying to subvert a genre, their ability to do so successfully relies on the rules and conventions of the genre.

The next step in the argument pursued by Culler involves investigating the progress which has been made in discovering the nature of literary language. He studies the 'poetics of the novel', the search for metalanguages concerned with plot or characters or themes. On the whole, he again finds the outcomes of these explorations rather disappointing. And this, in a sense, is the weakness of the whole pursuit of understanding with the linguistic model: the goods cannot be delivered; the 'language' cannot be decoded. But this is in contrast to the applications of the 'general idea' of structuralism (with some inputs from linguistics such as the concept of 'literary competence').

Much insight can be gained on the nature of literary knowledge and, for example, the role of the reader. And literature ceases to be quite so special. This is perhaps all the more the case when these general structuralist ideas are linked to those of say Marxism, or some other theories of the nature of literary production, and the nature of reality as portrayed in literature.

(v) There is a fifth and final substep in Williams argument about structuralism, and this is where he brings back Marx and ideology mainly in the guise of Althusser[43], and his student Macherey[44]. A British practitioner of this school is Eagleton[45]. The first plank of the argument is the basic Marxist position: that events of all kinds are ultimately determined in the economic base, and that although writing is to some extent autonomous, it is part of this system. It is related through the 'binding force' of the whole system which is *ideology*,

> "the condition of all conscious life ... experience is the most common form of ideology ... *deep structures of soecity actually reproduce themselves in conscious life.*" (My italics)

And so on. A structuralist task is therefore to search for the deeper structures as reflected in literature, unmasked of ideology, as a psychoanalyst attempts to analyse the unconscious mind. The Althusserian argument is a particular school which asserts that ideology can only be penetrated by theory - and this leads to disputes with other Marxists, such as Thompson, who still wish to adopt an essentially empiricist position[46].

Culler picks up this aspect of structuralism via the French 'Tel quel' school. Conventional structuralists (like Culler?) are criticised for 'accepting' the status quo nature of the systems

they are investigating; that is, by implicitly accepting an ideology. Perhaps, like linguists, conventional literary structuralists are being functionalist, and we investigated the critique of this position in the context of social science above. The alternative involves a concern with particular texts but with an emphasis on critique. This also takes us in the direction of 'deconstruction' which Williams considers outside of his structuralist category - and next, his fifth step.

(5) Semiotics and deconstruction

It is interesting to remark at the outset that Williams considers semiotics separately from structuralism while Culler considers them virtually synonymous. Essentially, Williams sees semiotics as potentially more free than structuralism. And in deconstruction, there is a concern with

> "taking examples apart ... not looking for an academic explanatory system, but for the system as a mode of formation, which as it becomes visible can be put into question and quite practically rejected."

Another means of attacking ideology and the connection back to Culler's argument.

(6) Cultural materialism and post-structuralism

Williams characterises his own position as 'cultural materialism'[47]. By this he means 'the analysis of all forms of signification, including quite centrally writing, within the actual means and conditions of their production'. This is in effect a structuralist stance based on semiotics but, all importantly, rooted in what Williams believes is the determining context.

It is worth briefly returning to Culler and noting his conclusions at the end of *Structuralist poetics*. They in effect mirror Williams, but stop short of supporting a materialist position; so they can be taken as a more conventional alternative. First, at a low level, structuralism provides a theory of reading. Secondly, it helps in relation to meaning:

> "... isolates codes, identifies layers of (possible) meanings, and one can 'read the text as an exploration of writing, of the problem of articulating a world."

(Much of this sounds like conventional 'new criticism.) Thirdly, there is the possibility of defining an aesthetics based on the pleasure of the reader. Fourthly, an 'unmasking of signs'. And fifthly, but mostly to be done, the formulation of the rules of particular systems of convention (rather than a mere affirmation of their existence).

4. Structuralism and geography

4.1 Geographical theory

Human geographers obviously share many of the same interests in structuralism as other social scientists. Its influence, as a contribution to substantive theory, could be considerable. And yet in any explicit sense, this is not the case. Harvey and Holly[48] offer a wide-ranging review of isms and geography and manage to avoid structuralism. Dacey[49] does incorporate the concept as one of a range of isms in an interesting schema. But the only active structuralists seem to be Harvey and Gregory.

Harvey[50] gives himself the label through his marxism by arguing that Marx was an 'operational structuralist' in Piaget's[51] sense. Gregory[52] takes structuralist thinking as a step towards the development of geography as a 'critical science'.

It is also the case that much mathematical model building, and comprehensive theorising in that context, is connected to the ideas of systems theory and hence, perhaps, to structuralism at least in its 'general' manifestation. Sayer[53] has criticised many of the models thus developed mainly on the grounds that they are functionalist and he advocates, as an alternative approach, again, Piaget's notion of 'operational structuralism'. But he does not develop the idea very far.

One criticism of the models which have been developed is that they are mainly static, and this alone emphasises the status quo and existing *functions*. However, this criticism has started to be less telling with the development of dynamic models, particularly those based on the ideas of bifurcation theory. In principle, it is possible to model transformations of structure and to make connections to the ideas of genetic structuralism. In those realms where mathematical modelling is appropriate (and no claim is made beyond that that is a fraction of geographical theory), there is now the exciting possibility that tools are becoming available to handle (Weaver-III) structural complexity[54].

4.2 Geographical writing

We can have some fun, and possibly gain some insight, by looking to structuralist methods as a basis for analysing geographical *writing* - and it is appropriate that this section follows a substantial subsection on literature so that other guidelines are conveniently available. However, all we attempt here is a sketch of some ideas and we leave their development for elsewhere.

A first task is to seek a structuralist interpretation of the writing of geographical theorists as 'reflecting' the structures they are writing about. This has the potential advantage of showing much more commonality between different writers than had hitherto been thought. It is certainly the case, for example, that many apparently different mathematical models are structurally similar - the differences arising from different choices of (mathematical) language. It is interesting in the context of this task to see how 'geographical criticism' (by analogy with the literary kind) has progressed. It could perhaps be argued that one progression (the geographical) mirrors the other (the literary). Early writings about geographical theory always seemed to focus on the author and the school (cf. biographical and historical 'criticism'). The period of 'systematic' geography may correspond to the autonomy of the text (and the 'new criticism'). A structuralist approach, as advocated above, asks us to dig deeper in our reading of geographical theorists. Geographical 'criticism' is probably still in the first phase with Kuhn's ideas added as a framework[55].

A second task is to explore how geographical theorists set about trying to invent (alternative) higher order languages to represent (that is, be transformable into) the structures of their system of interest. This is an alternative perspective on the first task.

A final comment: these tentative thoughts about the interpretation and criticism of geographical theorists are obviously applicable to other branches of social science; and indeed to other branches of knowledge - human, social or scientific.

5. Concluding comments

It has been a basic premise of this essay that 'structuralism' needs to be structured; that is, a structure has to be identified which can contain as elements the varieties of approaches to structuralist thinking and which shows how the elements are related. It is hoped that this has been achieved: first, by distinguishing the 'general idea' of structuralism from the more specific linguistic and semiotic models; secondly, by distinguishing particular substantive theories which may have structuralist underpinnings from methodological ideas of different kinds; and thirdly by illustrating the variety of applications across a range of disciplines. In this last section, we use this framework and draw some tentative conclusions. We make a distinction between systems and structures with many elements which are directly represented as a 'language' and those for which this is not the case; though we recognise that there is a grey area in the middle.

Consider systems for which many elements form a language. Relevant subjects and disciplines are, for example, linguistics, the psychology of dreams, painting, music and fashion. In all these and similar cases, we can expect a variety of the linguistic-semiotic model at least to offer insights and possibly to provide the key to understanding.

In disciplines and subjects where this does not hold - economics and social science for example - we would not expect the linguistic-semiotic model to offer much (though there is one exceptional topic to which we return below). In these cases, no general methods of analysis are available and the particular theories and hypotheses will dominate over method (at least in a general sense). When these kinds of system are being analysed, however, it is important to give some emphasis to the general idea of structure and the possibility of systemic effects rather than to adopt, say, a strictly reductionist approach within which it is assumed that the problems of analysis can be neatly partitioned. It is also possible that, eventually, some general methods will be developed and we may be seeing the beginnings of these in branches of dynamical systems theory. (It is potentially interesting to note that the first types of systems considered above, to which linguistic-semiotic models will be applicable, may be esentially Weaver-I or II - simple or of disorganised complexity - while the second class will be Weaver-III - systems of organised complexity.)

The grey (in-between) area is illustrated by the field of literature. On the one hand, there is a concern with the use of language, particularly, say, in poetry. In such cases, there is some emphasis on the possible meanings of elements of the language used and a linguistic-semiotic analysis may offer insights. On the other hand, there is a major interest in literature as a representation of knowledge about society. In this case it has in some sense to 'reflect' the structures of that society, in which case analysis of its product clearly falls into the second class above - as illustrated, for example, by much of the work of Williams. In many cases, both kinds of analysis will be useful in relation to the same piece of work, and so varieties of structuralism in this context should not necessarily be seen as competitive.

A similar comment could be made about languages which are generated by more complex systems - an example being, say, the production and perpetuation of myths. In this context, the work of Levi-Strauss may be useful, but probably marginally so with respect to the field of social anthropology as a whole.

A further substantive point can be made about (organised-) complex systems - the second type above. This is to echo the thought raised at the end of section 4 in relation to geography that it may be worthwhile to analyse the *writing* (as such) of a particular subject (and perhaps this is the limited sense indicated above in which linguistic-semiotic analyses are relevant in relation to literature). The ways in which writers represent meaning in different fiels can be analysed in this way.

It may also be the case that Chomsky's notion of 'competence' can be applied to the task of understanding complex systems. This does have an echo of the understanding of a 'higher order language' - and we have already discussed the concept of 'literary competence' in relation to literature as a *second order* language. Perhaps the idea of higher order languages, in spite of the difficulties, should not yet be abandoned.

Finally, we remark that, typically, authors operate within particular 'schools' of structuralism, either in relation to a variety of structuralist method or with respect to approach within a discipline. The argument of this essay turns on the need to review the variety of approaches in order to understand where any one may be effectively applied. This is another kind of argument for eclecticism.

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Figure 1. Structuralism

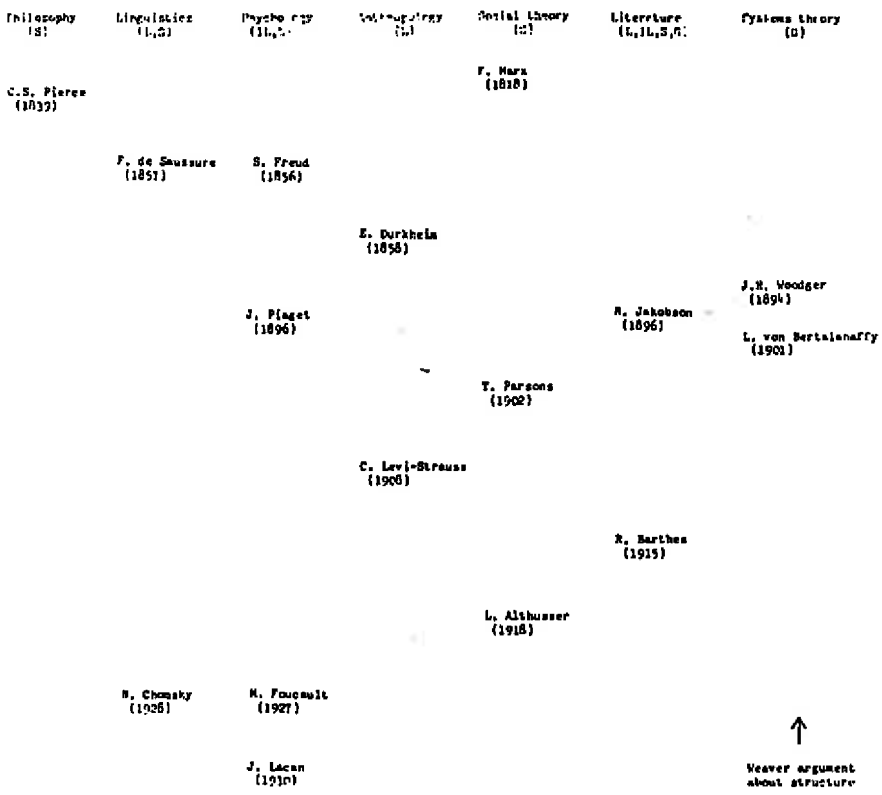
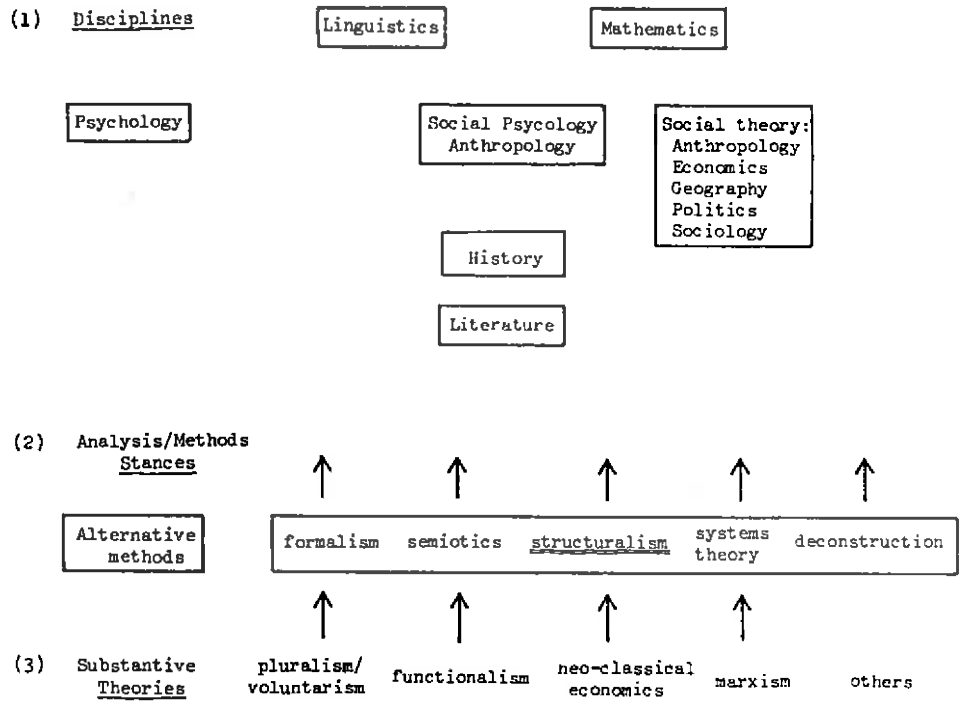
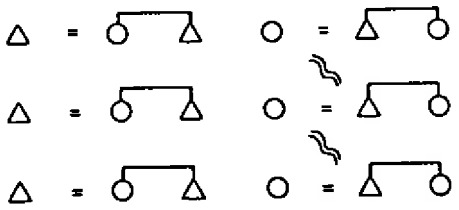


Figure 2.

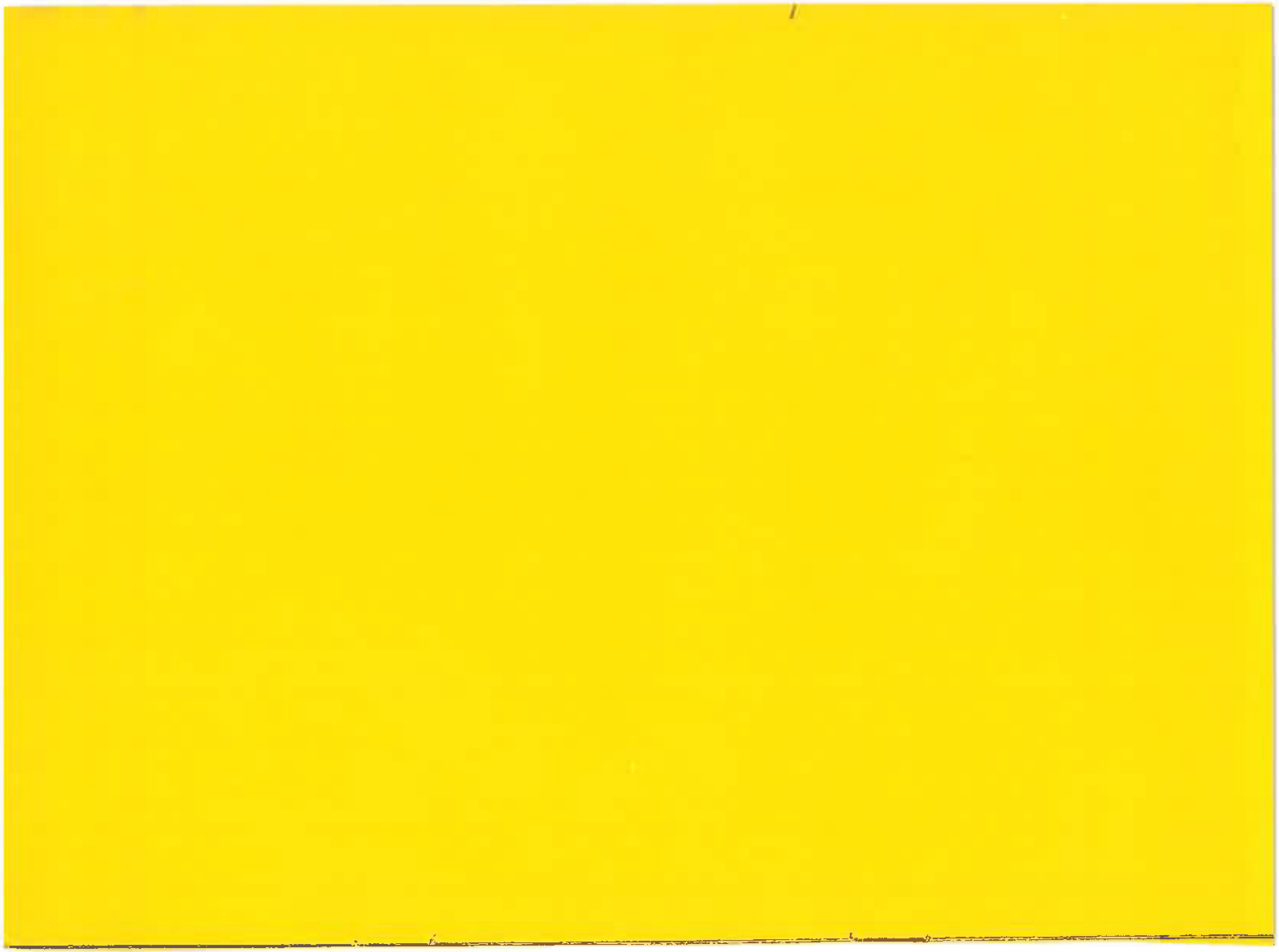


- look at combinations of (1) × (2) × (3) to get typical schools/authors

Figure 1. Some Levi-Strauss kinship schemes



Kachin schema Garo schema



14

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