Chapter 1
Analysis and Comparison in Testing Theory: An Introduction

What is Cross-Cultural Research? Human communities have a variety of practices, beliefs, social roles, norms, expressions, forms of organization and conflicts (economic, political, legal, religious, expressive and artistic) that exhibit some internal coherence within communities. These bear many close connections to the historical experiences, physical and social environments in which people live. They include configurations of elements and characteristic ways of interrelating that are shared with neighboring and interacting groups, and shared among dispersed groups that have common historical experiences and similarities, including common origin, common membership in historical civilizations, and languages that are mutually understood or that derive common families.

Elements and relationships that individuals or communities have in common are shared in a variety of ways. Some, such as the more intensive patterns of interaction that derive from common residence, joint experience, and discourse in a common language or system of signs, are relatively well bounded. Other patterns of sharing or similarity derive from processes of dispersal: migration, diaspora, the trajectory of lives lived through spatial movements, social mobility, careers, and distinctive histories. Interactions are by no means limited to localities, but to the trajectories of inhabitants who move through and between localities.

Cultures consist of shared constructions that emerge out of social interactions of sets of individuals that are the inhabitants of overlapping social and physical spaces. Coherence may be viewed as an emergent property, but may be present or absent to varying degrees and along varying dimensions or trajectories.

Sociocultural anthropology, as would be expected from a study of shared and contrastive constructions that embody meanings attributed to human life, is not an easy discipline, nor is there complete agreement among practitioners as to how to proceed.

Cross-cultural research takes a comparative approach to the complex problems of asking:

- What are the patterns of coherence and sources of coherence in the practices, beliefs, social roles, norms, expressions, and forms of organization and conflict in
  - human communities
  - other forms of groups
  - other extra-community trajectories
- How much of that coherence is due to
  - common history, language, identity
  - common or recurrent modes of adaptation to recurrent human problems
  - recurrent consistencies in how language, discourse and expression, social roles, norms and organizations are constructed into shared cultures?
- What are the patterns of decoherence and disjuncture, misunderstanding and conflict
  - that arise given the multiplicity and overlapping of cultures

> How can we distinguish patterns of coherence that include conflict, obstruction, resistance and dysfunction from decoherence, the superposition of distinct but independent systems that, at least for some initial time period, do not interact.
> http://www.lkb.ens.fr/recherche/qedcav/english/rydberg/nonresonant/decoherence.html

The interpretive approach to anthropology, in contrast to the cross-cultural, often asserts that comparison is impossible in principle because an objective or privileged frame of reference for interpretation cannot be justified. Hence the best one can do is put forward cultural interpretations that are sensitive to the meanings in play among inhabitants both of the world-as-studied-by-ethnographers and the world-as-discourse-among-ethnographers-and-those-who-'read'-ethnography, or to work to abolish such dualisms altogether, or simply to adopt a pragmatic one-must-simply-act-on-the-basis-of-good-values justified by common sense and condemnation of all the rest. Unfortunately, while standards for good and honest ethnography may be espoused, there is no absolute ground for legislating agreement and banishing disagreement about judgments, and a strictly postmodern approach to these questions is often viewed as having failed on these grounds, to the extent that it arrogates to itself a privileged position and consensus while denying the validity of approaches that do not match perfectly to this imagined consensus.

Cross-Cultural Research: A Short History

Cross-Cultural Research is one of the rare disciplines that have a conventional birthday. This is November 13, 1888. It was on this day when Edward B. Tylor, one of the founding fathers of Sociocultural Anthropology in general, presented his paper "On a Method of Investigating the Development of Institutions, Applied to Laws of Marriage and Descent" at a meeting of the Anthropological Institute of Great Britain and Ireland [Tylor 1889]. This dating seems to have certain justification, as in this meeting Tylor presented for the first time to a wider audience the results of research which can be called "cross-cultural" in the present-day sense of this word. Indeed, Tylor seems to be the first anthropologist who understood the importance of creation of what we call now "cross-cultural databases" and their formal statistical analysis.

This cross-cultural research tradition continued in Britain well into the 1920s (see first of all Hobhouse, Wheeler and Ginsberg 1915), after which, however, it virtually died out in England. Its center moved to Holland where as early as 1900 one of the best cross-cultural studies available up to the present was published (Nieboer 1900 [see also Nieboer 1910]). In the 1920s the "Amsterdam School" achieved, among other things, considerable results in the development of cross-cultural databases by cataloguing ethnographic data on more than 1500 cultures ([Steinmetz 1930]; see also e.g., [van der Bij 1929; Tjim 1933]). However, this work was not finished, and in the 1930s the European tradition of formal cross-cultural research virtually died out all together.

On the other hand, at this very time the tradition of cross-cultural research appears and continues to develop on the other coast of the Atlantic Ocean. This happens mainly due to the effort of a single person, George Peter Murdock (see, e.g., Barnard & Spencer, 1996; Ember, 1991; Goodenough, 1979; 1988; Murdock, 1965a; Spoehr, 1985; Whiting, 1986).

Considerable results in this respect were produced by Murdock's participation in the so-called Monday Night Group of the Institute of Human Relations at Yale. The Institute occupied a separate building but did not form a separate institution of research and teaching. It was organized in the late 1920s in order to support multidisciplinary interaction between various departments studying human relations from different angles. The main participants were psychologists, sociologists and anthropologists. In 1935 a few of its younger members declared that their senior colleagues were not moving in the direction of the real multidisciplinary synthesis but continuing their research in a traditional old way, whereas multidisciplinary synthesis was the main task declared in the Charter of the Institute. It was the achievement of this aim for which the Monday Night Group was established (first of all by the initiative of J. Dollard). They proposed that Murdock be the "Anthropology Representative" within the group. Murdock accepted the offer and he participated actively in Institute activities up to World War II.

Murdock took his responsibilities as the Institute "Anthropology Representative" very seriously. In this capacity he considered as his main responsibility the creation of what we would call now a "cross-cultural database" by the use of which his colleagues, psychologists and sociologists (who did not know the cultural anthropological literature) could, however, verify their hypothesis on the basis of these materials. To achieve this aim Murdock organized a project named *Cross-Cultural Survey* within the framework of the Institute of Human Relations. He considered as the aim of this project the collection and classification of basic information for a representative sample of world cultures. Murdock wanted to organize in an easily accessible and user-friendly form all the anthropologically known data for a representative sample of all the ethnographically known cultures in order to make it possible to verify cross-cultural hypotheses in a rigorous way. This would also serve to identify gaps in the ethnographic record and to organize "corrective" field work [Murdock *et al.*, 1987/1938. P. XXI].

To achieve this aim Murdock and a very small number of other anthropologists co-operating with the Institute of Human Relation (C. S. Ford, L. W. Simmons and J. M. W. Whiting) prepared and published in 1938 the *Outline of Cultural Materials* which they intended to use as a basis for the classification of ethnographic data. It was immediately sent out to a considerable number of anthropologists and other social scientists and was used for the classification of ethnographic data for 90 cultures. The group also collected comments and criticisms and used them to prepare by 1942 a revised and enlarged edition of the *Outline of Cultural Materials* which was published in 1945. Since that time three more enlarged and revised versions of this edition appeared (see Murdock *et al.*, 1987/1938).

At the very beginning of the project there was a discussion between its participants regarding whether the data should be collected in condensed form, or if the respective ethnographic texts should be reproduced literally in its original form. Murdock insisted energetically on the second option and his position won. It seems necessary to mention that this affected significantly the development of Cross-Cultural Anthropology, because this approach was used for the accumulation of anthropological data in New Haven on the basis of the Institute of Human Relations in the framework of "Cross-Cultural Survey" project which later was used as a basis for the establishment in 1949 of the

organization being in charge of the revision and enlargement of the largest full-text anthropological database. This organization is the Human Relations Area Files at Yale University (HRAF).

However, later Murdock started using more and more economical ways of recording and storing anthropological data, which constituted a basis for the development of cross-cultural databases of a rather different type. Murdock's *Social Structure* (1949) already contained such databases (although in 1949 Murdock does not appear to have known that these were just what later would be called "databases). We mean first of all Tables 61–71 of this monograph. For example, in Table 66 Masai culture is described in the following way: P I P O O BP P . GM GM, where the first P denotes "patrilineal descent", I designates "Iroquois kinship terminology for cousins," the second P denotes "patrilocal marital residence" and so forth (Murdock 1949: 237).

In this way Murdock managed to find a way of rather economic storage of cross-cultural data. It is remarkable that he developed this method in the pre-computer age. However, the immense potential of Murdock's database approach became especially clear after the invention and diffusion of computers. Indeed, it is very easy to transform symbols of the above mentioned record into numbers (as the main data formalization was already done earlier during transformation of full-text descriptions into simple signs); after that it is perfectly easy to make these records perfectly machine-readable even by the most primitive computers. This way we can get perfectly machine-readable databases with which we can perform enormous amount of possible operations.

The immense potential of Murdock's formalized databases was understood by his colleagues rather early, and already in the 1950s they persuaded him to publish his databases independently in the above described formalized form. The first publication of this sort was "World Ethnographic Sample" [Murdock, 1957], which contained formalized information on 565 world cultures for 30 variables.

Murdock continued this direction of his activities after he had moved in 1960 to Pittsburgh University. There he took an active part in the establishment of the *Ethnology* journal where in its first issue printed in 1962 he began publishing as separate installments his largest database, the *Ethnographic Atlas.* In the 1967 Issue 2 the journal published the summary edition of all the previous installments which contained data on 863 cultures for more than 100 variables. The same year the summary edition of the *Ethnographic Atlas* was published as a separate book [Murdock, 1967]. However, even after that Murdock continued to publish (up to 1973) additional installments of the *Ethnographic Atlas* which contained data on cultures not covered by 1967 summary volume. This way, by 1980 Murdock accumulated formalized information on 1267 world cultures. However, a full version of the *Ethnographic Atlas* has never been printed. Nonetheless, these data are available to the academic community in another form – the electronic one [Murdock *et al.*, 1986; 1990; 1999–2000].

The first attempts to convert the cross-cultural databases in the electronic format began almost immediately after the appearance of the first reliable computers, and already in 1967, almost immediately with the publication of the printed version of the *Ethnographic Atlas*, a punchcard version aimed at the database analysis with mainframe computers was published. With the invention and diffusion of Personal Computers cross-cultural databases (including the *Ethnographic Atlas*) started to be published on floppy disks, first the 5" ones [Murdock *et al.*, 1986], then on 3" diskettes [Murdock *et al.*,

1990], and finally on CD [Murdock *et al.*, 1999-2000], and through the Internet (http://eclectic.ss.uci.edu/~drwhite/worldcul/atlas.htm).

However, the *Ethnographic Atlas* was not the only project of cross-cultural database publication started by Murdock and his colleagues. Another initiative of his was of no less importance.

The Standard Cross-Cultural Sample and Standard Sample Spss Database.

In 1969 he published together with D. White an article titled "Standard Cross-Cultural Sample) [Murdock & White, 1969]. The article itself did not represent a publication of some new database. Its significance was in something else. The article contained first of all a description of a "frame" of a database designed to be rather different from the *Ethnographic Atlas* one. Within the *Ethnographic Atlas* project Murdock tried to collect data on a rather limited number of parameters for a maximum possible number of ethnographically described world cultures. The "Standard Cross-Cultural Sample" project was aimed at the formal description of only 186 cultures of the world. The number of possible description parameters was not considered to be limited in any way, but open to contributions from cross-cultural researchers.

186 cultures of the sample were selected very carefully. All the world was divided into 186 ethnographic areas, whereas the sample included only one culture (normally the best ethnographically described one, with earlier descriptions favored over later ones) from each of those areas. Due to the fact that the sample included the best ethnographically described cultures, it has turned out that to collect the data for this sample is generally easier than to do this for any other representative world-wide cross-cultural samples of equal size, and the data more reliable. Consequently, statistical analysis of the Standard Cross-Cultural Sample data sometimes gives more valid results than the one for the whole *Ethnographic Atlas.*

Murdock and White also organized the Cumulative Cross-Cultural Coding Center at the University of Pittsburgh and obtained the support of National Science Foundation awards to code the and publish the first installments of data for the Standard Cross-Cultural Sample. These installments were published by Murdock himself (in collaboration with his associates) [Murdock & Morrow, 1970; 1985; Barry & Paxon, 1971; 1985; Tuden & Marshall, 1972; 1985; Murdock & Provost, 1973a; 1973b; 1985a; 1985b; Murdock & Wilson, 1972; 1985; Barry *et al.*, 1976; 1985; Schlegel & Barry, 1979; 198; Barry & Schlegel, 1980 &c]. However, even this was not their main achievement. Their really important achievement was the fact that the Standard Cross-Cultural Sample started to be used by other scholars in order to collect the data for this sample with the aim to test cross-culturally their own hypotheses. The fact that different investigators used the same sample to expand the collection and publication, in the public domain, of cross-cultural data guaranteed the compatibility of the respective datasets independently created by different scholars. The publication by Murdock and his associates of the first Standard Cross-Cultural Sample datasets played a certain additional positive role (let alone the very fact of the publication of rather useful cross-cultural datasets) – these publications created some additional interest of cross-cultural researchers to collect the information for use with the Standard Cross-Cultural Sample. Within such a context in addition to the technical preferability of the Cross-Cultural

Sample researchers get two added stimuli – they do not need to collect data only on a few important variables, and they can correlatee the new variables that they develop with those of others. For example, you would like to test cross-culturally a hypothesis regarding the influence of subsistence technologies on some socialization patterns. In this case you would only have to collect data on the respective socialization patterns, as the data on subsitence technologies for the Standard Cross-Cultural Sample cultures have already been collected and published [Murdock & Morrow, 1970].

Subsequentally, we have achieved a classical cumulitative effect – as a result of the independent efforts of many independently working scholars who collected data to test their own hypotheses we have obtained a cumulative database (sometimes denoted as STDS) with the potential exceeding by a few orders of magnitude the potential of any of its constituent elements. The resultant cumulative database formed as a result of the merging of a several score of primary databases,[1] developed in order to test a limited number of hypotheses may be potentially used now to test a few dozen million hypotheses. In its latest version STDS (Khaltourina, Korotayev and Divale 2002) contains data on 186 Standard Cross-Cultural Sample cultures for 1863 variables.[2] It is highly remarkable that all this enormous set of extremely valuable cross-cultural information appeared not as a result of a huge and expensive formal scientific project, but as a result of independent work of a large number of independently working scholars whose efforts were coordinated just through the use of one carefully designed sample.

In creating the Standard Sample for Cross-Cultural Research, Murdock and White (1969; on-line at http://eclectic.ss.uci.edu/~drwhite/pub/SCCS1969.pdf) address the questions that revolve around the study of culture into several parts: First, the foci of study; second, the issues of coherence or decoherence within the foci studied, and third, the issues of coherence or decoherence between foci. These will be taken up below.

[1] Below we shall mention in the chronological order the list of the publications containing the coded data (in printed and/or electronic form) for the Standard Cross-Cultural Sample which have been included in the cumulitative database: [Murdock & White, 1969; Murdock, 1970; Murdock & Morrow, 1970; Barry & Paxson, 1971; Murdock & Wilson, 1972; Tuden & Marshall, 1972; Murdock & Provost, 1973a; 1973b; Wheeler /Nammour/, 1974; Broude & Greene, 1976; Barry *et al*., 1976; Roberts, 1976; Barry *et al*., 1977; Murdock, Wilson, & Frederick, 1978; Whyte, 1978a; 1978b; Schlegel & Barry, 1979; Barry, Schlegel 1980; Paige & Paige, 1981; Rohner & Rohner, 1981; Sanday, 1981; Barry & Schlegel, 1982; Patterson, 1982; Rohner, Berg, & Rohner, 1982; Rohner & Rohner, 1982; Broude, 1983; Ross, 1983; Barry & Schlegel, 1984; Barry *et al*., 1985a; 1985b; Barry & Paxson, 1985; Broude & Greene, 1985a; 1985b; Frayser, 1985; Murdock, 1985a; 1985b; Murdock & Morrow, 1985; Murdock & Provost, 1985a; 1985b; Murdock & Wilson, 1985; Murdock, Wilson, & Frederick, 1985; Paige & Paige, 1985; Pryor, 1985; Sanday, 1985; Schlegel & Barry, 1985; Tuden & Marshall, 1985; Whiting, 1985a; Whyte, 1985a; 1985b; Barry & Schlegel, 1986a; 1986b; Betzig, 1986; Burton *et al.*, 1986; Murdock & White, 1986; Pryor, 1986; Rohner, Berg, & Rohner, 1986; Ross, 1986; Schlegel & Barry, 1986; White, Whiting, & Burton, 1986; White, Burton, & Whiting, 1986; Winkelman & White, 1986; White, 1986; Bradley, 1987; Frayser, 1987; Patterson, 1987; Pryor, 1987; Rohner & Rohner, 1987–89; Roze-Koker, 1987; Schlegel & Eloul, 1987; Wheeler /Nammour/, 1987; Low, 1988b; Betzig, 1989a; 1989b; 1989c; Bradley *et al.*, 1989; Murdock, 1989a; 1989b; Pryor, 1989; Roberts, 1989; Roze-Koker, 1989; Schlegel & Eloul, 1989; White *et al.*, 1989a; 1989b; 1989c; 1989d; 1989e; White & Murdock, 1989; Bradley *et al.*, 1989; Anderson *et al.*, 1992; C. R. Ember & M. Ember, 1992a; 1992b; Dirks, 1993; Anderson *et al.*, 1994; Bradley, 1994; Dirks, 1994; Low, 1994; C. R. Ember & M. Ember, 1995; Ludvico, 1995; Ludvico & Kurland, 1995; Divale *et al.* 1998; Lang, 1998; Burton, 1999; Divale, 1999; Divale & Seda, 1999; Divale & Seda, 2000; Burton, 2001; Divale, 2001; Schroeder, 2001].

[2] To be systematic we should also mention one more set of formalized cross-cultural information. We mean several installments of database published by HRAF for a random sample of 60 world cultures which contains formalized data for *c.* 1000 variales. These include data on basic sociocultural parameters [Levinson & Wagner 1987], death and dying [Glascock & Wagner, 1987], religious practioners and altered states of consciousness [Winkelman & White, 1987], as well as adolescent socialization patterns [Barry & Schlegel, 1990]. See also the concordance of the above mentioned databases [Ember *et al.*, 1992].

This database has been in development for use in a computer lab, on CDs, and on-line. Thanks to Khaltourina, Korotayev and Divale (2002), the database has been checked for data quality, with corrected files replacing those originally published in the *World Cultures* electronic journal (D. White, founding editor, William Divale, publisher; Patrick Gray, General Editor). Thus, the instructional use of the teaching system that we describe here merits widespread distribution and on-line documentation. To facilitate its use, we have made a single file out of the Spss data files and a single file out of the codebook. The use of these files will be explained in the chapters that follow.

It seems necessary to stress that it appears possible to test cross-culturally with the use of the STDS such hypotheses whose existence was not even known to the creators of the primary databases. We shall mention just one example. During a study of the influence of the family structure [Bondarenko & Korotayev, 2000; Korotayev & Bondarenko, 2000] it turned out to be necessary to test cross-culturally a hypothesis that polygyny should correlate positively with socialization of boys for aggression.[3] It The STDS contains much data both on polygyny and socialization for aggression. We would like to stress once more that all the scholars collected their data to test their own hypotheses. For example, L. Betzig collected data on polygyny in order to test her own hypothesis which predicted that in complex traditional cultures we should observe a rather strong correlation between the despotism level and the rulers' harem sizes [Betzig, 1986; 1989a] (this hypothesis was incidentally supported by the respective cross-cultural tests). On the other hand, C. R. Ember and M. Ember gathered their socialization data in order to test their hypothesis predicting that the main factor determining violence level (first of all, homicide rates) within cultures is just the socialization for aggression in late boys [C. R. Ember & M. Ember, 1992; 1994; 1995; M. Ember, C. R. Ember, & Peregrine, 2002]. The scholars collecting data we needed had no idea about our hypothesis and had no way of knowing that their information would be used for the cross-cultural testing of the above-mentioned hypothesis. However, it turned out to be quite possible to use those data just for this purpose. And indeed we found a rather strong and significant correlation in the predicted direction [Korotayev & Bondarenko, 2000].

It seems also necessary to stress that databases created by Murdock, his colleagues and followers can be used not only for the cross-cultural tests of various hypotheses formulated in advance. Through cross-cultural database analysis a scholar can make such scientific discoveries which one would not expect before the start of her or his analytical work with databases.

[3] The logic of this hypothesis looks as follows. We mean first of all the well known "father absence" factor [Burton & Whiting, 1961; Bacon, Child, & Barry, 1963; B. Whiting, 1965; Munroe, Munroe, & Whiting, 1981; Kon, 1987. P. 32–33 etc.]. The above mentioned authors have shown that boys growing up in the environment consisting primarily of women tend to develop aggressive dominance-oriented personalities. Other important contribution here belongs to Rohner [Rohner, 1975], who showed that the development of the above-mentioned personality type correlate positively with the lack of parental warmth, whereas such a lack is typical just for polygynous (especially, non-sororal polygynous) families which are usually characterized by a low degree of cooperation between co-wifes. It is well known that such a context provokes lack of parental warmth and severe punishment of children [J. W. M. Whiting, 1960; Minturn & Lambert, 1964; Rohner, 1975; Levinson, 1979], which tends to lead to the formation of the above mentioned adult personality oriented at aggression and dominance.

We will restrict ourselves here to just one example. Darya Khaltourina decided to study the influence of warfare frequency on female status using the Standard Cross-Cultural Sample database.

Her initial hypothesis was rather simple – the more peaceful is a culture, the higher is the relative female status (and the other way round).

In general, this hypothesis passed the cross-cultural testing quite successfully [Khaltourina, 2002]. However, the attentive and persistent analysis of the STDS database made it possible to detect a few important regularities not expected in advance. For example, it was found that internal and external warfare frequencies affect female status in rather different ways.

It was found out that this is only internal warfare which affects female status negatively. In fact, this is not surprising, as the internal warfare turns out to be a powerful factor of the development of the patrilocal residence, which in its turn correlates negatively with the relative female status – indeed, within a patrilocal social context a woman after marriage finds herself separated from her kin (unlike her husband who gets a constant support from his relatives with whom he lives), which in its turn tends to lead to a significant decline of the relative female status in comparison with matrilocal, neolocal, or even ambilocal contexts.

On the other hand, it was found that the purely external warfare tends to lead to the rise of the female status. Thus, it has turned out that high levels of internal warfare correlate positively and significantly with, e.g., female leadership on the level of kin groups and extended families (Rho = + 0.5, $p = 0.02$) or female control over property (Rho = + 0.4, $p = 0.01$), at the meantime correlating in a negative way with, e.g., the wife deference to her husband (Rho = – 0.6, $p = 0.002$), and so on. Such regularities appear to be accounted for (at least partly) through matrilocality and high female contribution to subsistence that correlate positively (and logically) both with the high levels of purely external warfare, and the high female status. We would like to stress, that though the detected regularities are very logical, they were only detected in the process of cross-cultural database analysis which in this case helped not only to verify some *a priori* hypotheses, but also to discover some important regularities not known in advance [Khaltourina & Korotayev, 2003].

Problems of Cross-Cultural Research

The classical problems of cross-cultural research as noted above are: first, the foci of study; second, the issues of coherence or decoherence within the foci studied, and third, the issues of coherence or decoherence between foci. The first is the problem of what it is that one wants to study in terms of foci. Murdock and White (1969: 331), for example, take up the issue of sampling the diversity of human communities in order to learn something about coherence or decoherence within and between communities. This is not the only approach to cultural comparisons, but one that focuses on clusters of people who inhabit, as least in part, those specific and stable sites that can be studied as communities.

One could as well have other standard samples such as ones devoted to the study of migration, to the study of institutions and organizations, to the study of particular types of cultures, subcultures or populations. The insistence of Murdock and White on this point is not on communities as representatives of larger cultures, but on communities as

pinpointed times and places in which ethnographic study has been sufficiently well carried out that it is possible to list, from the ethnography, what specific bundles of practices, beliefs, social roles, norms, expressions, forms of organization and conflicts (economic, political, legal, religious, expressive and artistic) are present in each of the specific times and places of the distinct ethnographic foci that constitute the sample. At this level, there is no a priori assumption whatsoever that the observed elements exhibit internal coherence. That is a matter open for study, both through the analysis of the single case, and through the comparisons of different cases.

Cross-cultural research has often been denigrated by straw-man arguments. Many commentators have said that it assumes at the outset that cultures are bounded and discrete entities or that they are functionally coherent units when in fact these are among the questions that are open to study. The accusation that cross-cultural research sweeps variability under the rug by taking ethnographies to be "representatives" of larger cultural systems that are assumed to be uniform is also a straw-man argument. Samples used for purposes of comparison are precisely the opposite: they are samples of variables that vary in situ in whatever kinds of situations they occur. Both the type of community and the situations in which its inhabitants find themselves are part of the variation that is studied. Marilyn Strathern (1991:48-51) gives a useful commentary on this problem.[1]

Second, there is the problem and the issues of coherence or decoherence within the foci studied, in Murdock and White's case, that of the comparative study of human communities. They note (1969:329-330) the weakness of the functionalist arguments that were commonly used by ethnographers to argue for the cultural coherence of the communities they studied. Functional linkage of traits asserted by an ethnographer in one society, for example, are often contradicted that one trait but not the other is present in a similar neighboring society, or by the fact that the traits do not correlate across societies. The functionalist approach to ethnography was vastly overgeneralized in its heyday, that lasted from the 1920s through the 1970s.

Third, there is the problem and the issues of coherence or decoherence between foci in the study of human communities due to common historical origin or experience. Murdock and White (1969:330) note that the conjectures of those anthropologists who attempt to reconstruct culture history on the basis of trait similarities are not notably superior to those of ethnographers who investigate functional relationships.

Cultural coherence or decoherence within and between human communities: human behavior, beliefs, and institutions

For the study of culture and human behavior, cross-cultural research provides evidence
{for and against}
{hypotheses or theories}
{of coherence or decoherence
{borrowing or independent invention}
{within and between}
{human communities or other foci}.

The six sets of terms above are paired in brackets because the research agenda may examine any and all of these types of evidence. Negative evidence may debunk a theory of hypothesis. Positive evidence, if consistent, reliable, and replicable, may support it.

The importance of this type of research is not all or none, across the board for coherence of one sort or another, but in the specific linkages that are found and the exploration of linkages and explanations.

Testing hypotheses using data from a sample of cultures does not imply that the cultures are independent, that cultures are natural units, that they are closed systems, or anything of the sort. Geographical distributions and historical processes have to be examined. Some kinds of correlations may indicate groups of cultures that share a common history, that borrowed from a common source, or that interacted with dominant cultures, colonizing or immigrant groups, empires, zones of market, political or religious influence, or the like. Other patterns of correlation such as those that follow a phylogenetic tree of language differentiation, for example, may indicate historial or evolutionary continuities and branckings. Others may indicate functional relationships that either diffuse in blocks or where the presence of one set of elements leads to the independent invention of others that are functionally related. Correlation cannot indicate causation in any simple way, if only because all of the rival hypotheses about causal or feedback or random processes have to be explored.

Cross-cultural research is neither functional or historical or evolutionary, but may be any combination (including none) of the three; it is not necessarily dependent on surveys of ethnographic snapshots without time depth, but may be diachronic and concerned with change and cultural dynamics. It is not necessarily based on trait inventories or attributes of individual cases, but may include or focus on networks of relationships between as well as with the foci sampled for study. It may be based on a sample of cases, a random sample, or an exhaustive set of all existing, extant or available cases for study.

The specific findings of cross-cultural research have been summarized in part in a book by Levinson and Malone (1980) as well as C. R. Ember and Levinson (1991) and published in thousands of individual books and articles. Much has been accomplished in this field of research, mostly by specialized or additive increments where each individual author has selected a distinct sample. One of the contributions of Murdock and White's (1969) standard sample, given that ninety or more studies have contributed codes to the cumulative database, is that a geometric progression in research results is possible by examining relationships between topics investigated by different contributors of coded data.

Avoiding Pet Theories

Still, in spite of the major accomplishments of cross-cultural research, and the potential or geometric increments on our understanding of human communities using the standard sample as a cumulative database, cross-cultural research has lagged behind other fields because of the seeming commitments of contributors to one or another theory exclusive of the others.

The favoring of pet theories in cross-cultural research was evident in the first series of studies, from Edward Tylor (1889) to Hobhouse, Wheeler and Ginsberg (1915), where cross-cultural correlations between treats were taken to indicate evolutionary sequences. Tylor, for example, used correlations between matrilocality and matrilineality at one extreme versus patrilocality and patrilineality (with cases of bride capture in

between) as evidence for evolution from matriarchy "stage" to a patriarchal "stage" with an intermediate "transition" indicated by bride capture.

In trying to disprove evolutionary theory in favor of the particularity of distinct historical sequences, Alfred Kroeber (in the 1930s and 1940s) used correlations and similarities between societies in the same region to infer common origin, and to reconstruct historical or prehistorical sequences from shared patterns in trait distributions (Kroeber 1931, 1935, 1936a, 1936b, 1939a, 1939b, 1940a, 1940b, 1941, 1946, 1948).

Test the Alternatives

Harold Driver (1956, 1966) questioned the validity of the methods of reconstruction of both the 19th century evolutionists and the mid 20th century Boasian historicists as well as the correlational inferences of the functionalists. MORE?? His reward was expulsion from the field for a period by Kroeber's rejection of his criticisms, and ten years spent as a cab driver before regaining an academic career at the University of Indiana. It seems that scientific consensus, like that of postmodern sociocultural anthropology, does not brook criticism very well. Jorgensen (1980) and White (1975) are among the few that have kept to Driver's agnostic view on theory, but Naroll (1961, 1964), a historian, was the great innovator in proposing solutions to the problem of testing correlational and distributional evidence in terms of competing functional and diffusional or historical interpretations, the famous "Galton's problem" named after Sir Francis Galton's justified critique (1889) of the first cross-cultural statistical study from a comparative survey of ethnographic data, done by E. B. Tylor in 1889.

The Standard Sample and a Cumulative but Eclectic Science

The standard sample proposed by Murdock and White (1969) follows the agnostic approach to method and theory proposed by Francis Galton and developed by Driver and Naroll. Having started his career as an avowed functionalist interested in evolutionary theory under the influence of Ogden (1922) and Sumner (1906), Murdock, capitulated to the agnostic approach in the face of the evidence that all cross-cultural samples necessarily suffer from Galton's problem. The discussion of "The Measurement of Historical Influences" (Murdock and White 1969:348-352) follows Naroll in proposing methods for dealing with Galton's Problem. The first two pages of their article (the section labeled "Pinpointing") is a good statement, still valid today, of the problems of making inferences about function linkages from correlational data, and it explains why statistics are needed in the context of testing not just pet hypotheses, but competing hypotheses and theories.

Cross-cultural research is certainly not the sole arbiter of hypotheses and theories in the social sciences, or anthropology in particular. But as in the sciences, all of the social sciences have come to recognize that a triangulation of converging results, obtained by different methods and ways of looking at and analyzing data, is a useful requirement for development of valid results in any area of inquiry. One of the key advantages of cross-cultural research is that the data come from the widest possible diversity of sources: human societies distributed over the face of the globe and potentially, over different historical periods. Ideally, data from both past and present will

be part of the triangulation of sources of data. Completed ethnographies necessarily rely on data from the past and need to be understood if we are to learn from ethnographies to be conducted in the present.

[1] http://eclectic.ss.uci.edu/~drwhite/courses/PARTIALCONNECTIONS49.pdf