Reasoning in Teobland Discourse

INTRODUCTION

The question of the nature of reasoning among so-called "primitive" peoples has been a long-standing one in anthropology, linguistics, and psychology. In the literature of the discipline, the term "reasoning" has been used in a variety of ways, and it is often difficult to draw clear distinctions between different types of reasoning. Some authors have focused on the cognitive abilities of individuals, while others have emphasized the social and cultural context in which reasoning occurs.

The paper presented here provides a framework for understanding the reasoning processes of Teobland people, who are a group of native Americans living in the southwestern United States. The Teobland people have been studied extensively by anthropologists, linguists, and psychologists, and their reasoning abilities have been the subject of much debate.

The key to understanding Teobland reasoning lies in recognizing that it is not a simple process, but rather a complex interplay of cognitive and social factors. The Teobland people are known for their ability to make decisions based on a wide range of information, and they are able to use this information in novel and creative ways.

RESEARCH HYPOTHESES

1. Teobland reasoning is based on a combination of cognitive and social factors.
2. Teobland reasoning is more flexible and adaptable than previously thought.
3. Teobland reasoning is capable of handling complex, non-linear systems.

REFERENCES


She contends that the language of the Trobriand lacks terms which posit relations among propositions and claims.

This does not mean that the Trobrianders are incapable of explaining a sequence in terms of cause and effect, but rather that this relationship is of no significance. (1949:407)

Lee's denial of the concept of causal relations leads her to assert, with regard to motivation, that the Trobrianders not only do not interpret acts in terms of intents, but that they do not in fact even have intents. "The Trobriander performs an act because of the act itself, not for its effects" (1949:408). Lee concludes her 1949 paper as follows:

Whether they are given or read into reality by us, temporality, causation, ideology, and relationship in general have neither meaning nor relevance for Trobriand behavior. (1949:413)

Such claims may seem credible when evaluated only in the light of the limited data Lee presents, and, in fact, many anthropologists are impressed by her arguments. For one who has lived in the Trobriands, learned the language, and experienced the complexity of everyday life there, however, these claims are absurd. In this paper I will present an analysis of an example of natural Trobriand discourse. From this analysis, I will draw what I think are some more reasonable conclusions about the nature of Trobriand reasoning. In addition, I will provide an explanation of the source of Lee's mistaken conclusions and consider some issues concerning the standards under which are likely to be justified making inferences about other people's thinking.

The analysis presented here will focus on deduction, the sort of inference which involves the assignment of a degree of likelihood to one proposition on the basis of the likelihood of other propositions. In our society, the rules of deduction in symbolic logic are exemplar inference forms. In classical symbolic logic, only two degrees of likelihood are considered: a proposition is either true or else it is false. The rules of deduction in this system are a special case of inference as defined above. When we are working with people who are widely taken at a normative standard, they are not in fact accurate descriptions of how most of us make inferences most of the time. We often think in terms of a continuum of likelihoods, and we make plausible inferences where strong inferences are not available. That is, rather than infer that something is strictly true or false on the basis of some observation, we may instead only be able to infer that it is likely or unlikely. I am making no claim here about the nature of the mechanisms by which the adjustment of likelihoods is accomplished. Whether it is Bayesian or otherwise is a topic for another paper. What I am arguing is that even in the context of observable adjustments of likelihoods, and assess the direction (up or down)—if not the amount—of change in the likelihood of a proposition. A rough model of inference then, contains these elements: (1) a proposition which relates two or more concepts (e.g. P implies Q), (2) a new bit of information, either retrieved from memory or gleaned from the interpretation of the world of experience, concerning the likelihood of one of the concepts related by the first proposition (e.g. P is very likely), and (3) a procedure for determining what impact the new information has on the other concept related in the first proposition (e.g. Q is also very likely).

Some sort of inference must be utilized any time one makes an assertion, or attempts to support an assertion, about the likelihood of an event or state that has not been directly observed. This means that inference is involved in virtually every instance of planning. Much of the apparent richness of our experience derives from our use of inference to fill in and elaborate our representations of the world. Sometimes we use inference to establish the likelihood of events which are technically observable, but which have not actually been observed. Other times inference tells us about events, such as the intents and desires of other social actors, that we can never observe directly.

That people make inferences is easily demonstrated by pointing to those things we all do that require inference. Specifying just where, how, and on the basis of what information people make inferences is, however, somewhat more difficult. A major problem in the study of inference in natural discourse is that much of discourse is composed of illogisms in which one or more premises are left unstated. If I say to you, "Socrates is mortal because he is a man," you know what I mean. But it is not necessary for the purposes of communication to explicitly state the missing major premise—viz., that all men are mortal. That premise is implicit in your understanding of what I have said even though it does not appear in the discourse. Given a community of speakers with some shared set of understandings about how the world works, it would be both redundant and tedious for each of them to exhaustively specify all of the premises used in his reasoning when he is communicating that reasoning to his fellows.

The task of identifying inferences in natural discourse, then, must involve a specification of the premises on which the inferences are based. In the following section I present a brief excerpt of discourse from an important area of Trobriand life, and I also attempt to demonstrate that an ethnographically informed model of the cultural knowledge about the events in this domain can provide the premises missing from the discourse itself, thus permitting us to analyze the inferences that are being made.

CULTURAL PREMISES

Consider an example from the domain of Trobriand land litigation. The cultural premises that underlie reasoning about claims to land concern the conditions under which rights in land can be transferred from one person to another. The full set of premises for this domain is much too large and complex to present here. A small subset of those premises, however, accounts for a large fraction of the inferences made in litigation. A simplified account of that subset will be presented here.

There are two necessary, but not sufficient, conditions for a legitimate
transfer of rights in land. The first is simply that the person who is giving rights in land must, at the time of the transfer, have rights to give. That is, this person must have previously and legitimately acquired the rights, and must not yet have transferred the rights to someone else. When this condition is met, the land is said to be TUPWA, "still remaining" with respect to that person. Once a person has transferred his or her rights in land to someone else, that land is no longer TUPWA; it is said to be KASISELA, "decided upon" or "allocated" with respect to that person. The satisfaction of this first condition is summarized in Tbrondal discourse by the term TUPWA.

The second condition is that the person who is to acquire rights must have provided the rights holder with an instance of at least one of several classes of exchange inducements called POKALA. Regardless of the form taken, POKALA as an inducement is given with the hope, but without the guarantee, of a reciprocal presentation. This second condition for legitimate transfer is institutionalized in discourse by the term POKALA or by any of the more specific terms for its sub-categories.

A basic premise, then, is that a legitimate transfer of rights in land implies both that at the time of transfer the land be TUPWA with respect to the person giving the rights, and that the aspiring rights holder have provided POKALA to the person giving the rights. A second premise is that whenever a legitimate transfer has taken place, the recipient of the rights in land does in fact have those rights. This one seems so trivial as to not deserve mention, yet it is an important premise upon which many inferences are based.

**A LAND DISPUTE**

In July of 1976, two men disputed each other’s claims to rights in a particular piece of garden land. A village court was convened to hear the case. Each man made a presentation to the court in which he gave an account of the sequence of events he believed led to his having rights in the land. The two accounts began with the same historical events, but they diverged with respect to a transfer of rights about thirty years in the past. Both litigants described a POKALA presentation by a third man to a woman who previously held rights in the garden (see Figures 1, 11). The first litigant to make his presentation to the court maintained that this POKALA attempt was unsuccessful; that it was not responded to with a transfer of rights. He claimed that the花园 remained TUPWA at this point (12), and that the woman later gave the garden to him in response to his subsequent POKALA (13). The second litigant maintained that the rights to the garden were transferred to that third man in response to his POKALA (13), making the garden KASISELA with respect to the old woman. This litigant claimed that he later acquired rights to the garden, not from the woman, but from that third man who had provided the earlier POKALA (13, 14).

As stated, the claims of both litigants are plausible. They each describe a possible history of the garden which conforms to the principles of land tenure. In the course of the testimony of witnesses it became clear that the POKALA attempt by the third man some thirty years ago was indeed successful and was followed by the transfer of rights in the garden to him. The following is a translation of an excerpt of the court decision directed to the losing litigant:

With regard to this garden. Well, within the argument, if it had been TUPWA, you all understand. You all know how it is with POKALA and TUPWA. But this garden was not TUPWA. It was already KASISELA, and this is the source of it . . . My hearing of it, my unbiased opinion is this. If it had been TUPWA, one would worry, [the second litigant] would not take it lightly; it would be your thing. But because it was previously decided upon, first. I say, let it be KASISELA.*

**ANALYSIS**

The decision begins with a hypothetical condition, "If the garden was TUPWA," and explicitly invites the listeners to make the appropriate inference, "You all know how it is with POKALA and TUPWA." What they all know is that POKALA and TUPWA together are the necessary conditions for a transfer of rights. This is, of course, the major underlying premise. The first (giving) litigant’s POKALA to the old woman is not questioned, so that if it were true (at time 13) that the garden was TUPWA, then the necessary conditions for a transfer of rights would have been
From this analysis, and from many others like it performed on discourse that we have read, we conclude that the construct of the woman as subject to the will of the man is not one that is simply an idea that springs from the nature of the human relation. We are not educated in this way, and we believe that, although the woman may be subject to the will of the man, she is not the object of that will in the same way that men are subject to the will of other men. We also believe that the woman is not the object of the will in the same way that objects are subject to the will of other objects.

The hypothesis that the woman is subject to the will of the man is one that is not supported by the evidence. We have seen that the evidence shows that the woman is not subject to the will of the man in the same way that men are subject to the will of other men. We have also seen that the evidence shows that the woman is not subject to the will of the man in the same way that objects are subject to the will of other objects.

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Lee was unable to find syllogistic reasoning for at least two reasons. First, Malinowski was unable to set down a written record of the sorts of speech in which syllogistic reasoning is made explicit, and second, having never lived in the Trobriand, Lee had no access to, and thus could not make explicit, the implicit premises underlying the discourse which was recorded. But if Goody means that the ability to do syllogistic reasoning depends on writing, then he is also wrong, because he has confused the technology required of the analyst for a description of reasoning (setting down a written record) with the technology required for the performance of reasoning. Just as writing is required for a description of the syntax of a language, but not for the performance of grammatical speech, writing is necessary only for the description, not for the production of syllogistic reasoning.

The failure of non-literate peoples to solve experimenter-posed syllogistic tasks is not indicative of an inability to do syllogistic reasoning, but of the failure to conceive of syllogistic reasoning meta-linguistically as a "structure" of reasoning which can be applied in abstraction to novel as well as familiar situations. In this paper I have argued, I hope successfully, that when reasoning in a domain which is structured by a set of meaningful cultural premises, non-literate peoples do employ syllogistic forms of reasoning which are formally indistinguishable from the everyday reasoning of Western man.

NOTES
1. The research reported here was conducted by the author in Milne Bay Province of Papua New Guinea in 1975 and 1976 under a dissertation research grant from the Social Science Research Council. The analyst in this paper is taken from my doctoral dissertation, Hutchins (1978). My thanks to Michael Cole for his criticism and advice on this version of the material.
2. Malinowski published seven books and several articles on the Trobriand between 1923 and 1935. The most important of these for this paper are (1922, 1929, 1935a, 1935b).
3. See Polya (1954) and Collins and Larkin (1977) for two views of plausible inference.
4. The recent literature of discourse comprehension is rich in demonstrations of the importance of inference to fill out interpretations (cf. Bobrow & Norman, 1975; Schank & Abelson, 1977).
6. The text reported is a translation by the author of a case excerpt which was originally recorded on stereo tape. The transcription prior to translation was made by the author and checked with informants. The relational terms are given the same translations as those used by Malinowski (contra Lee).

REFERENCES