

The Student Guide to Anthro- Logical Thinking

by

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Welcome to the guide to better anthropological thinking. If you are reading this, you should already be familiar with my booklet *The Anthropology Student Guide to Better Grades*. You should know how to take notes, listen in class, ask questions effectively, and write answers to exam questions. At least you should be working to improve your ability to do those things.

Improving your study skills is a constant task. Even professors have to work at it. But you also need some skills that go beyond the mechanics of note-taking. You need to teach yourself how to think anthropologically. In this booklet, I will offer suggestions on how to improve your skills in this area.

At the outset, you need to put one reminder into each section of what follows: because we are talking about ideas and methods, you will find differences and disagreements among teachers and in different books and articles on anthropology. One of the most fundamental principles of scientific thinking is that *everything is tentative and subject to revision*. If your instructor presents things differently from what I am about to suggest, don't be surprised and don't be worried. Just learn what you are taught and then think about whether the material in the following pages can be applied to it. You may find you have some ideas of your own or some criticisms of your teachers' views. You may eventually decide to criticize me. I won't be surprised and I won't be offended. I won't even grade you down—as long as you show understanding of the basic principles of anthroPOLOGICAL THINKING.

Need Help With Logic?

I strongly recommend anthropology students take at least one philosophy course. Any of the following are likely to give you experience with logical thinking:

Logic
History of Philosophy

Philosophy of Science
Epistemology

If you don't find a course with one of these names in the catalog, take a look in the science and math departments. Or come and ask me for advice.

What Should You Know?

Your logic instructors may cover subjects in addition to the ones most immediately relevant to your work as an anthropologist. But if you can get exposure to most of the list below, you will have a good start on logical thinking needed for your reading and research:

The syllogism
Analytic and synthetic arguments
A priori statements
Empiricism and the verification principle
Logical positivism and its critics
Tautologies
If/then statements
The idea of causation

And don't forget, some of these will come up in our Theory and Methods courses which are both required!

So, now that you know how to study and you know that logical thinking is complicated and its results open to question, you are ready to learn how to think anthroLOGICALLY.



1. Anthropology as Science

If you've taken my introductory course, you know that I define anthropology as:

the scientific study of human behavior with emphasis on the data from primitive cultures.

I consider this a useful working definition or "operational" definition. Most textbooks give larger conceptual definitions, but sometimes we need to know immediately what we are working with.

Let's consider the main words in this definition, in reverse order. Let's also stay with simple, working definitions, even if they limit us somewhat. Culture means "shared, learned behavior." Primitive means having small population size and density, lacking written language, using mostly human muscle power for tasks, and little division of labor/few specialized roles. Primitive can include other features, but we don't want to get too involved in this concept right now—you'll talk about this many times in your anthropology courses. As the definition notes, we place emphasis on data from primitive cultures, but do not depend on them entirely.

And what about "data?" This word refers to our information which comes from observations, interviews, photographs, written reports by other researchers, and other sources of knowledge. We will talk more about this later.

For now, we are most concerned with the word "scientific." We all recognize that there are many ways to know things. Scientific knowing, however, has very special, unique properties that distinguish it from all other ways of knowing that humans have ever invented. Some anthropology is non-scientific. We will look at this later on. To think anthropologically in nearly all instances, however, requires that you know how to think scientifically. So let's see what that means.



2. Anecdotal Versus Systematic Evidence

The first thinking skill you need to develop is to see the difference between anecdotal and systematic evidence. Anecdotal evidence is based on experiences you have had or stories you have heard—tales of the experiences of others. Anecdotal evidence often tells us important things. It can be used to illustrate ideas. It can be especially powerful in some cases.

But anecdotal evidence suffers from two major flaws: we don't know whether it is accurate and we don't know whether it is representative. For these two reasons, social scientists are very suspicious of anecdotes.

Let's consider these two flaws a little more.

2.1 ANECDOTAL EVIDENCE MAY NOT BE ACCURATE

Anecdotal evidence usually comes as a single case and is often difficult to verify. "I heard about a guy who was in prison for murder and they let him go and he killed this woman. This shows we need the death penalty." Yes, it has happened. Yes, the anecdote-teller might be right. But anecdotal evidence is highly subject to manipulation, misunderstanding, misinterpretation, and outright lying. When did this particular story actually take place? In what state? And was he actually in prison for murder? And did they let him go or did he escape? And did he kill someone or did he get killed or did he rob a store or what?

Whenever you deal with anecdotal evidence you have to try to validate every detail of the

story. Humans are incredibly complex. And one of our complex abilities is that of twisting information to fit preconceived notions. What if the same person who told you convincingly about the released prisoner who committed murder later explained about the Jewish conspiracy to take over the world by controlling the banks of London? Would you believe the first anecdote and reject the second? Why?

2.2 ANECDOTAL EVIDENCE MAY NOT BE REPRESENTATIVE

But what if the anecdotal evidence comes directly from your own personal experience? It has to be accurate. You know it; you saw it. But what if your experience was unusual? What if it was the exception rather than the rule? What if it was true for the time and place where you experienced it, but not necessarily for other parts of the society? In other words, an experience may not represent the whole range of possibilities and might be misleading even though it is true. This is the main problem with anecdotal evidence: we have no idea whether it represents anything that happens frequently or whether it is a bizarre, unusual event, or whether it is a complete fabrication by the person telling the anecdote. The differences among these choices are crucial for anthropological knowledge:

- If the anecdote is a fabrication, the people who can study and explain it are psychologists.
- If the anecdote is a bizarre, unusual event, the anthropologist might use it as an example of an *exception* to something.
- If the anecdote is a common occurrence, then anthropologists have an interest in it because it is a major part of some aspect of the culture—in which case it really isn't an anecdote any more.

But this only raises the question: how do we know what kind of anecdote we are dealing with? Here is your first lesson in *anthropologic*: anecdotal evidence is only important if it is systematic.

2.3 SYSTEMATIC EVIDENCE CAN BE TESTED FOR ACCURACY AND REPRESENTATIVENESS IN SOME WAY

Montclair State's own Sociology Professor Jay Livingston has explained systematic evidence very effectively in his book *Crime and Criminology* (1992:4-5). He says

By systematic, I mean evidence that is gathered according to fairly regular procedures so that anybody who used those procedures would arrive at similar results.

In other words, you have to be sure that whoever might check up on your anecdote interviews the same person who told it to you. And you have to be certain they will tell the same story with the same conclusion and the same intermediate events. And, you have to have good reason to believe they are reliable.

In many cases in anthropology, we solve this problem by finding the most reliable informants we can. If you work in a village in a faraway culture, this may be the best you can do, and it is difficult. If possible, you check as many anecdotes as possible with at least a small number of

supplementary informants. Even so, a lot of classical anthropology can be criticized because the data rely almost exclusively on the knowledge—read, "attitudes, beliefs, prejudices"—of a single informant, who, no matter how intelligent and well-meaning, may be atypical of the culture he/she has been asked to represent. In the research methods course, we will discuss recently-developed techniques for identifying the most "culturally correct" informants.

Statistical Surveys. The best way to avoid the anecdotal trap and get systematic evidence, however, is the sample survey. In this procedure, you ask the same set of questions of a set of respondents drawn in some way from the people of the culture you want to know about. The sample survey improves your chances of getting an accurate picture of the culture. You will learn how to draw an appropriate sample in the course on quantitative methods.

Let us return to the example from section 2.1 above. Suppose you had been talking to a resident of Washington D.C. If you took the statement about the need for the death penalty as representative of Washington, D.C. culture, how would you explain the November 1992 vote of over 60% of residents in opposition to capital punishment? Would that 60% have said what your anecdote-teller said? It seems unlikely and this tells us that you need to conduct a more representative survey of the attitudes of people in the D.C. area.

Detailed Anthropological Observations. Systematic data does not necessarily require a statistical sample. We sometimes get anthropological studies by "participant observation," in which intensive, close, observation produces so much detail that we are confident we have a reliable, accurate account of a particular segment of human behavior in a particular time and place. Jay Livingston gives as examples "a town government, a criminal gang, a marriage, a mental hospital." Anthropologists would add "a village, an age-set, a hunting-gathering band." Later in this booklet, we will see some examples of groups anthropologists have studied systematically although they did not follow formal statistical procedures. If you do research in the United States, however, even though you may be studying a "town government..." etc., you will probably find it more beneficial to adopt some kind of sampling strategy than to claim participant observation alone as a research method. When you do the methods course, your pre-apprenticeship, or internship, this is an anthroPOLOGICAL Issue to raise with your advisor.



3. The Five Stages of Scientific Research

Now that you understand the important difference between anecdotal and systematic evidence, you are ready to learn the major components of science. Be forewarned: not all of your teachers will see things the way I am about to present them. But if you learn what follows, I think you will be able to adapt to any variations in other classes. Most importantly, you will be able to evaluate anthropological readings, to criticize them and think about how they could have been done better. Since I have insisted that anthropology is a science, you will not be surprised to read now that anthropological research proceeds in general as does any scientific research. I see five basic stages:

- Assumptions
- *Observations*
- *Measurements*
- *Correlations*
- Theories

The inner core or middle three stages—observations, measurements, and correlations—connected by the brackets on the left, make up the general area of research methods.

The outer two stages—assumptions and theories—are the conceptual parts of science. Although they seem on the outside edges, you can also connect them mentally. Think of this list as a circle starting with assumptions, leading to theories. Then theories lead back to assumptions to complete the circle. A lot of science works more or less like that.

Verification Once More. Except for assumptions, each of these stages is subject to verification—and sometimes the assumptions, too, can be verified. A few authors describe how to verify the stages of their research. But usually, verification is implied rather than stated. With a little practice, you can figure out what information would be needed. And look for statements with no apparent possibility of verification. They are either assumptions—or—cases of unscientific thinking.

Let's look more closely at each of these stages.

3.1 ASSUMPTIONS

The practical or operational point for starting a scientific study may be the gathering of data. The logical starting point, however, is really a set of assumptions that will guide the data-gathering.

Assumptions are beliefs about things that seem to have to be true; or, they may be statements that seem true enough to take for granted at least until better statements come along. And while the original assumptions are with us, we can use them.

Unfortunately, many anthropologists do not spell out their assumptions. Or, they write them in forms that make them hard to identify. With some careful reading, thinking, and the hints and examples to follow, however, I believe you will be able to ferret them out.

Grand Assumptions. Assumptions come in at least 2 major forms: grand assumptions and working assumptions. Grand assumptions are often not stated in anthropological writing, but here is an example to help you start thinking about them:

...man is a social being obliged by nature to live with others as a member of society. (Lenski 1966:25)

Working Assumptions. More commonly you will find working assumptions. These are usually statements of belief in or loyalty to some existing theoretical orientation. In other words, one starts an investigation by stating that someone else has already found the appropriate set of explanations, and that now we are going to prove them, modify them, expand on them, or use them to disprove some other set of ideas. Even working assumptions come in more grand and less grand forms, however. Here are a few examples of the grander variety:

...we are a naturally aggressive species easily aroused to violence.
(Tiger and Fox 1971:220)

...a degree of male dominance exists in all known societies, if we define male dominance as a situation in which men have highly preferential access, although not always exclusive rights, to those activities to which the society accords the greatest value, and the exercise of which permits a measure of control over others. (Friedl 1975:7)

Need Help Finding Assumptions?

Do you have trouble figuring out what the assumptions are that underlie or guide many of the anthropological studies you read? Don't be ashamed—many authors are most unhelpful and do not clearly state the logical basis of their work.

One way to look for assumptions is to go back to *The Anthropology Student Guide to Better Grades*, and review section 1.4 on finding key sentences. Such sentences often contain explicit or implicit statements of the assumptions.

Another technique is to study the examples on the nearby pages of this booklet. Most statements of assumptions take the forms given here

A third technique is to look for particular key words that are often used in assumption statements:

This work is based on the *assumption* that...

The literature on functionalism has built up a *case that...* [note that "case" here means in

general, not a particular case study]

As Levi-Strauss *has shown...*

As structuralism *argues... implies... indicates... suggests, etc....* It is my *belief* that...

Assumptions in the Negative

Assumptions can appear as critical rejections of earlier ideas:

Most scientists have long ago given up trying to prove Freud's theory of incest.

This study will show that cultural materialism is not adequate to explain food taboos.

"The mode of production in material life determines the general character of the social, political, and spiritual processes of life. It is not the consciousness of men that determines their existence, but on the contrary, their social existence that determines their consciousness." (Karl Marx as quoted in Harris 1979:55)

Sometimes the assumptions seem to have no particular reference in the literature:

...we can very usefully think of 'ritual' as an aspect of all behaviour, namely the communicative aspect. (Leach 1964:xiv)

Note that the grander working assumptions do not directly imply what kind of study might show them to be accurate or not.

Less grand assumptions might include the following examples. Note that they suggest direct, immediate studies:

...the natural processes of unequal societies tend to increase the level of inequality, and...only sustained, conscious, organized struggles by the victims of inequality can undercut these natural processes. (Franke 1993:13-14)

...the spacing of children and the patterns of child-rearing are everywhere adjusted to whatever kind of work women customarily do. (Friedl 1975:8)

The great universalistic religions can also best be understood as products of the misery the Old World imperial systems created in their futile attempt to relieve reproductive pressures by intensification, exploitation, and warfare. (Harris 1979:109)

Sometimes the working assumption is specifically limited by the author to only one ethnographic case. But the implication is that this could be true of many other cultures or of all cultures:

Ritual and economic activity were linked together in the very construction of the whole cycle since one manifest intent of the ritual was the promotion and sanctification of economic process. (Firth 1967:11, writing of Tikopia)

...a conceptualization of urban communities from the perspective of general systems theory...can be useful in addressing the question of how broader structural forces contribute to local-level impoverishment. (Maxwell 1988:172, writing of the black South End of Boston)

Assumptions and Theories. From this small list of examples, you can see that assumptions look and sound very much like theories—supposedly the last stage in the list I provided. This is not a mix-up. Or, rather, in a way, it is. Remember the circle I suggested you draw in your mind? Because step 5 leads directly back to step 1, the two are connected. One writer's conclusions often become the next writer's working assumptions. Or maybe you would rather think of it as a line going from 1 to 5 then to a new 1 to a new 5 and on and on. The history of a particular school of thought within anthropology might look a lot like that. With some assumptions made, we need to gather information.

The Research Methods Part of Anthropology Includes:

The Three Stages—

**Observation
Measurement
Correlation**

3.2 OBSERVATIONS - SUBJECT TO VERIFICATION

To understand human behavior, we must have observations. You may also be thinking of this as "data," or as "facts." I prefer the more humble word "observations," because it does not imply complete truth or assurance. We try to observe correctly; we try to observe accurately. But we also recognize that our data could be inaccurate or unrepresentative, so we qualify it as "observations subject to eventual review by other researchers."

Observations may be just that—you watch and record some activities of members of the culture you are studying. But observations can also include:

- Answers to questions on a survey questionnaire, or data collected from administering free lists, paired comparison tests, card sortings, color perception tests, or other kinds of systematic perception data.
- Comments in long, open-ended interviews—but watch out for the problem of anecdotal evidence here!
- Descriptions of religious or folk beliefs, collections of jokes, magical formulas, what Malinowski (1922:24) called the "corpus inscriptionum" of a culture."
- Photographs, video tapes, maps, or drawings of the community you are studying.
- Government, church, or other records.
- Historical reports or data collected by other anthropologists who worked in the community or one nearby.
- Measurements on height and weight of children, amount of food eaten, size of houses in square meters, and so on
- Other information not included in the list above.

In other words, anthropologists make a wide variety of observations. We'll talk more about what kinds of observations are best for what kinds of assumptions in the course on research methods.

You may think this overly academic. But as you read ethnographies—the main descriptive accounts in anthropology—you will be surprised to find that many of them contain observations (data) of questionable reliability. Read them carefully. Read each description with your mind focused on the question—are these data gathered in a way in which they could be verified by another researcher? By reading like this, you will sharpen your awareness of this second stage of the logic of anthropology—and the first stage of research.

3.3 MEASUREMENTS - SUBJECT TO VERIFICATION

Whenever possible, we try to turn our observations into measurements. Measurements have three major advantages over observations in general: (1) measurements are often easier to verify, (2) measurements are more precise, and (3) measurements provide more information.

Russell Bernard (1994:16) gives a good example of the advantage of measurement. Suppose you say "most of the land...is controlled by a few people." Wouldn't it be more informative to know what "most" and "few" mean? By measuring you could provide that information. You would also be verifying whether the words are appropriate: if 46% of the land is owned by 31% of the people, could you maintain your original claim?

You'll spend a lot of time learning how to evaluate measurements in the quantitative methods (statistics) course. And we'll discuss it less mathematically in the general anthropological methods course. For a beginning, you should keep in mind that all observations could be made into measurements. Sometimes it's impractical, but when you can do it, make a

measurement. And when reading someone else's work, ask whether the claims made from the observations require more precise measurements.

Need Help With Observations and Measurement?

If you can't take the research methods course right away, read on your own:

**The Foundations of Social Research,
chapter 2, pages 19 to 50 in Bernard, 1994.
*Research Methods in Anthropology.***

This chapter will give you a lot of ideas on how to think logically about what you read in anthropology.

3.4 CORRELATIONS - SUBJECT TO VERIFICATION

Now we are ready for the third step in research and the fourth in scientific thinking: correlations. If the word "correlations" bothers you, think instead of CONNECTIONS, or RELATIONSHIPS. Or associations. Or "going together." A correlation is technically a formal mathematical measurement of a connection. We saw in section 3.3 above how observations should be made into measurements whenever possible. We saw in sections 2.3 and 3.2 that observations should be systematic whenever possible. Now we can say that systematic observations can be turned into systematic connections called correlations. Correlations are the heart of most scientific knowledge and of most modern anthroPOLOGIC. Correlations tell us which things are probably connected to each other—and how much—if they are based on certain kinds of measurements.

Non-mathematical Correlations. Some correlations can be tested and examined mathematically. This booklet is not an introduction to statistics. You'll learn that from our sociology professors who have experience in just the kinds of statistics you need to know. But you can find conceptual correlations in all kinds of anthropological studies including those that have no statistics at all. Remember our discussion of assumptions in section 3.1? Grand assumptions and the grander variety of working assumptions may have hidden correlations that are hard to find and not always useful to write down.

But one of the best places to look for correlations is among the working assumptions. Let's go back to a few of the earlier examples from page 10 from Friedl, Harris, Leach, Franke, Maxwell, and Firth. Here are a few correlations drawn from the assumptions:

- The spacing of children correlates with the kinds of work women do.
- The patterns of child-rearing correlate with the kinds of work women do.
- The great Old World universalistic religions correlate with—

high levels of imperial misery
high levels of intensification
high levels of exploitation
high levels of warfare

(The statement quoted on page 10 seems to say that all 4 of these must be present if an Old World universalistic religion is also present.)

- The level or type or something about the economic activity correlates with the level or type or something about the rituals.
- Something about or some element or elements of broader structural forces correlate(s) with local-level impoverishment.

"Real" Correlations

In statistics, the term correlation has a technical meaning: it is the covariance of standardized variables. Or, the average dispersion from the average of two variables that have themselves been transformed to have an average of zero and a variance of 1. The most commonly used correlations are also known as Pearson correlation coefficients.

You'll learn about this important—and very understandable—relationship measuring device in your quantitative methods course. If you have trouble with math, don't be discouraged: with a bit of work, you can grasp the idea. With the computer, you can do the calculations at the stroke of a key. As long as you understand the results the computer gives, you can do good anthropology even if you get anxious about the mechanics of the calculations. Just push the computer key and start writing about what it means.

Because such significant advances in our knowledge and understanding have derived from using correlations, the term "correlation" has come to mean any kind of connection or association. It can be the true, mathematical variety, or a more general association among two or more categories of things observed.

- Some elements of the natural processes or the length of time of the

inequality correlates with increases in the level of inequality, and therefore...only cultures with sustained, conscious, organized struggles against inequality correlate with its reduction.

See how the assumptions translate into correlation-type statements in these examples. Some are simple and straightforward; others are complicated and may involve many kinds of observations and measurements. Don't worry—you can handle the more complicated versions by breaking them down slowly and piece-by-piece into their smaller, simpler, parts.

The most important point is this: working assumptions usually state or imply one or more correlations. By translating the assumptions into their correlation equivalents, you have turned them into something that can be verified—tested for truth or falseness. You have also made them easier to understand.

Two Types of Correlations. First, look for two types of correlations: yes/no correlations or how much/how little correlations. You don't need to understand statistics to do this. Later—when you've had statistics—you'll be able to decide which kind of statistical tests are appropriate by knowing whether the correlation is categorical—yes/no—or numerical—how much/how little. For now, however, let's just consider a few examples of each type so you can get the idea.

Yes/No Correlations. These correlations are usually about features of a culture that are either present or absent, or they are one kind or another with nothing in between:

- Wherever you find patrilocal or virilocal residence, you will find patrilineal descent. [In 563 out of 588 cases, apparently—see Harris 1997:268.] The correlation for matrilocal and avunculocal with matrilineal is not nearly so strong: only 115 out of 164 cases.

Two of my favorites from introductory anthropology courses are these:

- Wherever you find hunting and gathering as the main food-getting strategy, you will find reciprocal exchange.
- Wherever you find hunting and gathering as the main food-getting strategy, you will find nomadic movement rather than settled village life.

And here is one of a set of more than 100 yes/no correlations arranged in an evolutionary sequence by anthropologist Robert Carniero (1973:834-71):

- Wherever you find a headman, chief, or king, you will find specialized religious practitioners.

You'll find his article a gold mine of examples of yes/no correlations with definitions and with references to the ethnographies where the data are located—useful for verification!

Yes/no correlations can be found inside a single culture or village as well as cross-culturally:

- Professional employment is entirely absent among former untouchable caste households in Nadur village. By contrast, former landlord households contain no agricultural field laborers.

How Much/How Little Correlations. A kinship system is usually either matrilineal or patrilineal or some other single type. A headman, chief, or king is either present or absent. But many correlations are about amounts:

- The percentage of individuals with sickle-cell trait increases with the degree of dependence on agriculture in a sample of 60 African villages.
- The degree of dependence on agriculture increases with the degree of dependence on root and tree crops and decreases with the degree of dependence on cereals. [See Wiesenfeld 1969:308-331 for both of these first two.]
- Among modern industrial cultures, the frequency of violence increases with increases in the level of social inequality.

As with yes/no correlations, most are likely to be cross-cultural, but many will also be within a single ethnographic case:

- Among Nadur village households of the Nair caste at least, the greater the amount of land gained in the land reform of 1971, the greater their incomes in the 1987 sample survey.

And—as you might have guessed—the two kinds can be mixed together to make things logically more difficult:

- "Among hunters and gatherers and horticulturalists the relative power of women is increased if women *both* contribute to subsistence *and also* have opportunities for extradomestic distribution and exchange of valued goods and services." (Friedl 1975:135)

Note here that women's power is apparently measured in how much/how little fashion while having opportunities for extradomestic exchange...seems to be a yes/no situation.

- If the main support of a Nadur village household is a female worker, the chances of also being heavily dependent on an agricultural laborer's pension or another government welfare program are far greater.
- Average household size is much smaller among female-supported households in Nadur village.

Here is a more complicated one:

- The longer the postpartum sex taboo the greater the level (frequency?) of polygyny and this leads to patrilocal residence. (Whiting 1969:424)

Learning to untangle the measurement and other aspects of correlations such as these last few will occupy your entire professional life as an anthropologist. For now, know that you can expect correlations to take two basic forms and that the two forms will sometimes be mixed together. If you are writing a paper for a course, one of the favors you can do yourself is to try to write about types of correlations that you feel you understand best. If the mixed type seems hard to make sense of, choose a topic with correlations in simpler forms.

Four More Types of Correlations. Along with the yes/no—how much/how little distinction, you should be able to identify the direction of the relationships in correlations. Many kinds exist, but a very large percentage of research involves just two kinds: positive and negative.

Positive correlations mean that the two things correlate like this:

- For a yes/no type:
If one is present, the other is also present.
- For a how much/how little type:
As one increases, the other increases.

Need Help With Correlations?

A clearly-written overview of scientific logic appears in the textbook by Carol R. Ember and Melvin Ember, 1993, *Cultural Anthropology, Seventh Edition*. Englewood Cliffs, New Jersey: Prentice Hall.

Their Chapter 4— "Explanation and Evidence"—pages 46-58—introduces correlations, theories, and cross-cultural comparisons. It uses as an example some of the famous post-partum sex taboo correlations discovered by John Whiting that also appear on the facing page of this booklet. See if you can connect the parts they cite with those here.

Looking at the several examples on previous pages above, do you see any positive correlations?

Another common type is the negative correlation. You should be able to figure this one out since it is just the opposite of positive:

- For yes/no correlations:
If one is present, the other is absent.
- For how much/how little correlations:
As one increases, the other decreases.

I would guess that positive and negative correlations account for well over 90% of what you will come across in all but the most arcane studies. Or, if you become very involved in statistics, you may work on nonlinear relationships which have special features that violate the assumptions of most research involving correlations. These nonlinear correlations may be very important in certain areas, but since they demand rather sophisticated statistical skills, most anthropology books and articles do not make use of them. If your research happens to require such techniques, get advice from a trained statistician.

The Logic of Exceptions

Students often ask how a correlation could be true or meaningful if it has exceptions. Ember and Ember—on page 54 of the book cited on page 19 above—give a good introduction to this problem. Here are the 4 most common reasons for exceptions:

1. Sampling error. You'll learn about this in statistics. It's not necessarily a big problem.
2. Measurement error. Some observations or some measurements were not taken correctly or were taken so vaguely that a culture or cultural feature got wrongly identified.
3. The effects of other variables. Exceptions to a 2-variable correlation might mostly disappear if you added a 3rd factor. The thing you are correlating just happens to be more complicated.
4. And of course—the whole correlation could be wrong or misformulated.

Actually, exceptions often make a correlation more fascinating rather than a logical mess. Trying to figure out why the exceptions are there has led many anthropologists

to some of their best insights.

See the case of figuring out exceptions to the post-partum sex taboo correlations as described in Ember and Ember.

A third type of correlation is sometimes called the *null correlation*. It just means that two or more things are apparently not related in any regular way. Of course, in some great cosmic sense, everything is related to everything else. But does the volume of your car radio increase as you increase in speed? Does it decrease? Does the average age of the female children in a household increase with the average amount of wine imbibed? Wherever you have matrilineal kinship, do you have intense struggles against inequality?

Watch out—I can't guarantee these relationships just stated will all turn out to be nonexistent. But probably they are. And if a relationship exists between any of them, it probably has no scientific significance—something we will consider briefly in the next section about theories. But first we must mention the fourth kind of correlation: *false correlations*.

False correlations present one of the most important and difficult challenges to anthropology—and to science in general. Two or more elements of a culture seem to associate in a regular way, but actually they don't. Or—as more often occurs—they are both the result of another cultural element that is connecting them together to create the illusion of a correlation.

How can we suspect that a correlation is false? Good question. I think the truth is that we often can't be sure. With statistics we can do certain procedures to eliminate alternative possibilities. With our knowledge of the literature on a particular subject—say, postpartum sex taboos—we can have some confidence that we are aware of the possible false correlations because, say, they are inconsistent with what other research has shown. But the fact is, much of social science—and maybe science more generally—involves the activity of clearing away false correlations. By clearing them away, we do clear the way for the possibly true correlations: the ones we want for our theories.

Probably the most famous false correlation in anthropology has been that between race and intelligence. Despite repeated attempts by believers in white or Asian intellectual superiority over blacks, the evidence shows strongly that factors other than race are producing the apparent—that is, false—correlations.

What are those other factors? Lower school spending and worse facilities in black neighborhoods, higher test anxiety among black children produced by decades of racist theories and racist practices, tests made up of questions almost certain to reflect suburban (mostly white) school curricula—these correlate with IQ and SAT test scores as much as does anything racial or genetic.

And then we have the question whether "intelligence" is meaningfully measured by tests. Then the question whether race is a biologically meaningful concept among humans—a question anthropologists and geneticists mostly now agree should be answered "NO." You'll learn more about why the correlation of race with intelligence fails the test of anthropoLOGIC in several of your anthropology classes; but if you can't wait to get into the issue, take a look at Gould (1981), Montagu (1997) and Lewontin, Rose, and Kamin (1984).

Need Help With False Correlations?

Take a look at Jonathan Marks. 1995. *Human Biodiversity: Genes, Race and History*. His bioanthropoLOGIC shows what's wrong with the race and intelligence correlation.. A nice feature of the book is that he emphasizes the logical questions involved in research on race and on genetics more generally.

3.5 THEORIES OR EXPLANATIONS - SUBJECT TO VERIFICATION

We've come to the final stage of scientific anthropology. Theories try to do two things: (1) figure out what causes what in a correlation and (2) explain *why* the causation or at least why the correlation exists. Why are things the way they are? Why are some cultures like other cultures? Why are some cultures so different from each other? Why are some features of a particular culture so closely linked to other features?

Let's be frank: many anthropologists stop short of theories. They offer up their descriptions which may contain assumptions, observations, and measurements. At least some correlations are implied in almost any description, but they may also be explicitly stated.

Theories, however, are not found in all—maybe not even in most—ethnographies. Not even in many cross-cultural studies that focus on correlations.

I imagine many people stop short of theorizing because it is difficult; others out of humility; and some because they don't feel it is necessary to try to explain their correlations—just discovering one is pretty exciting.. Anyway—for whatever reasons—you'll have more trouble easily spotting theories in your reading because they are rarer entities. Ember and Ember (1993:49-50) put it this way:

It is difficult to specify any one procedure that is guaranteed to produce a theory, because developing a theory requires a creative act of imagination, and no discovery procedure by itself necessarily generates this creative act.

I think they are right, but they left out one important consideration: a lot of thought and experience working with certain ideas and the observations, measurements, and correlations related to those ideas, are likely in combination to lead to theories. Or at least critiques of existing theories.

Need Help With Causation?

Sometimes you can tell pretty easily which element of a correlation causes the other. In his study of the post-partum sex taboo and related customs, John Whiting found a high correlation with climate. He immediately guessed (1969:432) that people's sexual practices could not reasonably be thought to "cause" the temperature and climate where they lived. It therefore makes anthroLOGICAL SENSE to propose that the climate somehow effects the sexual and other practices. Since mother, baby, and father sleeping arrangements are part of the study, he reasonably argues that these arrangements could be connected to the temperature element of the climate—an argument that can be tested with observations.

Things almost immediately get more difficult. If the climate seems to cause the sleeping arrangements, then do the sleeping arrangements cause at least one of the other correlations? Whiting's essay is a good starting point for practicing the logic of causation. And check out his ideas about WHY while you're at it. They are not too hard to follow.

In other words, the best—the *only*—way to learn how to develop theories or how to effectively evaluate them is to put a lot of time and effort into thinking about them. For the rare genius, maybe this doesn't apply; for the rest of us, time and effort do. And while you're thinking, share your ideas and problems with other students. The chances of getting a good theory are probably increased if you talk it through with others. Just like studying for exams—which I suggested in the earlier booklet you do with friends and fellow students—working on a theory works best with several minds.

If doing theory has no clear cut rules or procedures, can we do anything anthroLOGICALLY to improve our understanding? I think so—by looking at an example. Be forewarned: this example is not necessarily verified or necessarily the best theory ever put forth in

anthropology. But I think it is simple, clear, straightforward, and believable: so it should be a good example for practicing how to think logically about a theory.

My example comes from Marvin Harris's studies on food taboos and preferences. The theory tries to explain why some animals are considered abominable—pigs to Muslims and Jews, for example—while others are considered sacred—like cows to Hindus. Here it is in my formulation (which he might agree or disagree with). First, here are the main correlations:

An animal is *abominated*—considered unclean, disgusting, or horrible to God if:

- It is nutritionally valuable, that is, tempting to eat,
- Raising it is dangerous to the community as a whole, and
- It is valuable only as food.

By contrast, an animal is *venerated*—considered beautiful, sacred, holy, if:

- It is nutritionally valuable, that is, tempting to eat,
- Eating it is dangerous to the community as a whole, and
- It is valuable in several ways in addition to food.

Let's summarize the observations/measurements that Harris offers to verify the correlation (again in my words).

For an unclean, abominable animal, take the pig in the Middle East after about 2,500 B.C. We have—

- a decline of forests, swamps, and other good pig-raising areas
- the fact that pigs need grain, but grain output was not keeping up with population growth due to ecological decline—or decline of carrying capacity or the onset of diminishing returns to the ratio of pigs versus grain production
- the fact that pigs could not give milk suitable for humans or pull plows or do other useful draft animal tasks
- the result that the farmer who produces pigs threatens further deterioration of the environment and food production system for the whole community

Now, for the beautiful, holy, sacred animal, take the cow in India after about 300 A.D. We have—

- a decline of forests to dangerous levels
- hot, dry seasons suitable only to zebu humped cattle
- the cows give milk
- cows give birth to oxen necessary to plow the fields
- cow dung is used for fuel, house floors, and fertilizer—replacing many of the resources previously taken from the now-depleted forests
- with the result that the farmer who kills and eats a cow eventually loses the ability to produce grains and loses the nonfood resources of the cow

Now, here is the theory:

The reason why the pig is abominated and the cow venerated, each in its respective environment, is that—

Cultures tend to impose supernatural sanctions on the consumption of animal flesh when the ratio of communal benefits to costs associated with the use of a particular species deteriorates.

The most severe restrictions tend to develop when a nutritionally valuable species not only becomes more expensive, but its continued use endangers the existing mode of subsistence [that is, the cost/benefit ratios deteriorate to the point of possible disaster].

These supernatural restrictions take two extreme forms: abomination and veneration.

Now go back to the material on page 24 for the predictions about when abomination is chosen and when the animal is venerated.

Does this theory sound reasonable? The first anthroPOLOGICAL step in considering it is to ask yourself that question. Let's break it down into a few parts.

First, notice that the theory simultaneously tries to explain two things that are similar at one level and different at another. In logical terms, this is often a mark of a good theory. Both abomination and veneration are ways the community compels people to refrain from eating a particular animal. But abomination leads to its not being raised in the first place (the Middle Eastern pig) while veneration leads to its being raised but not slaughtered for immediate food use (the Indian cow). So, the theory operates at more than one level and tries to account for one phenomenon that appears in more than one form.

Getting pretty complicated? I think so, and I think you will find this to be the case with most theories. As I said earlier, time and experience with data and correlations will make all this easier. But it *is* worth your time and trouble to study this example carefully—read it over several times and go to the original sources (Harris 1977 and 1985) for further details. As you absorb its logic—or wonder if it makes sense—you will be laying the logical groundwork for a better go at other theories you will come across.

Could such a theory be verified? How? One approach would be to compare several cultures with different ratios of communal benefits and costs. Where the costs are high compared to the benefits, we should expect to find supernatural sanctions. Which kind—abomination or veneration?—the theory predicts that pretty clearly, so we "just" have to make the observations or take the necessary measurements.

Now you have probably realized that figuring out what is the ratio of communal benefits and costs could be very difficult. It is. And that is the challenge of scientific anthropology. If you want to verify—positively or negatively—a theory, you might have to do a lot of hard work

on your research design.

Another approach would be to study some existing ethnographies to see if enough observations or measurements are there to make at least a preliminary judgment about the likely validity of the theory. You might make a list of animals and whether they are abominated or venerated or neither. Then see if any of the conditions cited on page 24 above seem to hold for the abomination or the veneration. If those specific conditions do not hold, do similar—or parallel—conditions obtain? Maybe forests didn't decline, but something else changed so as to cause a deterioration in the ratio of communal costs to benefits.

Want to give it a try? See how Harris (1985:88-108) applies his theory to changing attitudes about eating horse meat in Europe and the US. Can you make a list from his chapter 5 on horses that is similar to those on page 24 for pigs and cows? It's a good exercise and could be expanded into a nice term paper.

What About Causation? You can see in Harris's theory an idea of causation: attitudes about animals are caused by certain features of the animals combined with certain circumstances in which they are reared. Break down each of the features and circumstances and you have the material on pages 24-25. It's much more complicated than Whiting's temperature and sleeping arrangement correlation. But most theories are.

Getting to the Bottom of a Theory. You may have been wondering if this theory is complete. The answer is "NO." Theories are never complete and can often be expanded or altered or translated into other forms to fit other situations. They are usually also only partial explanations even for the things they are trying to explain.

How can you know this? One way is to go through a theory's main statement and check that each claim is specifically accounted for in the correlations associated with the theory. Let's go back to the theory summarized on pages 24-25. Notice that it says "supernatural sanctions." Read the theory again, taking out the word "supernatural." Does the theory seem to be just as effective? In other words, why doesn't the theory just say that "cultures tend to impose sanctions...." What in the correlations or in the statement of the theory tells you that they have to be supernatural?

I think the answer is: nothing. An element has been left unexplained. Perhaps Harris sees that all his cases have to do with supernatural sanctions, so he decided to put that in the theoretical formulation. But the supernatural part isn't fully accounted for.

How should we proceed? We could remove the word supernatural and make the theory less specific. Or, we could try to guess—engage in some creative thinking—what the reason for the appeal of supernaturalism might be in making sanctions about animals.

Here is a possibility: maybe cultures impose supernatural sanctions to try to remove the sanction from possibility of debate. If we say that raising pigs is harmful to our communal cost/benefit ratio, some animal raisers might disagree. If we say that killing cows is harmful to agriculture, some cow owners might reply that they don't own land. If the situation has deteriorated—as the theory says—maybe we don't want to have a debate and we don't want

some people going off on their own, disobeying the sanction. By making it supernatural, we make it undebatable. At least in cultures where everyone follows the same religion. At least it's a possibility.

How would you test—verify—such an idea? Think about it. It's a good test of your anthroLOGICAL ability. But if you can't figure out what to do, don't despair. It's a good kind of question to bring into a methods class, a theory class, or to talk about with other students. You'd be surprised how often someone else comes up with a good idea just off the top of her/his head. Part of being a good anthropologist is just recognizing when someone has said something anthroLOGICALLY useful. And keep in mind—all kinds of interesting and important questions cannot be answered with our present state of knowledge. Part of the enterprise of scientific thinking is to remain humble and recognize the limits of our understanding even while trying to push beyond them.



4. How to Critique a Theory

Most of your work in anthropology will involve either developing or improving theories or critiquing theories of others. Both are important in advancing our understanding of human behavior.

Before you will be able to develop or improve theories, you need to learn to critique theories of others. Critiquing is easier; doing it develops your skills for the harder work of coming up with theories of your own. So let's work on a simple way to critique a theory. After that, you're on your own, but you'll have the basic tools to go forward.

To critique a theory, I suggest you—

1. *Outline it in terms of the 5 stages of scientific research.* Lay out the main elements of the theory on a sheet of paper.
2. *Look for strengths and weaknesses stage by stage and at the connections between the stages.*

Let's consider this in a bit more detail.

- What are the assumptions?
- What are the observations?
- Are there measurements?
- What are the correlations?

Are they yes/no or how much/how little?

And for the theory itself—

- What is the direction of causation?

- What is the explanation?

This not-so-simple exercise will give you the essential starting point. Then you should go through each stage looking for elements that don't make sense. *Most importantly—look for problems at the points of connection between the stages.* Do the observations fit the assumptions? Were the right things measured? In the best possible way? Are the correlations verified? These last questions will be considered in the course on research methods, but you can start thinking about them and working on them without that background—in some ways it's better to have a go at it before you memorize the official techniques.

Then you should consider the main theoretical issues. Has the theorist given a good justification or some direct verification for his/her idea of the direction of causation? Is the causation simple and straightforward—as in Whiting's temperature and sleeping arrangements—or is it more complex as in Harris's attitudes towards animals and ecological/technological conditions? Is an explanation offered? Does it cover both similarities and differences? Can you see pretty clearly how it might be tested or verified? Have attempts been made to do so? What do they show?

Use these questions to get started. You can come up with many more questions. Once you start questioning theories and all the stages and elements that go into them, you'll find it gets pretty interesting; if not, you should reconsider becoming an anthropologist!

4.1 THE CULTURE OF POVERTY - EXAMPLE OF A THEORETICAL CRITIQUE

Let's try a fairly clear cut—though not simple—theoretical critique: the "culture of poverty" theory. Remember, this is not a textbook in anthropology, so we are not going to try to examine all the evidence. Instead, we'll go over the kinds of logical issues that might arise if you were trying to think through this theory.

I am going to borrow from a recent paper by MSU's own Andrew H. Maxwell. His paper on "The Underclass, 'Social Isolation' and 'Concentration Effects': The culture of poverty' revisited" covers almost exactly the ground needed. As with earlier examples, I am interpreting his article somewhat to adapt it to the theme of this booklet. Maxwell's paper is a theoretical critique, so your own close reading of it will act as a supplement to this booklet.

Let's start at the beginning (Maxwell 1993:231): "Social science explanations of poverty from about the Second World War to the present are of two types." Notice that the 3rd word of the article is "explanation." We are dealing with theories.

Next we learn that one type involves "culture" or ideas as the explanation for poverty. The other is "class" or "social structure." Each of these types can be viewed at two levels: the larger culture (The USA as a whole) or within the poor community itself. Already we have five possibilities:

- US culture causes poverty.
- Poor people's culture causes poverty.
- US social structure causes poverty.

- Poor people's social structure causes poverty.
- Some combination of these four?

You'll notice in reading the article that possibility number 1 does not appear to have any important support—it's hard to imagine how the ideas Americans have alone could cause some people to be poor. The other 4, however, have substantial literatures of support and opposition. More generally, you should notice here that we have two levels of analysis: the whole culture and the group (subculture) living in poverty.

Next, the problem of time is introduced. This is an important element in any anthropological explanation. Could one of the five items above cause the initial descent into poverty while another one causes its continuation? For example, could US social structure cause poverty in the first place while poor people's culture causes their poverty to continue? I told you theories usually get complicated!

Maxwell's article approaches this problem in terms of two similar but contrasting approaches. The classic "culture of poverty" theory of Oscar Lewis explains original inner city poverty as caused by the larger social structure; its perpetuation is caused by the "values and attitudes of their subculture." So powerful are these "values and attitudes" that "improved economic opportunities...are not sufficient to...eliminate the subculture of poverty" (quoted in Maxwell 1993:233). In other words, time becomes a factor in the study—how much time does it take in poverty for the "culture" to develop? And what else is needed if the jobs aren't enough?

An alternative theory comes from William Julius Wilson who argues that the endemic poverty of US inner cities developed from the decline of entry-level, low-skilled jobs after about 1960. In earlier decades, white European immigrants came without skills or education, but could start the rise to the middle class by working in steel and auto production. By the second generation, they could put their children into the expanding education system and see them move into better jobs. After World War 2, however, the new—mostly black and Latino—workers coming into the cities found an economy without entry-level jobs. Instead of setting up a process of advancement toward the middle class, they found themselves out of work and on welfare.

According to Maxwell, Wilson goes on to argue that long-term unemployment combined with racial segregation and the flight to the suburbs of the few middle class blacks and Latinos who benefited from the gains of the civil rights movement. This combination produced "social isolation" and "concentration effects," which deprived the poor and unemployed and their children of the kinds of positive role models needed to adopt behaviors and attitudes that would help them get jobs. In place of the "culture of poverty," he observes the presence of an "underclass."

So is Wilson arguing the same thing as Oscar Lewis? Read Maxwell's article to find out; but then go on and read Lewis and Wilson too. Maybe you'll see things he didn't.

Breaking down the argument. Let's try to put Wilson's formulation into the structure I've suggested and see if it clarifies the logic. Maxwell's article gives just enough information to do it, but less on the whole structure of what Lewis thought. Here's what I found in the article

along with a few things I added based on what is there:

1. Assumptions

A person's place in society is determined primarily by the interaction of his or her skills and the forces of an impersonal, rational market place.

Individuals adapt to market demands by observing and copying role models who have achieved what the individuals want.

[Both these assumptions are stated in the article—I didn't figure them out independently. Fortunately, Maxwell summarized them, but you could presumably dig them out of Wilson's original texts.]

2. Observations

A huge literature on poverty in the US, including the characteristics of poor people.

No literature on the specific effects of role models is discussed—here is an area for critique or further reading or direct research to test the idea: do poor people lack role models? Do they need them?

3. Measurements

A large literature exists with all kinds of numerical data on unemployment, welfare dependency, income, crime, family size and structure, disease, attitudes, and so on.

4. Correlations

Neighborhoods with high percentages of long-term unemployed people correlate with high percentages of youth with low skills, and with attitudes and behaviors inconsistent with finding stable, long-term employment.

[Note that more observations would be needed here to verify this correlation. I had to make it up since the specific features of the underclass are not mentioned in the article.]

5a. Theory—Causation

- Lack of entry-level jobs causes unemployment of the unskilled.
- Long-term lack of entry-level jobs causes long-term unemployment.
- Long-term unemployment causes family break-up.
- Family break-up combined with poverty causes lack of ambition or some combination of attitudes that interfere with educational achievement or skills attainment.
- Lack of well-employed role models in the neighborhood seals attitudes of despair or unwillingness to seek better skills.

[I had to make most of these up to show how you would operationalize the more general concepts of "isolation" and "concentration," given the overall text of the article. Read the article and see if you agree.]

5b. Theory—Explanation

If all this is true, we are a society in need of some major changes. But what kinds? When you know what you think on this, you know what you think about a lot of things. I'm sure I don't have to tell you that it has far more implications than why some animals are venerated and others abhorred. Let's consider some logical possibilities, since Maxwell's article shows that Wilson is himself not definitive on this part. Remember earlier how we said that social scientists often stop short of the explanation stage?

- People above the underclass hate it or want it to stay there to satisfy their evil desires to feel superior, to have people to punish, or something.
- People in the underclass prefer living in poverty and misery and taking drugs and going to jail rather than having stable jobs, incomes, and families.

Sound kind of nuts? How about this one?

- No one can figure out how to bring people out of the underclass; programs to do so just don't work.

Testing a Theory Empirically: The "Culture of Poverty" in Central Harlem

Maxwell questions the internal logic of Wilson's argument: intellectual history and logical examination indicate that Wilson may have accepted more of the "culture of poverty" theory than he thinks. If an argument is logically inconsistent, we need to modify or reject it.

The ultimate scientific verification requires finding observations that support or undermine the theory. Usually this empirical test is done at the level of the correlations. Anthropologist Katherine S. Newman (1992) offers a critical look with data. After operationalizing the concepts of social isolation and concentration, she examines evidence at two levels. First, taking the central district of Harlem where over 40% of the population lives below the

government poverty line (1992:6), she considers how many female-headed households there are with children under 18 versus how many children are living in married-couple families. Then (1992:10-11) she looks at the numbers and percents of children in school and the numbers of families with at least one full time worker. Do you see why these particular statistics are critical to the theory? Is her look at one area of Harlem sufficient? What kinds of data would she find to support Wilson? To refute him? Try to guess before you read the article.

Secondly, Newman (1992:7-18) examines ethnographic data from several anthropological studies of inner city households, kinship networks, and community institutions such as churches. She claims these data show that real, old-fashioned anthropological participant observation produces information not apparent in census tract statistics alone. How might such data affect the debate about whether role models are available in the community and about what kinds of attitudes and aspirations are held by children of the poor? Make a guess and then see what she says. How can her ethnographic evidence avoid the anecdotal problem? What further research might help to resolve the differences between her, Maxwell, and Wilson?

Combining her article with Maxwell's and a look at Wilson's original statement of the issues (1987) you can get a good start at practicing the logic of constructing and critiquing a theory.

It's testable if enough programs are there to evaluate and enough observations are available. Looking for an interesting term paper topic? Or what about this one?

- Powerful groups or organizations benefit from creating and perpetuating the underclass structure. They take actions to keep things the way they are. They may not be conscious of the effects of their actions on the underclass because they take the actions to achieve other goals that happen to have poverty and its consequence as outcomes.

If this one is true, what is the explanation? Why and how do the powerful groups benefit? Be specific. Scientifically, you can't just say, "Oh, the rich get richer and the poor get poorer." What actions do they take? Are they or are they not conscious of the effects of their actions on the underclass? Or do they dispute the idea their actions have such effects? And why do their

actions have those effects (if they do)? If you can answer questions like these, you will be writing a very challenging description and analysis of US society. Or, try it somewhere else. Is there an identifiable "underclass" in other cultures? Which ones? Where? How similar are the defining features? Are there particular ways in which the other underclass differs from its US counterpart?...

You could keep asking questions like this for several sentences. And you would have a cross-cultural research proposal.



5. What About Nonscientific Anthropology?

In section 1 of this booklet I acknowledged that there are many ways to know things. Many anthropologists have used nonscientific approaches in trying to "understand" other cultures. Scientifically, we could say they provide only the level of observations. Only science has the unique features of insisting on the type of verification procedures mentioned earlier. And only science has the goal of discovering and verifying general relationships and the conditions under which these relationships hold or break down. So in reading the details of the lives of other people, you could find material to use scientifically. Many ethnographies are like that—but beware of the problem of anecdotal evidence.

Particularism. An example of semi-scientific anthropology is the work of Franz Boas and his students. Although his stated goal was eventually to make possible scientific analysis, Boas limited himself to detailed descriptions of particular cultures. This approach is sometimes called particularism. Many of the great classical ethnographies in anthropology belong to this school of thought. They can stand alone for their descriptive detail or you can use the detail for scientific theorizing.

Interpretive Theory. Recently, anthropologist Clifford Geertz and others have proposed abandoning the traditional goals of science and replacing them with something called "thick description." The anthropologist's intense familiarity with a culture makes it possible for her/him to describe the culture in detail, but nothing is testable in the scientific sense and there is apparently no goal of finding or explaining cross-cultural or intra-cultural correlations. You, the anthropological reader, somehow "get" what the description is trying to tell you. Paul Shankman's (1984) critique of this approach and the replies to his critique can give you an introduction to the anthroPOLOGICAL issues surrounding thick description and interpretive theory. His summaries of Geertz's thick descriptions of Balinese trance and the Balinese "theater state" will provide you with a starting point to see what difference it makes in the analysis of actual data. You should read at least one of these examples in the Geertz original to see what thick description looks like.

A science-oriented use of thick description can occur when the data are inadequate or not yet in a form rendering themselves verifiable or the sample is too small for a meaningful test of a correlation. In *Black Athena* (II:2), Martin Bernal states that he could not maintain "disciplinary rigor," with his material and moved to a "thick description" involving many

different types of information simultaneously." It is clear from the context that thick description serves as a temporary technique until sufficient evidence will make possible a more rigorous test of certain of his claims.

Postmodernism and Deconstruction. Most recently, some anthropologists have attempted to adapt trends from literary analysis and philosophy that also emphasize the particular, local, context-specific nature of all knowledge. In place of the systematic, correlational, explanatory orientation of science, they propose a set of constantly shifting, nonsystematic intersections of local sets of observations, always influenced by the bias of the observer. They deny the possibility of operationalizing variables. They are thus directly and explicitly opposed to science, which some see as a kind of Western imperialist prejudice (the idea that we can explain the behavior of others). Postmodernism and deconstruction have their own vocabularies that can be frustrating to beginners: metanarratives, totalizing metanarratives, parody, discourse. They also use the words "reading," and "writing" and "story" in a specialized way. One good starting point is the book by David Harvey (1989) called *The Condition of Postmodernity*. It is a scientifically-oriented critique, but it includes a readable summary of postmodern and deconstructivist ideas along with references to the main writings that got the movements going. A summary with a focus on anthropology is contained in Downey and Rogers (1995).

You'll have to do a lot of work to get into the postmodernist way of thinking, but that is more the stuff of a theory course. Here I just want to suggest a way you can get started in trying to understand their anthroPOLOGIC. Try applying the criteria of the scientific method. I know it sounds unfair since the whole idea of their approach is to be anti-scientific. But if you can't make easy sense of what they are doing, ask yourself what are their assumptions. Then try to make a list of their observations. Whether they use the term or not, you may find it a way to get an idea about the direction and substance of their approach. You probably won't find any measurements and you shouldn't find any correlations, but you might well find statements that sound in some ways like explanations. This will allow you to ask yourself how they connect their explanations to other parts of their writing. And if you find them convincing, you can throw away this booklet and stop worrying about the stages of scientific research!

Before such an extreme act, however, ask yourself how you would use nonscientific anthropology to study a whole culture or how you would approach a particular theoretical problem—if you're in the regular anthropology major—or a practical issue if you are in the PRAN program. What kind of research would you do? What kinds of findings would you present and how would you support them?



6. Conclusion

I hope this booklet will help get you started on the lifelong activity of anthroPOLOGICAL THINKING. If you've already started, maybe it will help speed up your progress? Your comments and reaction to the booklet will help me improve it for future students. So come by and let me know what you think—anthroPOLOGICALLY, of course.



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