

STRUCTURAL ANTHROPOLOGY IN AMERICA AND FRANCE: A COMPARISON

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I. Introduction

More than fifty years have passed since Claude Lévi-Strauss, the father of French structural anthropology, applied structural analysis and built models to elucidate orders beneath various kin-ship systems, in his monumental work *The Elementary Structures of Kinship*, and more than twenty years have passed since another structural analysis appeared in American anthropology. However, such important theoretical developments seemed to have no serious impacts on social sciences and human studies in Indonesia. Only very small number of articles using structural paradigm have been published in the last few years (Ahimsa-Putra, 1995; 1997; 1998; 1999a; 1999b; 2000; 2001), and there seemed to be no serious reactions -in the form of comments, critiques or discussions- from Indonesian social scientists on this paradigm¹. This, I think, reflects the stagnancy of the social and cultural sciences in Indonesia such as anthropology, archeology, history, linguistics, literature and sociology), which unfortunately have never really managed to give any significant contribution to the theoretical developments in their own fields after their establishment in Indonesian universities forty or so years ago.

Such a disappointing situation might be related to the fact that many Indonesian social scientists are still unable to keep up with the development of theories in social and

human sciences, which is due in part to their poor quality of English and to the unavailability of English books -especially in social science and human studies- in Indonesian bookstores. If such books are available, they mostly are very expensive.

This article on American and French structural anthropology is written with the intention that Indonesian social and cultural experts might know and get some ideas about the making of one of the most important paradigms in social and cultural sciences in the twentieth century, i.e. structuralism. The emphasis is deliberately put on the philosophical aspects of the paradigm, for it is believed that such philosophical backgrounds will help readers to understand structuralism better and easier as they compare it with other socio-cultural theories of the day. There are actually three kinds of structural anthropology, i.e. Dutch, French and American structural anthropology, but only two of these are discussed and compared here, the French and the American, because these structuralisms are based on the idea of the similarities between culture and language and are seriously developed, whereas the Dutch structuralism was rather premature and was later heavily influenced by French structuralism.

In his article "Structural Anthropology" (1972), Werner compares and discusses the notion of structure in ethnoscience and Lévi-Strauss' structuralism. The title of the article suggests that for Werner ethnoscience is also structural anthropology. In this case he

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¹ Critical notes have been given by Koentjaraningrat on Lévi-Strauss' analysis of kinship (Koentjaraningrat, 1980), but they are not very accurate in my view, and are superficial.

shares the same view with Scheffler (1966), who considers "formal ethnography" or The New Ethnography -another name for ethnoscience- as structural anthropology. Scheffler discusses kinship analysis in formal ethnography and in Lévi-Strauss' structuralism, and concludes that the differences between these two structural anthropologies lie in their methods and criteria for satisfactoriness for the models they build, while their similarities lie in their adoption of methods from structural linguistics.

Ward Goodenough, a pioneer in American structural anthropology, states that anthropologists studying alien cultures are like linguists studying foreign languages. In this case he believes that one of the basic problems of the anthropologists is

"how to describe the culture of another people for an audience that is unfamiliar with it, so that the description is not a caricature, but presents a set standard that satisfactorily represents what one needs to know to play the game, acceptably by the standards of those already know how to play it" (1970: 105).

Such a problem is not unlike the one the linguists face in describing a language. But here the linguists are better off than the anthropologists, for they have established a set of concepts and symbols with which elements of a language can be described and compared to other languages. Goodenough suggests anthropologists to take linguistic method as a model for cultural description.

A similar step has also been proposed by Lévi-Strauss, the founder of French structural anthropology, who says that in studying kinship, as well as other cultural phenomena, anthropologists are in a situation formally similar to that of structural linguists. The phenomena they analyze are of the same type. Since linguistics in Lévi-Strauss' view is the most advanced social science, it is legitimate then to apply its method of analysis in anthropological studies (Lévi-Strauss, 1963:34).

Both The New Ethnography and Lévi-Strauss' structural analysis adopt the method

and theory of phonology in linguistics. However, they have done so differently, and for that reason they have been led to different directions. Unfortunately, neither Werner nor Scheffler traces the differences between these approaches deeper to their roots. I will argue here that the different analyses and results of these structural anthropologies stem from their different views on the goals of anthropology in general as a scientific discipline, their views on society and culture, on the criteria of scientific theory, on the concept of meaning and on knowledge about phenomena, as well as the ways to obtain them. It is these deeper backgrounds or basic foundations that we need to know in order to have a complete picture of these perspectives, and my purpose here is to compare and discuss these essential points.

In discussing them, this paper is divided into several parts. The first and second will be focused on how The New Ethnography and Lévi-Strauss' structuralism adopts linguistic method in their analyses. The third and fourth will be on their assumptions and their views about the objects they study as well as the goals of their studies, while the fifth and sixth are about the epistemological backgrounds of the approaches. Finally, in the last part some concluding remarks will be given.

II. American Structural Anthropology and Linguistics

As has been known widely, one of the major scientific problems in cultural anthropology has been the problem of explaining cultural similarities and differences in various societies scattered over the globe (Jorgensen, 1979). The need to account for the phenomena in a scientific and systematic way has inevitably urged anthropologists to conduct comparative studies. It is not surprising then that cultural anthropology has been characterized from the start by its emphasis on comparative approach (Kobben, 1973).

The systematic comparative study was pioneered by the British cultural evolutionist, E.B.Tylor, who in nineteenth century invented the method of worldwide cross-cultural

comparison. He was concerned at that time with explaining the stunning differences in cultural development, political organization, religion, kinship system, etc., that occurred in many societies in different parts of the world. To understand the variations, Tylor gathered information on a sample of 350 societies from around the world and used tests of empirical probability to determine whether or not relations among social institutions under consideration were subject to lawful regularities. When the relations between variables proved to be significant Tylor called them adhesions. Since then, this type of comparison has dominated formal global cross-cultural analysis in anthropology, especially in American anthropology. In contemporary matrix analysis, Tylor's comparative study is known as R-mode analysis, in which the scientists take the variables or culture traits as the sampling units rather than societies or cultures (Jorgensen, 1979:311).

Nowadays, most comparative studies in anthropology are carried out with the intention of testing or exploring hypotheses. Some of them are about the interrelations of cultural forms, like between certain marriage and certain type of kinship system, between political organization and economic pattern, or between religion and health practices, etc., while some others are about the relations of cultural forms to extra cultural phenomena, such as prevailing conditions in society, prevailing emotion and moods, the general level of health and so forth. These are propositions about the place of cultural forms in a larger socio-cultural setting, and there are two kinds of these. First, the propositions that deal with the impacts of the prevailing extra-cultural conditions on the forms of cultural standards or rules, and second, those that treat the cultural principle as the antecedent or independent variable, and the extra cultural condition as the consequent or dependent variable (Goodenough, 1970:122-123).

Many anthropologists hold that propositions concerning human behavior, society and culture, can be considered generally valid only after they have been subjected to rigorous cross-cultural

examination. But it is precisely at this stage that anthropologists encounter serious problem. We know that verification of every proposition or hypothesis need the compilation of reliable information from a large sample of world societies. To meet this requirement G. P. Murdock tried to accumulate reliable ethnographic data from various sources, which have now become the Human Relations Area Files. However, cross cultural studies utilizing the Files revealed that there were discrepancies in the sources from which the Files were gathered, due to different interests among the ethnographers or anthropologists (Goodenough, 1964a). The recorded data on different societies were products of a series of detailed observations on what the people said and did, the circumstances of their behavior and the consequences of their activities. The descriptions of the same people provided by different researchers prove to a certain degree to vary from one another. Furthermore, an ethnographer working on society A with a deep interest in kinship for instance, would certainly give us rich data on that subject, while other subject -ecology, for example -would be poorly reported. On the other hand, an ethnographer in society B with interest in ecology would provide us a lot of information on this field, whereas his data on kinship may be meager. This makes it difficult to test hypotheses on the relation between kinship system and ecology for instance.

The second problem is about the comparability of the data themselves, which were collected by different reporters, using different methods and for different purposes. An example of this is the difference between Goodenough's and Fischer's data on residence pattern in Truk society (Goodenough, 1968b). Although both researchers did fieldwork in the same society, their data on some social aspects turned out to vary. Such data would of course create difficulties when they are used for comparative purposes, since they are incomparable. Consequently, if the data are not comparable we cannot conduct cross-cultural comparison. If such studies were carried out, the conclusion would always become problematic.

These problems had made some anthropologists realize that their data for cross-cultural comparison come to them already packaged in various ways, and that the packaging grew out of the researchers' system of classification based on their common everyday classification and their theoretical frameworks or interests (Ford, 1967:19-20). It is necessary then, that to conduct comparative studies the data must be taken out of its current packaging and resorted to suit the researchers' purposes. This means we need to standardize the system of classifications to handle the raw data and reorganize or change the ways the data are packaged/presented to make them comparable to each other, for if comparable ways are not employed by different ethnographers comparative researchers would be beset with additional, and sometimes insuperable, difficulties (Ford, 1967:10).

Reflections on the typology and its related problems have made it clear that classifications appropriate to comparative study are on different conceptual level and serve different purposes, from the categorical distinctions used by the people in a particular society. While the former should generally be applicable to all societies, the latter must allow us to explain the behavioral event within a given society, as a universe in itself. A new problem for cultural anthropology then is how to represent other peoples' cultures to make them comparable to each other.

Goodenough and some other anthropologists conceive this problem as similar in principle to that of the linguists when they want to describe the speech sounds of other languages. One of the approaches in describing a language (descriptive linguistics) is Zellig Harris's structural analysis. This approach involves basically a set of operations performed on a raw corpus of speech, so that a compact statement of what utterances occur in the corpus would be obtained (Eastman, 1975:20). Thus, it tries to describe language in a more abstract manner. To achieve this, Harris introduces the notion of component in his structural analysis of phoneme and morpheme. He defines a phoneme as a unique combination

of components. Here parts of the words that are not distinct from each other but occur freely or are in complementary distribution are viewed as one phoneme. When /p/ and /b/ are regarded as two phonemes -the first is voiceless bilabial stop and the second is a voiced bilabial stop- each is viewed as a distinct class of sounds. Their distinctiveness lies in the component of voicing. Thus voicing is the distinctive component of those phonemes. Some phonemes differ from each other in only one component, but others differ in more than one component. The classes of sound (or phonemes) are thus composed of components. These components are among others: stop, glottal, palatal, voiced, labial, dental, etc (Eastman, 1975).

When a person learns a new language, he hears a stream of sound emanating from a language speaker. He actually can perceive the sound in many different ways. However, in order to speak and hear the language correctly as judged by its native speakers, he needs to know how to perceive that stream of sound. A linguist can help him by describing and defining the minimum number of behavioral units that a speaker must learn to distinguish. The analysis of the elements that create differences among these modes of articulation as distinct stimuli results in a set of distinctive features or distinctive components, i.e. the irreducible units of language. The various combinations of the features make up phonemes (Goodenough, 1970:105-106). The different shapes of the phonemes can thus be described as resulting from different combinations of the distinctive features.

In a language, phonemes are ordered in more complex units, each of which carries some specific kind of meaning, and these more complex units are further ordered into still more complex units. Thus, the linguists build up their accounts of language in terms of its own basic elements, i.e. the distinctive features. But these features cannot be represented with reference to other units within the language. To describe them the linguists use some independent perceptual and conceptual frame relating to the acoustic speech sound or to what happens in the

mouth when sounds are produced. They describe the distinctive features in terms of such things as aspiration, nazalisation, and point of articulation. These elements or variables are not parts of any particular language. They belong to the linguists' kit of concepts that are used to describe any and all sounds that can play a role in language. The kit is thus a meta-language (Goodenough, 1981:15).

In descriptive linguistics the task of isolating and describing sound modalities of a particular language is called phonemics, and its transcription represents the sound categories that make a meaningful difference in a certain language, whereas the study of sound production and the development of meta-language by which the phonemes and the distinctive features of any language can be described is called phonetics, and its transcription is a set of concepts employed by the linguists to describe speech sounds (Goodenough, 1970:108). These two operations are fundamental to the science of language, and neither is possible without the other, for the progress is made possible only as linguists learn to discriminate sounds in order to get at the phonemes of other languages, and find new sound distinctions they do not know existed before, and add these new distinctions to their phonetic kit possibilities with which they try to represent the next new language. The kit extends until they find no meaningful distinctions being made in new languages that cannot be described in terms of the phonological variables or distinctive features they have learned. Then they can reexamine, explore and systematize the contents of their phonetic kit to allow them to make controlled comparison of the phonological system of different languages. In this way they build foundation of a general theory of speech sounds which is consistent with the phenomena of all languages (Goodenough, 1970).

Generalizing from the difference between phonetics and phonemics, we can also say that a description of any socially meaningful behavioral system is an emic one insofar as it is based on elements that are

already components of that system, and an etic one to the extent that it is based on conceptual elements that are not components of that system (Goodenough, 1981:16). Emic analysis, as we have seen, seeks to arrive at a minimal set of conceptual components that can serve as the basic reference for describing the rest content of the system. But these components can only be represented in etic terms, that is with reference to concepts that are extrinsic to the system being described. Thus, by using emic and etic perspective we would have a series of conceptual apparatus through which we could search the similarities and differences among specific behavioral system (Goodenough, 1981:17).

For the reasons above some anthropologists believe that their problems in comparative studies can be solved by applying linguistic methods of description and comparison, since both practitioners- i.e. the linguists and the anthropologists- have actually similar problems. When an anthropologist arrives in the field and begins to collect information from the people, he discovers that the natives make conceptual distinctions in different fashion. They have their own classifications and typologies about things around them. To describe these and compare them with his own classifications, the anthropologist has to find a set of conceptual instrument that will allow him to portray their distinctions as well as his own. This means he has to analyze the phenomena differently and more finely than he previously did (Goodenough, 1970:36-37). Such a conclusion has led some anthropologists to a view that culture is actually a phenomenon like language, and language is for them a set of standards for human conducts of a particular kind, i.e. for speech behavior. A description of language is an account of a set of standards for speaking which application results in speech within the variance that the language speaker considers as appropriate. Thus,

"..To learn French, for example, is to learn standards for communicative oral behavior and to develop a skill in

applying them both to shaping our own behavior and to apprehending the behavior of others (the others in this case being people we identify as speakers of French). A description of the French language is a description of the standards we need to know in order to speak in a manner a Frenchman will regard as acceptable and to understand as well as they do what French-man say to one another" (Goodenough, 1981:15).

The application of linguistic method in anthropology is now known as The New Ethnography, Ethnosemantics, Descriptive Semantic, Cognitive Anthropology, or Ethnoscience, but here I will use the term The New Ethnography, which is defined as the study or description of folk conceptual system in order to discover the conceptual world of a people through their linguistic categories (Eastman, 1975:85). One of the analytical methods taken from linguistics in the New Ethnography is componential analysis or semantic analysis. In this analysis the linguists describing linguistic utterances should refer to non-linguistic events, and they take meaning as "ways in which features of language are related to things outside language" (Burling 1970:9). The basic assumption here is that a linguistic expression designates a class of concepts. It denotes specific image or subclass of images within the class of any one occasion of its use, and it also signifies the criteria by which specific images or concepts are included or excluded from the class of images or concepts that the expression designates (Goodenough, 1970: 72). What is signified here are the definitive attributes of the class.

We see here that the explicit analogy of semantic analysis or componential analysis in anthropology is based on the componential model of phonology. There are however, several assumptions underlying this analogy. First, the data in semantic analysis (i.e. terms) are viewed as more or less equivalent to the products of phonological analysis (i.e. phonemes). Substantively, they manifest superficial similarity, in that a term represents

a set of features (semantic) just as phoneme represents a set of features (phonetic). Therefore, all terms comprising the data are assumed to be in contrast with each other as phonemes contrast with one another in a language. In addition to that, different denotata of a term are also assumed to be noncontrastive in the same way as allophones of a phoneme are (Durbin, 1972:388).

In componential analysis, the terms of a semantic domain (such as kinship) are distinguished from one another by distinctive features. Goodenough applied this method in his analysis of Truk kinship terminology. In the table below, he represents the kinship terminologies and the person denoted by the terms. He uses a set of conceptual tools to describe these persons, such as FaSi, FaMo, FaSiDa, MoSiSo, MoMoSi, etc. He then analysis the table to find the criteria that people use to classify their kin, which means that he has to discover the significatum of each lexeme. The following table shows a raw data that needs to be further analyzed. For Goodenough, each signification, at the end, should exhibit a combination of values for several different criteria which can be construed as variables, for instance, male is the variable of sex. "Just as phonemes of a language enter into various combinations to make morphemes and these combine to form constructions, conceptual variables and their values combine in larger constructions which are the significata of linguistic forms" (Goodenough, 1968: 108). Goodenough's analysis of the denotata of each lexeme results in the two paradigms which show what criteria are used to denote a certain category of kin.

It is obvious here that the logic of the analysis is virtually identical to the logic of familiar types of phonological analysis. In phonology the linguists divide the universe of possible vocal sounds by certain distinctive features crossing each other in various complex ways and in that way serve to separate the noises into mutually contrasting sounds. Similarly, in kinship

Table 1.

Lexemes	Samples of Denotata
semej (sama, ji)	Fa, FaBr, MoBr, FaFa, MoFa, FaFaBr, FaMoBr, MoFaBr, MoMoBr, FaSiSo, FaSiDaSo, SpFa, SpMoBr, SpFaBr, SpFaSiSo, MoSiHu, FaSiHu, etc.
jinej (jina, ji)	Mo, MoSi, FaSi, MoMo, FaMo, FaFaSi, FaMoSi, MoFaSi, MoMoSi, FaSiDa, FaSiDaDa, SpMo, SpMoSi, SpFaSi, SpFaSiDa, FaBrWi, MoBrWi, etc.
semenapej (sama, napa, ji)	Fa, FaFa, MoFa.
jinenapej (jina, napa, ji)	Mo, FaMo, MoMo.
jinejisemej (jina, ji, sama, ji)	FaSi, FaSiDa, FaSiDaDa, FaMo, FaMoSi, FaMoMo, etc.
pwijj (pwii, ji)	For male ego : Br, MoSiSo, FaBrSo, FaMoBrSo, FaSiSoSo, WiSiHu, etc.
	For female ego : Si, MoSiDa, FaBrDa, FaMoBrDa, FaSiSoDa, HuBiWi, etc.
feefinej (feefina, ji)	For male ego : Si, FaBrDa, MoSiDa, FaMoBrDa, FaSiSoDa, but not WiBrWi
	For female ego : no denotata.
mwaani (mwaani, ji)	For male ego : no denotata.
	For female ego : Br, MoSiSo, FaBrSo, FaMoBrSo, FaSiSoSo, but not HuSiHu
mwegejej (mwegeja, ji)	For male ego : same as feefinej.
	For female ego : same as mwaani.
jeesej (jeesa, ji)	For male ego : SiHu, WiBr, FaBrDaHu, etc.
	For female ego : BrWi, HuSi, FaBrSoWi, etc.
pwyinywej (pwyinywa, ji)	For male ego : Wi, WiSi, BrWi, FaBrSoWi, etc.
	For female ego : Hu, HuBr, SiHu, FaBrDaHu, etc.
jaaj mwaan (jaa, ji, mwaani)	For male ego : o.Br, o.MoSiSo, MoBr, MoMoBr.
	For female ego : o.Si, o.MoSiDa.
mwaaninyki (mwaani, nyky, ji)	For male ego : y.Br, y.MoSiSo, SiSo.
	For female ego : y.Si, y.MoSiDa.
neji (newy, ji)	So, Da, ChCh, BrCh, SiCh, MoBrCh, MoMoBrCh, FaBrChCh, MoSiChCh, FaSiSoChCh, FaSiDaSoChCh, FaMoMoBrChCh, etc.

Source: Goodenough, 1968. Notes : Sp = spouse; o. = older; y. = younger.

Tabel 2.

Paradigm I		Paradigm II	
semej	A B C	jaaj mwaan	A H E G
semenapej	A B C J	mwaaninyki	A H E G
no lexeme	A B C J	no lexeme	A H E
jinej	A B C	jinejisemej	A H C
jinenapej	A B C J	no lexeme	A H C
no lexeme	A B C J	no lexeme	A H
pwij	A B D E		
mwegejej	A B D E F		
mwaani	A B D E F C		
feefinej	A B D E F C		
no lexeme	A B D E F		
jeesej	A B D E		
pwynywej	A B D E		
nejj	A B		

Notes : A to J are the values of significata

- A = the constant of being *tefej* to Ego.
- B = seniority of generation. B1 senior; B2 same; B3 junior.
- C = sex of relative. C1 male; C2 female.
- D = symmetry or parallelism of relationship to the connecting matrilineal group. D1 symmetrical; D2 asymmetrical
- E = sex relative to Ego's sex. E1 same sex; E2 opposite sex.
- F = mode of relationship. F1 consanguineal; F2 affinal.
- G = age relative to Ego's age. G1 older; G2 younger.
- H = matrilineal group membership relative to Ego's. H1 member of Ego's group; H2 member of Ego's father's group; H3 member of neither group.
- J = collateral removal. J1 lineal; J2 not lineal. (Goodenough, 1968: 109).

analysis the anthropologists divide the universe of possible kin types by a different kind of distinctive feature (and they too cross each other in various complex manners and thus serve to segregate the kin types) built by any particular society into mutually contrasting sets. The important point here is that both phonology and this type of componential analysis refer the linguistic phenomena (contrasting words or sounds) to extralinguistic criteria, generally to articulatory features in the case of phonology, and to differences among kinsmen in the case of kinship analysis (Burling, 1970: 20). The procedure used in this semantic analysis is comparable to the distinctive feature analysis or component model of linguistic developed by Jakobson and Harris.

III. Lévi-Strauss Structuralism and Linguistics

If American anthropologists sought for models and methods in linguistics in order to solve their problems in describing and comparing cultures around the world, Lévi-Strauss did the same things for different reasons. He turned to linguistic to find the answer for the problem on the scientific status of social sciences, especially anthropology. He seemed to be preoccupied by Wiener's critique of social science, i.e. that the extension of mathematical methods of prediction in social science is unlikely, firstly, because the developments in social sciences -due to their very nature-, produce impacts upon the object of their investi-

gations. As most of us know, in social sciences the object of the study is usually affected by the presence of the observer that results in the modification of the phenomena under consideration. Secondly, the phenomena that are subjected to sociological or anthropological scrutiny are defined within the sphere of interest of the researcher. They are problems about life, education, career and death of individuals, hence the statistical runs available for the study of a particular phenomenon are always too short to become the foundation of valid induction (Lévi-Strauss, 1963:55-56). Nonetheless, Lévi-Strauss seems to believe that social science should persist, and the problems are still surmountable.

To solve the problems, Lévi-Strauss suggests that anthropologists adopt linguistic analysis, particularly the structural analysis of language, for reason that linguistics studies language, a social phenomenon possessing two fundamental characteristics that make it suitable for scientific analysis. The first is that much of linguistic behavior is the product of unconscious human mind. When people speak, they are not conscious of the syntactic and morphological laws of their language. Neither are they aware of the phonemes with which they express different meanings, nor the phonological oppositions which reduce each phoneme to a bundle of distinctive features, and this still holds true even on the grammatical level. Therefore, in studying language we need not worry about the influence of the observer on the phenomenon being observed, because the observer cannot affect nor change the phenomenon by becoming conscious of it. Secondly, language had appeared very early in the history of mankind. This gives us long enough runs and makes language a valid object of mathematical analysis. Thus, language is a social phenomenon that meets the requirements of analysis suggested by Wiener (Lévi-Strauss, 1963:56-57).

However, the application of linguistic analysis in socio-cultural studies is only possible if different model of society and culture is adopted, and Lévi-Strauss opens for anthropology a new direction for research

by viewing society or culture in terms of communication theory. For Lévi-Strauss, a society consists of individuals and groups communicating to each other, using three different means of communication, i.e. women, goods and services, and messages or languages (Lévi-Strauss, 1963:296). These three kinds of communication are also forms of exchange, which are obviously interrelated, because marriages (communication through women) are associated with economic prestations (communication through goods and services) and language plays a significant role at all levels. In the light of this, we may say that rules of kinship and marriage serve to insure the circulation of women between groups, just as economic rules serve to insure the circulation of goods and services, and linguistic rules the circulation of messages.

In addition to that, there is also "substantial" similarity between language and culture, i.e. both are the products of the human mind and are projections of or are caused by identical unconscious structures, and therefore are built of the same material, i.e. logical relations, oppositions and correlations (Lévi-Strauss, 1963:69). There is thus a homology between these three levels, and this allows us to make an analogy between language and sociocultural phenomena, kinship and marriage in particular. However, this should be interpreted as a methodological hypothesis, since Lévi-Strauss intends to derive from linguistics a methodological model from the perspective of communication theory. It should also be noted that Lévi-Strauss is interested not in the analogy based on content, which would entail reductionism, but in analogy of structures, which means in the similarity of the logical organization of kinship or other cultural phenomena and language. In this way, linguistics can provide orientation for the analysis of cultural and symbolic system which by their very nature evade the rules or rigorous replication and verification (Rossi, 1982:13).

There are several linguistic theories that have influenced Lévi-Strauss' thinking. They came from Troubetzkoy, Jakobson and

Saussure. We will consider only some aspects of the theories that have been influential to Lévi-Strauss. One of these is the structural approach in Troubetzkoy's analysis of language. In one programmatic statement Troubetzkoy introduced four revolutionary methodological principles in structural linguistics. First, structural linguistics shifts from the study of conscious linguistics phenomena to study their unconscious infrastructure; second, it does not treat terms as independent entities, taking instead as its basis of analysis relations between terms; third, it introduces the concept of system; fourth, it aims at discovering general laws, either by induction or deduction (Lévi-Strauss, 1963). Following these principles Lévi-Strauss gives us an example of how such an approach might help us solve anthropological problems, such as the problem of mother's brother's attitudes in some societies, which will be discussed below.

The second linguistic theory that can be discovered in Lévi-Strauss' analysis is Roman Jakobson's theory of phoneme. Jakobson was convinced that it is impossible to evaluate properly any element of a language's system if it is not viewed in relation to other elements within the system. With the influence from Troubetzkoy, Jakobson was led to develop of the relational theory of distinctive features in phonology (Eastman, 1975:29). This theory holds that all articulatory distinctive features may be described as values or "terms", of two valued dimensions of oppositions. Jakobson also argues that all phonemic systems may be most economically and at the same time satisfactorily described in terms of single and small set of some twelve or so kinds of binary op-positions (Eastman, 1975). In Jakobson's view this scheme is more than just economical and fairly satisfactory descriptive device. He believes that a series of binary selections is inherent in the communication process itself. It is a constraint imposed by the code on the speakers in their speech behavior, and may be viewed as the encoder and decoder. This leads him and some other linguists to hold that the binary set is indeed

inherent in the structure of language, because a system of distinctive features based upon binary oppositions is the "optimal code" that can be used (Scheffler, 1966: 72-73).

Jakobson further believes that the main function of sound in language is to enable human being to differentiate the semantic units, which is done by perceiving the distinctive features of sound and separate them from other features of sound. Take for example phoneme /s/ and /z/, in 'seal' and 'zeal'. Both are consonant fricatives articulated at the alveolar ridge. They are not vowels, not stops, not nasals. They share all these positive and negative features. But, although these features are noticed or apprehended, they do not account for the difference between the two sounds. The important feature here is voice. Phoneme /s/ is [-voice], while /z/ is [+voice]. Thus voice is the distinctive feature that distinguish /s/ from /z/ (Eastman, 1975:29). Troubetzkoy, Jakobson and other linguists of the Prague circle hold that contrasts such as this one of voicing in phonology form a set, from which each language of the world selects its significance, and the nature of these contrasts is systemic. They are defined as opposition largely in acoustic and articulatory terms, such as voiced, consonantal, compact, etc., and the number of such oppositions proved to be small, not more than twelve (Jakobson and Halle, 1956).

The phonetic description of sound in this approach forms a matrix of various features that occur in them. On a matrix, the rows represent the distinctive features and the columns represent segments or phonemes (/p/;/t/;/k/, etc.). In this way we can see a phoneme as a bundle of features that occur simultaneously in speech. Thus a /p/ is for structural linguist a bundle of features such as [-voice], [+con], [+compact], and so forth. These features enable the linguists to relate sounds according to shared or non-shared values within a system. In English phonological system for instance, there is a relationship between /p/ and /b/, /t/ and /d/, /k/ and /g/ and /s/ and /z/. The relationship is one of voicing. In each pair of sounds one is voiced and the other is voiceless; /p/

expresses a negative connotation for voicing with respect to /b/. It has the feature of [-voice] and /b/ has [+voice]. Thus, with regard to the feature of voice in English, /p/, /t/, /k/, and /s/, are all [-voice], whereas /b/, /d/, /g/ and /z/ are [+voice]. Each pair shares together all other articulatory and acoustic features (Eastman, 1975:26).

Another important point in Jakobson's theory of phoneme is his view that phonemes differ from other linguistic entities by a set of traits that are never all present in any other entity, i.e. they are opposite, relative and also negative entities. Standing by itself a phoneme is a meaningless unit. "It is purely differential and contentless sign" (Lévi-Strauss, 1981:144-145). A phoneme acquires its meaning from its position within a system of phonemes. This is similar to other linguistic theory from which Lévi-Strauss' method of analysis was also derived: Ferdinand de Saussure's theory of linguistic value.

De Saussure holds that language is a system of interdependent terms in which the value of each term is a result of the simultaneous presence of others. All values are always composed of a dissimilar thing that can be exchanged for the thing of which the value is to be determined, and of similar thing that can be compared with the thing of which the value is to be determined (de Saussure, 1966:115). The value of any term in language is defined by its environment. Without first considering the surroundings it is impossible to fix the value of the word 'eat', 'sun', 'chair', etc. In some language it is not possible to say "to eat a girl" or "to sit in the sun" or "he is the chair". These examples demonstrate that values emanate from the system. When it is said that a concept has value it means that the concept is purely differential and determined not by their positive content but negatively by their relations with the other terms in the system. Its "most precise characteristics is in being what the others are not" (Saussure, 1966:117). This notion of the value of concept is reflected in Lévi-Strauss' theory, especially in his conception of family and his analysis of myths.

De Saussure also distinguishes two aspects of language: *langue* and *parole*. *Langue* refers to a particular code (organized system of knowledge), which is similar to Chomsky's notion of competence. It is a collective phenomenon that exists only in the shared understanding that enables people to communicate. It is a system, a social fact in Durkheimian sense, of unconscious interpersonal rules and norms upon which individuals' manipulations do not have any influence; while *parole* or performance in Chomsky's terminology, is the actual manifestations of the system in speech and writing (Culler, 1975:8). It should be noted however, that actual speech behavior is not a direct reflection of *langue* or competence, for a language is never exhausted by its manifestations. *Langue* contains potential sentences that have never been uttered, whereas *parole* comprises the realizations of the potential sentences that may deviate from the competence because they are manifested along with various communicative intents and chance factors. The contrasts between *langue* and *parole* is thus not a symmetric one between one system and another, but is an asymmetric one, between a system in isolation and the concrete situation in which that system interacts with other system and directed (Kronenfeld, 1979: 508).

A description of *langue* then is basically an explicit formulation in the form of rules and norms of the implicit knowledge possessed by those who can successfully communicate by employing that system. The language speaker need not be aware of these rules and indeed in most cases they are not. However, although the rules are on the level of unconscious they have empirical correlation, which are reflected in the speaker's ability to understand speeches, to recognize grammatically wellformed and deviant sentences, to perceive meaning relations among sentences etc. (Culler, 1975:9).

Language in the eyes of de Saussure is also a system of relations. These relations are of two sorts: distributional and integrative (Culler, 1975:12). The first refers to the relations between elements of the same level, and the second refers to the relations between

elements of different levels. The distributional relation consists also of two kinds: syntagmatic and paradigmatic. Syntagmatic relations according to de Saussure are relations of co-occurrences. Since spoken language is linear, the only possible kind of co-occurrence relation is the sequential relation. Paradigmatic relations are the relations that obtain among alternative possible fillers of some position in syntagmatic chain, and among alternative forms that some particular fillers might take in alternative position (Kronenfeld, 1979:509). De Saussure calls these relations associative relations. In language, such relations can be on the level of phonology ('bit' vs 'pit'), morphology ('run' vs 'ran'), syntax ('fought' vs 'had fought'), semantics ('kick the ball' vs 'catch the ball'), or other (sociolinguistics: 'yes ma'am' vs 'yeah'). Paradigmatic relations, thus, determine the possibility of substitution. The notions of syntagmatic and paradigmatic relations play significant roles in structural analysis, for they represent all the non-present associations (or planes of contrast) that potentially can be or are raised by the use of some particular forms of language (Kronenfeld, 1979:509).

In Lévi-Strauss' view, the structural approach of the Geneva School and of Troubetzkoy and Jakobson of the Prague School in the analysis of language is a good methodological model that can be adapted to the analysis of kinship systems and myths. Like phonemic systems, Lévi-Strauss says, kinship systems are systems of behavior structured by unconscious laws, and these behavior become meaningful only when they are integrated into systems. He noted also that the sounds that man is capable to make are unlimited. So are the attitudes of man in social interactions. But a particular phonological system will select as distinctive only certain elements of these sounds, likewise, a particular kinship system or social group will choose only certain components of its attitudes as distinctive in that system. These attitudes may also be seen, in structural terms, as features of relationship within a system. However, in applying structural analysis on kinship phenomena

Lévi-Strauss makes also distinction between kinship as a system of terminology and a system of attitudes, and he deals with the second as he tries to explain the attitude of the maternal uncle or mother's brother; a phenomenon discussed by Radcliffe-Brown a few years earlier.

Since kinship is viewed as a system, Lévi-Strauss believes that maternal uncle is a part of any kinship system, whether or not the social group under study uses certain kin term for that category. Thus, to understand the attitudes of maternal uncle, Lévi-Strauss opens his analysis by pointing out two interesting situations with regard to the son/nephew, namely first, the situation where the father represents authority and the uncle familiarity, and second, the situation where the relationship between father and son is of familiarity whereas the relationship between uncle and nephew is one of authority. For Lévi-Strauss, these two situations represent two sets of attitudes constituting two pairs of oppositions. In some societies the maternal uncle is [-familiar], [+authoritative], but in some others he is [+familiar] [-authoritative] (Lévi-Strauss, 1963:41). To analyze a kinship system in this way is to look for the unconscious features of the attitudes as part of the system. It also means to view kinship terms as a bundle of attitudes, which are related in many ways to other terms within the system. In terms of this perspective, Lévi-Strauss then arrives at the conclusion that such a relationship is only "one aspect of a global system containing four types of relationships which organically linked, namely: brother/sister; husband/ wife; father/son and mother's brother/sister's son". Furthermore, he also formulates a general rule that states that in cultures where the relationship between mother's brother and sister's son is distinctive "the relation between maternal uncle and nephew is to the relation between brother and sister, as the relation between father and son is to that between husband and wife" (Lévi-Strauss, 1963:42). This rule can be put in a formal way as follows:

$$(MB - ZS) : (B - Z) :: (F - S) : (H - W)$$

This postulate offers an alternative to empirical causal explanation and prediction, and is a good example of structural explanation and prediction, for Lévi-Strauss claims that "If we know one pair of relations, it is always possible to infer the other" Likewise in phonology, if we know the relationship between /k/ and /g/ or /p/ and /b/, we can infer the relation between /t/ and /d/ or /s/ and /z/.

In his application of structural analysis to myth, Lévi-Strauss views myth as a cultural phenomenon having both reversible and non-reversible time aspects, which means that it has recurring systematic elements, although the words used in telling a myth vary (Lévi-Strauss, 1969). This is similar to de Saussure's distinction between *langue* and *parole*. *Langue* belongs to reversible time, and *parole* to non-reversible time (Lévi-Strauss, 1963:209). Myth is also both synchronic, i.e. its elements cooccur simultaneously, and diachronic, for it is composed of sequential events. Like language too, the elements of myths acquire meanings only when they are put in larger context. Therefore, it is necessary to look at myth as made up of constituent units. Each gross constituent unit consists of relations. These units or distinctive features of myth are not proposed as isolated relations but rather as bundles of relations (Lévi-Strauss, 1963:211). It is only as bundles that these relations can be put to use and combined to produce meaning, somewhat like phonemes, which consist of distinctive features, combined into morphemes.

The first step in this analysis is to break down the story of the myth into its component sentences. Then write each sentence down on an index card bearing a number corresponding to the unfolding of the story. Each card then would show a given subject performing a certain function. This is called relation. The same kind of relation will come up diachronically at remote intervals throughout the myth. But since myth, according to Levi-Strauss, has also specific character, i.e. mythological time, which is both reversible and non-reversible, synchronic and diachronic, the myth should be arranged

in synchronic and diachronic way as well, and the true units to be analyzed here is the bundles of relations. When we reorganize the myth along the two dimensions we get the following result,

1	2	3	4	5		
	2	3	4		6	7
1			4	5		7 8
1	2			5		7
		3	4	5	6	8

To understand the meaning of myth we should also read the myth from left to right, column by column.

We can take Lévi-Strauss' analysis of Oedipus myth as an example of his structural analysis. He breaks down the Oedipus story into sentences and takes the sentences that indicate relations as the smallest units. Then he arranges these units synchronically as well diachronically. The results can be seen in table 3.

We find in the table four vertical columns, each of which include several relations. Lévi-Strauss says that the common feature of all relations in the first column is overrating blood relations, while the second column expresses the underrating of blood relations. The third column refers to monsters being slain, which he interprets as the denial of the autochthonous origin of man. The common feature of the names in the fourth column is the difficulties in walking straight or standing upright. This refers to the persistence of the autochthonous origin of man, such as has been indicated by other myths. So column IV is the converse of III, just as column II the converse of I. Lévi-Strauss assumes in his analysis that myth serves to resolve -at the level of logic or thought- the contradiction that is irresolvable at the level of reality.

Seen in this light, Levi-Strauss concludes, Oedipus myth deals with the inability of a culture to find a satisfactory transition between the belief that mankind is an autochthonous and the knowledge that

Table 3.

I	II	III	IV
Cadmos sees his Sister Europa, ravished by Zeus		Cadmos kills the dragon	
	The Spartoi kill one another		Labdacos(Laios' father) = lame (?)
	Oedipus kills his father		Laios (Oedipus'fa- ther) = left sided(?)
		Oedipus kills the Sphinx	Oedipus = swollen foot (?)
Oedipus marries his mother, Jocasta	Eteocles kills his brother, Polynices		
Antigone buries her brother, Polynices, de- spite prohibition			

Source : Lévi-Strauss, 1963: 214-216.

human beings are actually born from the union of man and woman. Here the myth becomes a logical tool that relates the original problem to the derivative problem. "Although experience contradicts theory, social life validates cosmology by its similarity of structure. Hence cosmology is true" (Lévi-Strauss, 1963: 214-216).

An important aspect to note here is how this approach compares methodologically with that of structural phonology and Saussure's syntagmatic and paradigmatic relations. The rows here represent the diachronic elements and the syntagmatic relation, while the columns represent the synchronic elements and the paradigmatic relation.

IV. Basic Assumptions of American Structural Anthropology

Our discussion above indicates that The New Ethnography or American Structural Anthropology aims at describing a people's culture in a formal replicable way, so that the result will be comparable to other descriptions using the same method or approach. In this way it helps to build the basic foundation of comparative anthropology that seeks to attain valid scientific generalizations or propositions of cultural phenomena. It is thus part of a large program in cultural comparative tradition, and therefore shares the same view with this tradition concerning the assumptions, object of study and the goal of anthropology as a scientific discipline.

As we have seen, explaining the cultural similarities and differences among various societies and cultures is one of anthropologists' major tasks. This scientific question has inevitably led the anthropologists into the domain of behavioral and social sciences in which one of the methods to get some answers to the problems is through comparative research. The basic assumption here is that human cultures tend to have their various components functionally integrated and reciprocally adjusted to one another. As new elements are invented or borrowed, they are gradually fitted into the pre-existing cultural matrix. Nevertheless, this tendency is far from universal or invariable rule. The integrative process is much more complex. New and introduced elements of culture require time before they become adapted to the cultural matrix and vice versa. Thus, any culture at any time exhibit relationships among its constituent elements, which are in part completely integrated functionally, and in part still adjusted or only imperfectly adjusted to each other. "By definition cultural elements can be considered functionally interrelated only if they occur together at the same time among the culture-bearing group" (Murdock and White, 1980: 4). This means that traits associations need to be measured by means of correlation. Here, determining the relative importance of various cultural factors in their relationships to each other becomes a fundamental problem for cultural anthropologists who want to understand human ways of life and how they change and develop.

Various studies had been conducted along this line of thinking. Some studies seek to relate aspects of culture to other socio-cultural variables. Some seek to relate characteristics of social life and culture to such environmental variables as latitude, climate, terrain, flora and fauna. Others attempt to explore the relationships between certain ways of life and biological, psychological characteristics of human organism (Ford, 1967:8). But, merely to assert that certain relationships exist between certain phenomena are not enough. The statements or allegations should be supported at least

by some measure of empirical evidence and anthropologists are compelled in this instance to resort to statistics. They then take a large representative number of cultures from all regions of the world and from different periods of history to determine whether the postulated relationships among relevant variables are quantitatively confirmed. Here statistical methods offer the only dependable technique to evaluate the extent of relationships between cultural elements, and thus arrive at scientifically valid generalizations (Murdock and White, 1980:5). Underlying the adoption of this method is the scientist's conception of scientific endeavors and theories.

Murdock writes that there can never be any generally valid science of man which is not specifically adapted to and tested with reference to the diverse manifestations of human behavior encountered in the thousands of human societies that are recorded in history and ethnography. "Whatever other methods of investigation that might be employed the comparative method is indispensable. Without comparative study, no combinations of other methods can achieve scientific results of universal application" (Murdock, 1965:298). The anthropologists who follow this principle believe that the ultimate goal of their science is to develop universal laws of human culture and behavior through verification. To accomplish this end, they look for the non-unique categories, the etic unit so to speak, and create, discover or establish relationships among them, and ask why such relationships occur (Cohen, 1973:vii). In so doing, they construct universal theories of culture. By theory they mean "a statement of lawful regularity about two or more variables which predicts that the appearance of a change in the value of one variable will lead to or cause a change in the value of some other variables" (Levinson and Malone, 1980:3). The problem that arises immediately from such notion of theory is that of measurement. "If a is correlated with b then to test the relationship we must be able to show that more or less one of these implies more or less of the other" (Cohen and Naroll, 1973:38).

Cross-cultural comparison -which is also called holocultural study (Naroll, 1973a)-, as practiced today is basically the brainchild of G.P. Murdock. Murdock's contributions in this field are, among others, the use of formal statistical inference including coefficients and correlations and tests significance; the development of systematic continental ethnographic bibliographies and, more importantly the formal use of the logical postulates, a system of reasoning which carries out Popper's doctrine of deductive reasoning and hypothesis falsification (Cohen and Naroll, 1973: 12-13). The last point shows us the epistemological background of cross-cultural approach, i.e. Popper's conception of theory and the stochastic epistemology.

Popper argues that true scientific endeavor is not inductive but deductive, and scientific research consists essentially of attempts to refute the scientist's own idea. He defines negatively the notion of scientific theory, to distinguish it from the metaphysical theory, and concludes that every good scientific theory is a prohibition. It forbids certain thing to happen. The more a theory forbids, the better it is.

In addition to that, a theory should also be falsifiable. Consequently, every genuine test of theory is basically an attempt to falsify it, not to support or prove it. Thus, he sums up, the criterion of scientific status of a theory is its falsifiability, or refutability, or testability (Popper, 1965: 37). If a really thorough and well-designed attempt at refutation fails, then the idea is tentatively presumed right. But it is never finally shown to be so. From this point of view, the best theory is

"...the one which, by natural selection, proves itself the fittest to survive. This will be the one which not only has hitherto stood up the severest tests, but the one which is also testable in the most rigorous way. A theory is a tool which we test by applying it, and which we judge as to its fitness by the results of its application." (Popper, 1968: 108).

Popper's science is empirical science, which should represent the 'real world' or the

world of our experience. Since a theory must be falsifiable, testable, it must also be empirical, and an empirical theoretical system must satisfy several requirements. First, it must be synthetic in the sense that it contains no contradictory statements, so that it may represent a *possible* world, our world. Second, it must not be metaphysical, but must "represent a world of possible *experience*". Third, it must be distinguished from other such systems, and becomes the one that represents *our* world of experience (Popper, 1968: 39). The criteria of empirical scientific study are thus, experience, testability, falsifiability. And cross-cultural comparison, in the eyes of its practitioners, is like Popper's science. It has as its scientific goal the development and verification of universal laws of human culture and behavior.

Another premise underlying the worldwide comparative study is that human being is part of natural biological order whose development is explainable by scientific laws. It is argued too, that culture as product of human actions is a natural phenomenon which development is explainable by laws (Jorgensen, 1979: 310). These assumptions lead to the second epistemological foundation of holocultural or cross-cultural study, i.e. stochastic epistemology that assumes that culture and society are elements of reality, or stochastic phenomena, which means that sociocultural phenomena operate according to the laws of probability. From this viewpoint, any explanation of social or cultural phenomena must seek to determine relationships among such entities defined as variables and/or constants (Cohen, 1973: vii). Moreover, human social and cultural life is assumed to be dependent upon or influenced by many factors. In the probability model of socio-cultural phenomena, a holocultural study predicts that if A then probably B, not that if A then always B. The prediction is considered confirmed if the index of the statistical association is greater than would be by chance alone. An acceptable chance risk level or level of statistical significance is usually defined as five times in one hundred or less (Levinson and Malone, 1980: 12).

The special kind of probability involved in such a study is known as Bayesian inference. To understand this probability we need first to consider the basic meaning of probability. Probability, in the classic sense, deals with a known universe having known characteristics. Take for instance that the universe is a bowl of marbles. All marbles are identical in all of their characteristics (shape, size, weight, etc.) except their colors. Half of the marbles are black, and the other half are white. The notion of probability may be defined with reference to this proportion. With an assumption that the marbles in the bowl are all well stirred, then a probability of 50% means the chance that a blindfolded person would get a black marble rather than a white one in a single draw. This is an example of what people call *a priori* probability, meaning that the proportions of black and white marbles are already known before any marbles are taken out of the bowl (Naroll, 1973b).

The second probability is *a posteriori* probability or Bayesian inference. Again we have the same universe in this model, but this time the proportions of black marbles to white ones are not known. Therefore, the probability of any given try yielding a black marble rather than a white one cannot be determined with certainty. What we can do is just making inference about it, which themselves have a certain probability of truth or error either. We may make statements about the probability that the true proportions of marbles in the bowl are thus-and-so by taking an example of any number of marbles from the bowl. In this case, our basic inference is the probability of probability, and the key concept in this line of reasoning is the confidence interval (Naroll, 1973b). All of these assumptions and conceptions about culture and science differ significantly from those of Lévi-Strauss' structuralism.

V. Basic Assumption's of Lévi-Strauss' Structuralism

Lévi-Strauss' originality, Rossi says, consists in having proposed a new definition of the scientific object of anthropological studies, because the empirical data appear

too heterogeneous and often ambiguous when they are taken at their face value (Rossi, 1982:47). Lévi-Strauss argues that it is not only naive but also false, to take overt behavior of people's conscious explanation for granted and treat them as genuine objects for scientific investigation, for in his view conscious phenomena hide unconscious structures. "They are not intended to explain the phenomena but to perpetuate them", Lévi-Strauss says (1963:281-282). Also, it is well known that people's explanation and/or behavior may hide their interests, or they are poor understandings of social phenomena. Further, the actions and explanations of some people sometimes contradict the actions and explanations of others. For these reasons, Lévi-Strauss and other structuralists argue that we have to go beyond surface structures or 'conscious models' of the people to find the deep and real structure which alone can account for the variety of socio-cultural phenomena or conscious explanation as well as their contradiction or discrepant properties (Rossi, 1982: 6). The reality of the phenomena lies not in the appearances as they are given to the observer but at a much deeper level. This consists not in the objects under consideration but in the relation between relations that is simpler than the objects themselves. This is the peculiarity of the fact studied by anthropologists.

The implication of this view is clear. We cannot anymore explain the meaning of a given cultural phenomenon or a custom if it is studied in isolation. On the contrary, it must be interpreted or analyzed in terms of the larger system of reciprocity; in its position within a system of relationships. This is what is called the systematic notion of meaning. A typical work of structural analysis is to explain the copresence of apparently heterogeneous elements in terms of their oppositions and reciprocal or complementary relationships (Rossi, 1982:48). A structuralist breaks down cultural facts into abstract elements and considers them in their mutual relationships, just like the linguist who breaks down morpheme into phonemes and analyzes their inter-relationships.

The phenomena under study are defined as relations between terms, from which a table of possible permutations is constructed. This table then becomes the focus of analysis, whereas the real observable phenomenon is regarded merely as one of the possible combinations or expressions (Lévi-Strauss, 1967:16). These relationships are also regarded as the "profound and omnipresent cause" of empirically observable functions. In this case the smallest unit of study is no longer man or his products as observable entities -which for Lévi-Strauss remain impenetrable-, but rather the relationships between the entities, which are more simple and intelligible. This set of relations is like a simple and constant form imposed upon the multiplicity of contents (Rossi, 1982:48). The exclusive concern of the structuralists with relationship as object of their investigation has allowed them to search for invariant forms underneath various content of cultural phenomena, rather than searching for recurring content behind variable forms.

In studying socio-cultural phenomena Lévi-Strauss holds that there is no society or any social system that can be grasped as a whole. Each society must be conceived of as composed of diverse and more or less interdependent "orders" of relationships between persons or between persons and objects as conceived by persons. A society consists of, thus, different forms or orders of communication. Each order is different from another in the materials being circulated or "communicated", or in the way the same materials are conceived as interrelated (Lévi-Strauss, 1963). Yet each order must have at least formally similar or identical structure. Hence, we may say that each order is only a conditioned variant of the other. The conditioning variables in this case being the kinds of materials involved in each order. These various forms or orders are not the structure itself, but only a variant expression of it. It is the structure that underlies people's conscious and unconscious models as well as their social transactions, and which in the end of the analysis must also be expressed or manifested in the structural represent-

tations of these models. One task would be then to formulate the rules for transforming the structure in one type of communication or "order" into the structure of another order.

From such a perspective, a structural analysis is basically a procedure or technique for sorting out levels of social phenomena, for learning about relations between phenomena at the same or different levels, and for relating the conscious and the unconscious models of the same or different people to one another (Scheffler, 1966:70). In his analysis the anthropologist treats each system of relations as one particular case of other systems, and searches for their global explanation at the level of transformational rules, which would enable him to pass from one system to another. Essential to the notion of structural analysis are the methodological concepts of transformation and structure.

A structure is not a representation or a substitute reality, for there are many structures located at various levels of reality (Lévi-Strauss, 1963:327). Lévi-Strauss clearly states that the structure he elucidates is nothing but empirical reality apprehended in its logical organization, and that there exists no structure separated from content or vice versa. "The structure is the content itself" (Lévi-Strauss, 1976:115). Structure is thus the determining (though invisible) relations which account for empirical observable reality. For Lévi-Strauss, the idea of structure implies the idea of transformation, because a group of phenomena is structural only if it is a system with internal cohesiveness, and the cohesiveness is revealed by the study of transformations which bring to light similar properties in apparently different system (Lévi-Strauss, 1976:18).

In his structural studies, Lévi-Strauss views social phenomena as "objectivated system of ideas". They are symbolic representations. Therefore, to explain them means to rethink them in their logical order (Lévi-Strauss, 1945: 528). When it is a question of men studying representations of other men, the representations can only be understood better and better, but never in a final definitive way, because the search for

truth will always depend on men who conduct the study (Rossi, 1974:93). Unlike the common causal explanation, structural analysis is a form of logical analysis. However, it is concerned not only with mental and formalistic entities but also with what kind of intrinsic coherence or intelligibility (logical structure) can be demonstrated to be present in cultural phenomena. The structural interpretation should then constitute an organized and coherent totality. It elucidates the meaning of socio-cultural realities -kinship systems or myths for instance- by exhibiting their systematic nature and by putting the various systems into a relationship of transformation to each other. In this way, what appears to be an immense disorder is organized in the form of "grammar" or language, "whose sole merits are its coherence and the fact that it accounts for all phenomena" (Lévi-Strauss, 1963:281).

To make the phenomena under study intelligible, anthropologists establish a model, i.e. a construction which purports to establish generalization which is valid only under certain specified (ideal) conditions, or in "its pure state" (Rossi, 1982:7). It is then the task of the anthropologists to devise the most efficient and parsimonious model to account for discrepancies or differences in the phenomena, not by comparing and differentiating entities (social facts) but by comparing their relational and positional properties. A model thus shows the positional and relational properties of certain phenomena. In so doing it allows us to make inferential statements about the situation, and to this extent the model explains the situation or phenomena being studied (Nutini, 1970:565).

Many critiques have been launched against structural analysis. However, in the eyes of its practitioners, these critiques show that some anthropologists have been bedeviled by an inability to conceive of a theory in anything but one-to-one relationship with a body of data (Kronenfeld, 1979:520). They consider a theory as valid only if it has been induced from a given body of data, or if one could deduce that data from theory. This is different from Lévi-Strauss' or structuralists' conception of theory. From the structural

point of view, a theory, to be useful, should go beyond accounting for the facts at hand. It should go on to generate a wide range of additional properties or possible permutations and combinations of abstracted elements, which may in turn be empirically evaluated.

As we have seen, Lévi-Strauss -like structural linguists- has abstracted out "frozen and complete synchronic states" from the inconsistencies and flux that manifest in any actual system as a result of several factors in normal diachronic change, because the aim of his structural analysis is not to explain a particular form of a particular kinship institution or myth in a particular society, but to discover the "deep and omnipresent" causes which will explain the regulation of relationships between persons in all societies and all times. Lévi-Strauss asserts that in this process a thorough analysis of one or few cases may be more appropriate in establishing the validity of generalization, than a large number of superficial instances (Lévi-Strauss, 1983: 314). This means simply that the single case or the compound of a few cases constitute a "model" which hopefully embodies the highest possible number of attributes of the universe under observation and experimentation, in which discrepancies may be accounted for by additional observational constructions (Nutini, 1970: 559). Consequently, structural analysis should be scientifically economic, in the sense that it has to utilize the least number of principles in order to explain the largest possible number of phenomena. "The most parsimonious explanation comes closest to the truth", Lévi-Strauss says (1963:89). For structuralism, this criterion of scientific explanation is more important than the traditional criterion. Lévi-Strauss believes that a particular phenomenon, such as a work of art, does not have an infinite number of structures.

We already know however, that the exhaustiveness of structural explanation is only approximate. Yet, this does not mean that the explanation is invalid or false. The notion of truthfulness or falsity of the explanation from the structuralist's point of

view is just not applicable to structural analysis, as it is in experimental analysis, because instead of proving anything about cultural phenomena the structuralist is concerned with understanding them. This implies that structuralism rejects the conception of rigorous experimental verification. For Lévi-Strauss, Popperian criteria of science are completely senseless in human science, where nothing is falsifiable (Rossi, 1974:93). The only possible criterion of truth is to show that the way the structuralist explains things allows us to account for more elements than we could account for with other explanation (Rossi, 1974:94). This is precisely what Lévi-Strauss is doing in his analysis of kinship systems, myths and other social phenomena. He always tries to construct models that can make the various complex socio-cultural phenomena comprehensible or intelligible. The proof of the analysis, for Lévi-Strauss, is in the synthesis, "in the capacity for reconstituting the empirical content from which it started" (Rossi, 1974:94).

VI. American and French Structuralism: Points of Differences

Our discussion on The New Ethnography or American Structural Anthropology and Lévi-Strauss' Structuralism or French Structural Anthropology shows that although they adopt analytical methods from linguistic theory, especially phonology, there are remarkable differences between these two structural anthropologies with respect to their analyses. This, as we have seen, results from their different conception on the goals of anthropology, the conception of society or culture, and the criteria of scientific theory.

The New Ethnography is born from the attempt of some anthropologists to refine their methods of cultural description, so that they would be more replicable and their ethnographies would be comparable. Based on such ethnographies their generalizations about cultural phenomena through comparative studies would be more reliable, since according to the comparativists the propositions based upon a single observation

would be considered valid only after being checked by a representative sample of comparable world's cultures.

Lévi-Strauss' structural anthropology, on the contrary, takes the opposite view. Like comparative studies in linguistics, anthropological analysis should be supported by something more than a mere classification and categorization, namely a real analysis. In phonological analysis the linguist extracts from phonemes the logical reality of distinctive features. When he compares languages and finds the use of the same distinctive features in other languages, these features are no longer similar phenomena "but one and the same". The linguist in this case uses his pair of oppositions to analyze other phonemes in other languages. In this way, he shifts his analysis to the unconscious aspect of the phenomena. Since structural anthropology take the unconscious activity of the mind as its object of study, "it is not comparisons that support generalization, but the other way around" (Lévi-Strauss, 1963:21). It follows then that to obtain the unconscious structure underlying each institution and custom is a necessary step in anthropological studies. This structure would become a principle to interpret other socio-cultural phenomena.

The New Ethnography and Structuralism also differs in their conception of culture. Lévi-Strauss views culture as consisting of various orders. An order has a certain structure, which is a transformation of the structure of another order. So, there are transformational relationships between these structures and the job of the anthropologist is to exhibit these structures and their interrelationships. Although The New Ethnography or cross-cultural study does not deny the existence of structure in culture, the cross-comparativists are not interested to lay bare that structure. They see culture as a system in which there are some functional relations between its elements, and in their opinion it is the task of the anthropologists to determine what kind of relationships exist between certain elements of culture, and whether or not they are attributable to lawful regularities.

The difference between The New Ethnography and French Structuralism is also reflected in their criteria of scientific theory. The New Ethnography emphasizes adequacy to stand up against rigorous test, and the goal of anthropology is to formulate laws about cultural phenomena; laws that state the relations between elements of culture that are verifiable and falsifiable. For the structuralists the aim of anthropological analysis is to make socio-cultural phenomena intelligible, and this can be obtained not by formulating propositions about relations between their elements but by uncovering their structure, their logical order that lies beneath the empirical observable facts, by constructing a model. Model plays a significant role in structural analysis, and the criterion to judge a model is not verifiability or falsifiability, but simplicity, as Lévi-Strauss states,

"...it is obvious that the best model will always be that which is true, that is the simplest possible model which while being derived exclusively from the facts under consideration also makes it possible to account for all of them" (1963:281).

Another more important divergence between The New Ethnography and Lévi-Strauss' structuralism can be found in their conceptions of meaning. For The New Ethnographer the meaning of a linguistic expression or a symbol is the class concepts or images it designates or refers. A word, it is said, "denotes image or subclass of images", or "signifies the criteria by which specific images or concepts are to be included or excluded from the class of images or concepts" that it designates (Goodenough, 1970:72). This is what some people call referential theory of meaning. The meaning of a symbol is what it refers to.

Another more developed theory of meaning adopted by some new ethnographers is the relational theory of meaning, which is based on the premise that the meaning of a symbol is its relationship to

other symbols (Spradley, 1979: 97). Adopting this perspective, an anthropologist must examine how a particular symbol is related to other symbols within the culture under consideration. Here, the relationship between a symbol and its meaning is still a semantic one, and it is held that this relationship provides the anthropologist with one of the best clues to the system of meaning in another culture.

As they were out in the field, anthropologists could use as this guide the universal semantic relationships to discover the meanings of symbols in the culture they were studying. These universal semantic relationships are for example: strict inclusion, spatial, cause-effect, rationale, function, sequence, etc. (Spradley, 1979:111). In terms of relational theory of meaning, we can uncover the meaning of symbol by using three principles: the use principle, the similarity principle and the contrast principle. The first principle says that "the meaning of a symbol can be discovered by asking how it is used"; the second states that "the meaning of a symbol can be discovered by finding out how it is similar to other symbols", while the last principle holds that "the meaning of a symbol can be discovered by finding out how it is different from other symbols" (Spradley, 1979:156-157). The last principle is, I think, the closest one to the notion of meaning in Lévi-Strauss' structuralism. It is based on the view that the meaning of any symbol depends on what it does not mean. However, since the meaning of symbol is the explanation given by the informant it is still at the conscious level.

Lévi-Strauss does not accept referential or relational theory of meaning. His conception of meaning is similar to that of the phonologists, according to whom the meaning of a phoneme is not defined by to what it designates, for it designates nothing, but by its position along two linguistic axes: syntagmatic and paradigmatic. Take for example the word 'project'. Its fourth phoneme /j/ will be defined against the other phonemes present in the same word, and against a set of possible (i.e. meaningful)

replacements of /j/, such as /t/ in 'protect'. A phoneme, thus, acquires its meaning only when it is envisaged as a legitimate member of a unit of a higher level, a morpheme. This notion of meaning is of course has nothing to do with semantics at all. "They are just the horizon that allows us to distinguish what is functional in a given language from what is not" (Merquior, 1986:14-15). Thus, we can think of /t/, but not /b/, as a possible replacement of /j/ in 'project', because we do not have the word 'probject' in English. In brief, meaning in such instances is only a 'tool' to spot the "difference" or "sense" as the diacritic support of structure.

The last, and I think, the most important difference between The New Ethnography and Structuralism lies in their epistemological background. As we know, these approaches use different criteria of science. This is reminiscent of the opposition between the Correspondence and the Coherence theory of truth. Each theory postulates the existence of some corpus beyond the propositional form, in which truth is expressed, and The New Ethnography or cross-cultural study's position is in line with the Correspondence theory, which holds that the corpus is an irreducible one and is known as 'fact'. The fact is available to the observer but is separate from him. In other words it is given and is susceptible of positive, discrete investigation. The fact is considered as stable, meaning that it is not affected by the presence, absence and the activities of the investigator. Assuming the given quality of the fact, correspondence becomes the criterion of verification in positivism. According to the Correspondence theory a judgement is correct or a proposition is considered as true if there is a fact corresponding to it, and false if there is not.

Unlike The New Ethnography, Structuralism accepts the opposite theory of truth, the Coherence theory. Lévi-Strauss himself seems to advocate this theory early in his career (Rossi, 1974:97). Coherence theory holds that there can be no separation although there is a difference- between the

phenomena observed and apprehended on one side, and the mind and the process of observing and apprehending on the other side. There is no demonstrable separation between them. An observer is regarded not as reporting on given facts, but as viewing a world of ideas in terms of a given world of ideas that are postulated. Phenomena are considered as lacking of possibility of positive identification and can only be expressed propositionally. Therefore, facts are not given. They are affected by the presence, actions of the observer. Furthermore, the phenomena are placed in overlapping classes. For this reason it is valid to regard the relations between phenomena as being internal to the phenomena. In that case explanation of the relations between phenomena are explanation about something integral of the phenomena themselves. Now, explanation can only be explanation of relations; phenomena, if discretely identified, are not "explained". This is precisely what structural analysis aims at. Since explanations are expressed in terms of propositions, the criterion of verification can only be coherence between propositions. The relation of coherence would be the one that does not violate the principle of contradiction. Coherence between propositions means a mutual dependency between propositions. If one proposition is changed, all are changed (Lowther, 1962:508-509).

VII. Conclusion

Two kinds of structural anthropology are discussed in this article: American and French structural anthropology. Although both take methods of linguistic as their models for cultural description and analyses, results of their studies are remarkably different. This, as we have seen, stems from their diverse views on several matters. First, on the goal of their studies, American structural anthropologists hold that the main task of anthropology is to account for the differences as well as the similarities of human societies by using comparative cross-

cultural study. This strategy, they believe, will enable them to formulate "laws" of socio-cultural phenomena. French structuralists, on the other hand, hold that to understand and explain socio-cultural phenomena anthropologists should build "efficient" and parsimonious models. Instead of comparing and differentiating entities, such as what the American structuralists have been doing, French structuralists prefer to compare the relational and positional properties of the phenomena under investigation.

This difference stems from other more fundamental ideas, i.e. the ideas of the nature of society and culture, or rather, the conceptions of socio-cultural phenomena. In the eyes of French structuralists, socio-cultural phenomena are composed of diverse, more or less interdependent orders of relationships, each of which has at least formally similar or identical structures, and is only conditioned variant of the other. The goal of anthropology then is to formulate the rules of transforming the structure in one order into another order. In the other camp, the American structuralists view socio-cultural phenomena as a system with some causal, functional relations between its elements, and the aim of anthropology is to define the relationships between these elements. These relationships are regarded as law-like regularities when they have passed rigorous cross-cultural examinations.

Closely related to these points of divergence are their different views on the criteria of scientific theory. For the American structuralists a valid science of human behavior should be tested with reference to the various manifestations of human behavior encountered in so many human societies. Therefore, comparative method is indispensable, and the scientific status of its theory is its falsifiability. The French structuralists, conversely, are more concerned with understanding socio-cultural phenomena, i.e. rethinking them in their logical order, by using a model. Consequently, the conception of science with rigorous experimental verification is inapplicable to structural analyses. The scientific status of a structural theory is

determined rather by the simplicity of its model.

From the epistemological perspective, the difference between American and French structuralism lies in their conception of truth and the relation between mind and the phenomena observed. The American structuralists adopt the Correspondence theory of truth, which holds that what we call fact is given, stable (unaffected by the presence of the observer), and is available to the observer, but is separate from him. The assumed qualities of the fact allow the scientists to use correspondence as the criterion of verification. On the opposite side, the French structuralists advocate the Coherence theory of truth, which states that there can be no separation between the mind and the phenomena observed. Facts are not given, are affected by the presence of the observer, and therefore are lacking the possibility of positive identification. Relations between phenomena are integral to the phenomena themselves. Consequently, explanation can only be explanation of relations and the criterion of verification is thus the coherence between propositions, or the logical organization or the mutual dependency between propositions.

Finally, the difference between American and French structural anthropology can also be found in their conceptions of meaning. While the American structuralists conceive the meaning of symbol as what it refers to or its relationships to other symbols, the French structuralists believe that the meaning of symbol is determined by its positions along two symbolic axes: the syntagmatic and the paradigmatic, and it has nothing to do with semantics.

Those are the significant differences between the two structural anthropologies. I believe that only by understanding and appreciating the differences and background can we avoid unnecessary or inaccurate critiques against structural approaches in anthropology. I also hope that the discussion here will enhance our appreciation of structural analysis in anthropology.

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