

Blood and Thunder: Notes on Semai Ethnometeorology*

by

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This paper has two aims. The first is to present, in some detail, information supplementary to that collected by Needham (1967:271-285) and Evans (1923:146-155, 199-207) on a complex of concepts and rituals surrounding blood, thunder and the "mockery" of animals. Needham's article is well enough documented to obviate any need to replicate his sources here. The second goal is to offer an analysis of this complex, which is found among widely separated Southeast Asian peoples. Insofar as this analysis is correct, some of Needham's conclusions seem to require modification.

Background

Fieldwork. These data were gathered in 1962 in a settlement of Semai and Semai-ized Temiar in Ulu Pahang, West Malaysia. At that time, most of the rituals described here were still practised. An investigation the following year among Semai to the west, in the lowlands of southern Perak, indicated that there this ritual complex was attenuated to the point of disappearance, although Maxwell (1879:48) and Evans (1923:199-207) report it from that general area. The Ford Foundation, the Peabody Museum of Yale University and the Ameri-

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This article presents in some detail supplementary data on an apparently "anomalous" Southeast Asian ritual complex which has received some attention in the anthropological literature. These data are then analyzed. The conclusion of the paper suggests some of the implications of the analysis for "ethnoscience" (the study of categories) and ethnepistemology.

can Museum of Natural History supported this research. The Singapore Botanic Gardens and the zoology department of the University of Malaysia helped identify plant and animal specimens.

The Ulu Pahang Semai. The economy of these Semai and their Temiar neighbors to the north rests on swidden agriculture, with supplementary hunting, fishing and gathering. As Austroasiatic-speakers, they are related, albeit rather distantly, to the nomadic "Semang," with whom there seems to have been some cultural contact. Their technology is rather simple.

Presentation of Materials

The main body of this paper falls into two parts: data and analysis. The method of explication, a simple associative psychology in the tradition of Galton, determines this presentation, disjointed and overly detailed as the unanalysed data may seem at first reading. Lowes (1927) exemplifies the sort of analytic technique used, although his work, despite its *cachet* among certain literary critics, has had few imitators. His basic question (Lowes 1927: xi) remains an important one: "how. . . out of chaos the imagination frames a thing of beauty." Readers who understandably find the raw data chaotic should appreciate the fact that "Chaos" is

the title of the first chapter of Lowes' (1927) most brilliant work.

The order in which the data are presented is more or less the order in which the most articulate informants supplied it to the author. A trenchant question here might be "Why not present the data as systematized, consciously or unconsciously, by the Semai?" There are two reasons. First, as shown elsewhere (Dentan 1970a, 1970b), Semai ideological systems are not always accurate guides to the praxis they claim to describe. A second, more problematical reason is that the Semai seem like everyone else to leave large areas of their knowledge unsystematized. Moreover, these areas seem larger among the Semai than among many other peoples (cf. Gardner 1966). Whatever the case, I was unable to elicit anything resembling an ethno-meteorology from Semai informants, including Semai intellectuals who have provided clear and systematic elucidations of other phenomena both to myself and to other anthropologists. This apparent lack of systematization is at variance with the order ascribed to the meteorological beliefs of other Malayan peoples (e.g., Benjamin 1966: 11-12, Carey 1961: 176-178, Evans 1923: 146-155, Schesbesta 1927, Skeat and Blagden 1906, II: 298-301). Such a variation might be due to cultural ecol-

ogical (cf. Gardner 1966) or ritual-cognitive (cf. Benjamin 1966: 12) factors. Whether a culturally determined, "underlying" structure exists in Semai psyches, however, is a question peripheral to the main thrust of this paper, which seeks to follow Needham's (1967) lead by investigating how similar ritual complexes might evolve in different cultural contexts. At any rate, a rigorous separation of data and analysis should make a re-analysis relatively easy.

DATA

Thundersqualls

Practical measures. Anyone who has been through a Malaysian thundersquall would agree that it is an appallingly violent phenomenon (see, e.g., Needham 1967:281; Dentan 1968a:21). Traditional Semai houses, raised on poles, are often flimsy, with rafters and rattan bindings that may either or both be rotten. During a thundersquall, therefore, people leave their houses to avoid being injured by a collapsing roof or falling tree. Before leaving, they scoop up their cooking fires in split bamboos and throw the coals outside, partly lest the wind blow the flames against the inflammable interior of the house (cf. Evans 1923:102; see also below). Sometimes they take their most valued possessions with them. Once out-

side, occasionally using winnowing baskets as umbrellas, they shelter under the floors of the sturdiest houses in the settlement. They sometimes also build bonfires, in part to keep warm.

Chəntəh. The commonest ritual act during thundersqualls is to **-chəntəh**, i.e., to make a bamboo knife, cut one's shin or calf slightly, catch the blood in a longitudinally split bamboo internode and throw the mixture to the wind. One Semai man put on a display of **chəntəh** for Schebesta. His rehearsal seems to be more ideal typical than typical of normal practice. Schebesta (1927:26-27; cf. also Evans 1923:200) describes this demonstration more or less as follows. The man cut his shin with a bamboo knife and caught the blood in a split bamboo that was filled with water. He threw the bloody water into the air "repeatedly" (Possibly six times, six being a magic number for the Ulu Pahang Semai). Next he threw it towards the sunrise, then towards the sunset. Facing the sunset he said (in my translation, since Schebesta's seems somewhat inaccurate).

*Open your great egg, light the sky,
light the earth, I am a good person,
I am a person who is easy to get
along with, I am a trustworthy person,
this is your tribute, go home.*

Turning to the north, he added, "Open the-light of the sky." Finally, he poured the rest of the bloody water on the ground in six places, without saying a word. He told Schebesta that if ritual specialists (Ealaa') were around, the *halaa'* would say a spell over the mixture before it was thrown into the storm. He also said that one might add ginger or tumeric to the mixture.

The performances we saw and heard about were a good deal less elaborate and more perfunctory. There is no question that having a *halaa'* around or using the two aforementioned widely used medicinal spices would enhance the efficacy of *chəntəh*, from a Semai viewpoint as they would enhance the efficacy of any ritual. On the other hand, they are unnecessary. We never saw spells, ginger or tumeric used during *chəntəh*. (cf. Evans 1923:201).

Rather than giving an elaborate screed of the sort put forward by Schebesta's informant, which was probably made up on the spot, people usually content themselves with repeating a single word, e.g., "Adoh, adoh, adoh..." (roughly, "Ouch" or "Woe" or "Alas") or, as the blood is thrown, "Loi, loi, loi..." to show that the sacrifice is made. Sometimes they simply shout "Ya'!", an address term which in this context could be

translated as "Hey, you!" with the implication that the person summoned should turn his attention to the summoner and what the summoner is doing.

Although there is a good deal of excitement and a lot of nervous laughter during a thundersquall, adults usually seem more bored than panic stricken when they *chəntəh*. Most children learn *chəntəh* when they are around seven to nine years old but they complain about doing it. What anxiety may be present during thundersqualls is probably due as much to socialization as to the violence of the squalls themselves. A woman usually covers her ears against the thunder and wraps her baby up in its carrying cloth, covering the infant's head. At the same time, she will urge prepubescent children to "Be afraid!" and to cover their own ears.

"If we did not *-chəntəh*," says one young man, "this whole place would be flat to the ground, covered with mud — and we'd be under it." Most Semai would agree, but, as noted above, there is a good deal of confusion about how *chəntəh* works. One explanation is that, by pretending to hurt oneself, one placates Thunder and Wind so that they will not hurt one further. Other people say that Thunder and/or Wind eat the blood, and yet others that they use it as face paint. Finally, one man said that the sight

of blood scares Wind and Thunder away.

There are many ways of describing Thunder (**əŋku**) and Wind (**pənuui,-poos**). For example, Thunder may be personified as a former human being or theriomorphized as a huge black leaf monkey or gibbon throwing coconuts or shooting at people. Baharon (1966:34) reports that the Ulu Puian Temiar say that:

Engku' looks like a huge black bear or an ape with two large red eyes. He has short legs and very long arms, and on both hands and feet are long sharp nails or claws. Every part of him is black except for his forearms which are white. He lives in caves on high mountains.

In this form, Thunder has some of the attributes of a powerful deity.

On the other hand, as the use of the informal second person pronoun in **chəntəh** might suggest, Thunder can also be a laughing-stock. In one Semai story, of which Baharon (1966:35-36) gives a Temiar variant, Thunder incestuously lusts after his younger brother's wife, who rejects his advances. (In a similar story, Schebesta 1927:25 asserts that Thunder's younger brother is "Pinui," i.e., Wind). Thunder then transforms his penis into a mushroom (*Acanthophora* sp., the "swollen scrotum fungus" or **bətiis puug**, which looks remarkably like

a phallus). Unwittingly, the woman sits on it, slaking Thunder's illicit passion. When she report the incident to her husband, he builds a fire around the pseudo-mushroom. And that, people conclude, gasping with laughter, is why Thunder makes so much noise.

Moreover, under questioning, people seem to get confused about how many Thunders there are. Since storms can occur in two or more different places at once, one informant suggested the idea of many Thunders riding the storm clouds. Similarly, although Wind is personified or theriomorphized on rare occasions, there seem to be several different types of Wind, e.g., — **-poos kəmərluog**, which involves stones (possibly hailstones) and which may be connected with the **chəb təntog səmərluog** (a grackle, *Dissemurus* sp.).

Other thundersquall rituals. Probably the second most commonly practiced ritual against thundersqualls is to pluck out a few strands of one's head hair, run out into the rain and pound the hair with a pestle, crying, "adoh, adoh, adoh. . ." As in **chəntəh**, this seems to be a pre-emptive, symbolic self punishment, a way of tricking the entities behind the squall into thinking that one has already suffered enough. The third most often used technique is to use fire against the evil influences behind the squall.

Throwing out the cooking fires and lighting bonfires may serve this end as well as the practical purposes mentioned above. Or a person may light the end of a piece of bamboo, then beat the torch out on the ground, crying "Fire, fire, fire..." Schebesta (1927:27) mentions burning thatch "for Enku," although the Semai phrase he quotes seems to mean "burning Enku's arse with thatch." Clearly, this ritual is to counteract the cold, wet squall with that which is hot and dry.

Once in a while, a man may charge out into the rain with a spear or pestle and stab or beat the wind, crying, "Wind! Wind! Wind!..." In one case, several bystanders remarked that the man stabbing the air was "crazed with fear." After the "fight" was over, he walked back home quietly, trailing his spear behind him. Informants said that men with shotguns might fire them off to drive away a thundersquall, but, possibly because ammunition was very scarce, we never saw this happen.

There are supposed to be less direct methods of scaring a thundersquall away, none of which we observed. One may cup his hand over his mouth and then pull it away while spreading his fingers as if throwing dust, in a cursing gesture (cf. Evans 1923: 202, 205). Alternately, one may directly curse the

thundersquall, telling it to go away and bother someone else (cf Evans 1923:201). The places the storm could go to are usually specified.

Finally, one can reportedly use a thunderstone (*batu' ênku*) to drive off a thundersquall. Ideally, these are shiny, smooth, dark, flat, heavy and rounded celts found in trees struck by lightning. A lump of quartzite said to have been used in this way and identified as a *batu' pœria'* is in the American Museum of Natural History. To use it, an old man hangs the stone from the rafters, then lies on his back on the floor and kicks the stone with his feet while the stone "eats Thunder's heart." A "typical" curse supposedly used in this ritual and probably as ad hoc as I think the one Schebesta's informant gave was runs as follows:

*Huhan', huhan', huhan', huhan',
huban' (an attention-getting word
which begins many ritual adjurations).
Heavy and hard be the speech of you-
two, oppressed your hearts, dumb
your mouths, go far away, no wrong-
doing is here, no job for you is here.
Thou-here stone, make heavy the
hearts of them-two.*

I am not sure whether the use of the second person dual in this curse reflects greater respect than the familiar pronoun used in other

storm curses or whether the informant was addressing his curse to both Wind and Thunder.

Dragons

Attendant on the perils of the thundersquall is the danger of flooding. Floods, the Semai say, result from the upwelling of waters beneath the earth, which are released as dragons (**dangga'**, **danging**, **naga'**, from Sanskrit **naga**) emerge into the storm. Since the important cognitive function of dragons in Semai ideology is discussed elsewhere (Dentan 1968a:22;1970a:20), the following discussion concentrates on the characteristics of dragons *per se* and their association with thundersqualls. The statements herein are a summary of informants' descriptions, although only one of the dozen or so people we talked to on this subject claimed to have seen a dragon. That one, incidentally, was a master of the straight-faced "put-on."

Adult dragons are immensely long and dark in color. They have two eyes; two small, blunt, gently incurving, black, cornute protrubences on their heads; teeth like the serrate jawbone of a python; a very long tongue; and, some people say, three bristles on each side of their body, but definitely no legs. In the Ulu Pahang area, one usually sees only the young, which are a

foot or two long and live under the sand along large rivers. These young are too slippery to hold and too fast to hit.

Larger specimens live in **nanəng**, deep swamps or deep holes in watercourses, some of which are all that is left of a former Semai settlement. These dragons come out only at night or during a thundersquall. Often their ascent during a squall releases a flood of mud and water which can destroy a settlement. For example, there is a **nanəng** near the Jinteh River where in ancient days people are said to have painted the face of a pet macaque (**Macaca nemestrina**) as if it were a human being. The allegedly resultant storm razed the settlement into a swamp, and a huge dragon devoured the survivors. People were observably reluctant to venture into this area, where the dragon still lives, although they pass by it fairly often.

Despite the fact that dragons and the associated upwelling of subterranean waters appear during thundersqualls, there seems to be no generally accepted way of getting rid of them.

Other Unusual Meteorological Phenomena

Colored skies. The Semai use the word **nyamp** to refer to several meteorological phenomena that may occur just before or just after

a downpour. They treat these conditions in ways that suggest an association with thundersqualls.

Although the term **nyamp** may refer to the sky at sunrise or sunset, the "ideal typical" **nyamp** seems to be the discoloration of the atmosphere which occurs when a downpour stops just as the sun is setting and the air, suffused with moisture, turns a ghastly reddish-yellowish-greenish color. This phenomenon, unlike sunrise or sunset, always turns up in Semai discussions of **nyamp**. Moreover, it is the only sort of **nyamp** during which people in fact take all the ritual precautions they prescribe for **nyamp** in general (cf. the argument for "ideal typical" ritual objects in Dentan 1970:19-23). Adults rush outside to bring their children indoors. Conversation stops. In a minute or two after the onset of this phenomenon the settlement, normally bustling at this hour, is as quiet and deserted-looking as a drowned village.

As in the case of the form of Thunder or Wind, different people give different explanations of the dangers inherent in **nyamp**. One is that a disease entity (**nyani' chəmbad**) haunts the strange colored skies, causing in the sides and lower back potentially fatal pains which can be assuaged by massage. Another is that **chəmbad** is a "water disease" which appears in dreams

as a small black tree and which is attracted by the "red" sky because "the sky reminds it of our blood." Children, the weakest members of the settlement, are especially vulnerable.

Sunset seems to be more dangerous than sunrise. The sun rises in the **ɔs nyeng**, translated by Semai as the "fire sea" and regarded as a "good place." When the sun sets, however, one's **ruai** (roughly, "soul") is liable to follow the sun into darkness or, in another version, God will follow the sun, taking one's soul with him. Soul loss, described by Dentan (1968a:82-88; 1968c:139-140,144,148-49) leads to apathy, malaise and eventually death. **Jenalɔɔb**, where the sun sets, is, some people say, a "bad place."

Like Malays (Singam 1961:60), the Semai say that rainbows (**chədau**) are unlucky. For example, walking under a rainbow might cause a fatal fever (Williams-Hunt 1952:72). Evans (1923:208) reports that rainbows spring up "from a place where a tiger has been sick." Again, blood features in the Semai etiology of a meteorological phenomenon. One informant says that a rainbow is the arc of blood formed by a tiger's flinging the blood of his prey across the sky. If not human, that prey is usually a pig or deer, the two animals the Semai seem to regard as most humanoid. A modified version of this

account has it that, on the spot where the blood of the tiger's victim has soaked into the ground, "hot rain" will eventually fall, sucking the blood into the sky. This second version is "proven" by the fact that "if we meet with a tiger's kill and settle nearby, in four or five months there will be 'hot rain' and a rainbow."

Although both Temiar (Carey 1961:118) and Semai have words for "hot" and "rain," they use a modified Malay phrase, **hujad panas**, to refer to "hot rain." This fact suggests that their worry about being caught in "hot rain" may be of Malay origin. Such showers, which, unlike thundersqualls, often do not significantly reduce the ambient temperature and which may occur in bright sunlight, are said to predispose one to diseases, particularly agues.

Tərlaid

Thundersqualls are, according to the Semai, generally unpredictable. Ritually adept people (**mai halaa'**) can forecast weather through dreams. Indeed, some dreams of ordinary people are predictive. For example, dreaming of a snake, the mundane equivalent of a dragon (Dentan 1970:20), outdoors, pre-sages a thundersquall; in terms of the analysis offered below, it is worth noting that dream of a snake

indoors suggests incest. Although there are a variety of ways to make rain, it is possible literally to whistle up a storm. Such whistling however, is **tərlaid**.

Tərlaid (usually called simply **tərlaid**) is to perform an action likely to product a thundersquall or other calamity, like tertiary yaws. For the Ulu Pahang Semai, the calamity almost always cited is the thundersquall. Central to the notion of **tərlaid** is the elusive concept of **alug** or **ləgnug**, terms usually translated as "mocking" or "laughing at." This concept, however, is not so easily translated into English. It seems at least to connote a failure to observe the sober and respectful relations that should obtain among people and between people and the natural world. Laughter enters into the picture as a sort of symptom, a sign that the laughter has to some degree lost his self control, his ability to conform to rules — a rather Kantian notion of humor. An example may clarify this concept of "social disorder." Normally people are supposed to keep meat, fish, fowl and fungi separate, never eating food from more than one category in a single day (Dentan 1970). Mixing these foods is eating **rawoid**, "without respect to the rules," just as wandering around without direction is walking **rawoid**. The kind of behavior that makes oneself or other

people laugh is similarly ungoverned, unpredictable, **rawoid**. Thus, in one sense, such actions suggest a cheerful and deliberate evasion of the rules one should have internalized, a willingness to ignore the self-governance on which a largely acephalous social system like that of the Semai must rest. On a darker level, such ungoverned behavior suggests a deliberate violation of the rules which order both society and nature. In this sense, it is close to madness. The fact that many of the animals involved in the rules against **tərlaid** are said to act **papa**, "crazy" with a sexual connotation (Dentan 1968c:141,145,150-51), is worth introducing here. These are the animals whose animality, as Foucault (1967:28-29) points out in another context,

has escaped domestication by human symbols and values; and it is animality that reveals the dark rage, the sterile madness that lie in men's hearts.

Thus, disrespectful action taken towards a person or any creature whose characteristics suggest unnatural behavior or thundersqualls logically evokes a corresponding disruption of the natural order (but cf. Dentan 1968c:145).

For instance, after I complimented a young friend on how handsome he looked in a shirt I had given him and punched him lightly

on the shoulder, he said, "Don't **alug**, elder brother; **tərlaid**." Vanity, puffing oneself up (or letting others do it), moves one from one's "natural" station in life, violating the rules of behavior that in this area are essentially egalitarian. Similarly, horseplay, like the common adolescents' trick of lifting a smaller boy from the river to expose his genitals, especially if there is a photographer around, is **tərlaid**. Indeed almost any activity which is noisy or brings on loud laughter will elicit cries of "Tərlaid!" from onlookers, even though they may be laughing themselves.

Within the notion that **rawoid** activities are often conducive to laughter is the idea that some animals are more dangerous to **alug**, to "fool around with," than others. For example, "fooling around with" the **ənrel** insect, whose call is a nasalized **yaii yaii** heard in the flower season when people are clearing their fields, can bring on a strong wind accompanied by lightning, heavy rain and a darkening of the sun. The euphemism the Semai use of **ənrel** when they are around is **Ja' Bunga'**, "grandmother of the flowers, **Ja'** implying the avoidance of intimate relationships which, in Semai terms, might lead to incest (cf. Radcliffe-Brown 1964:150-55, 198, 206, 208, 359). Likewise, "fooling around with" a **jəlo'** — a large, dark green water leech repu-

ted to enter a person's anus or vagina — brings on storms that “last six days and nights.” The leech clearly violates Semai notions of propriety by its alleged behavior, just as “fooling around with” it flouts proper behavior between man and nature in the latter's more dangerous aspects.

The following table summarizes specific action said to be especially *tərlaid*.

ANALYSIS

The foregoing attempt to present a comprehensive account of an alien metaphysics almost necessarily involves distortions of the data and contortions by the author. Of the Semai conceptualization of the thundersquall complex it seems proper to assert, as Cassirer (1963: 45) says of Rousseau's approach to understanding religion:

Only one thing we can of course neither expect nor demand... here. He does not analyze ideas precisely, and he does not move within the limits of a fixed philosophical terminology. Such a terminology he always felt as a fetter... He does not weigh his words... he follows the impulse of the moment and seizes upon the expression that impulse suggests. Hence we must not take any of his expressions too strictly, and we must not press them if we are to do justice to his thought.

Even to make a rough translation of a word like *tərlaid* involves a certain arrogance and perhaps premature analytic judgements. **Traduttore traditore**. Moreover, although the presentation of these data has followed, as far as possible, the way in which the Semai describe their world, analyzing these data in terms comprehensible to a Westerner cannot be homologous with the order in which the data were presented.

With these crippling disadvantages then, it is possible to seek answers, however intrinsically unsatisfactory and conjectural, to three questions. (1) What is the nature of the three “nonempirical” elements of the thundersquall, i.e., personified or theriomorphic Wind, Thunder and dragons? (2) What is the internal logic, if any, of the thundersquall ritual complex? (3) If such a logic exists, what are the implications of that fact for understanding the problem posed by Needham (1967:283), viz., how varieties this complex should occur among Southeast Asian peoples who seem spatially, culturally and historically otherwise unrelated to each other?

Nonempirical Phenomena

Burch (1971:150) defines “nonempirical” as a residual category covering phenomena (a) not available to the senses, even with instruments which magnify the senses,

and (b) not ascertainable by everyone who uses techniques that are allegedly proper. Wind, Thunder and dragons would fall into his set of nonempirical entities which are " 'alive' in the sense of being discrete viable units capable of goal-directed action" (Burch 1971:151). Semai talking about Wind, Thunder and dragons rarely assign any form to Wind. Different informants describe Thunder in various ways (cf. Schebesta 1927), while there is substantial agreement on the physical characteristics of dragons.

Wind and Thunder. Since any explanation of the forms taken by Thunder applies at least in part to Wind, this section concentrates on Thunder, both because the Semai seem much more likely to give him a shape and because much of the older anthropological literature refers to Thunder as either a High God or His agent. Since the scurrilous stories told about Thunder, the ways in which he is ritually addressed during a thundersquall and the fact that no one addresses him at any other time seem to rule out his being a High God in any meaningful sense, this section of the analysis deals only with two questions. First, why assign Thunder a nonempirical form? Second, given that such an assignment is necessary, why is there so much disagreement about what form he takes? (Cf. Radcliffe-Brown [1964:330-

406] for an alternative explanation of a similar phenomenon).

To answer these questions, it is important to recognize how salient thundersqualls are in Semai life. There is almost none of the bombardment by new stimuli suffered by technologically more advanced peoples. Even the natural environment is fairly uniform. A thundersquall suddenly disrupts this peaceful and humdrum homogeneity with appalling and potentially deadly violence (cf. Needham 1967: 281). It would be surprising if people did not try to come intellectually and emotionally to grips with such a disruption.

Furthermore, from the Semai viewpoint, thunderstorms do not just happen. They happen to special people who are in a particular settlement at a particular time. It is therefore logical to ask what the people of that settlement might have done, recently, to bring on such a natural disorder. The question, in other words, is not "Why thundersqualls?" but "Why did this thundersquall happen to **us**, **now**?"

As the data given under the heading *tərlaid* indicate, Semai attribute the occurrence of thundersqualls almost entirely to human activities. On a practical level, this etiology "transforms" natural occurrences into cultural sanctions. Intellectually, this socially practical solution poses a Semai intellectual

with "the central problem of anthropology, viz., the passage from nature to culture" (Levi-Strauss 1962:99). Thunder is, in this sense, a mediator between nature and culture, a necessary link in a chain of causation which does not admit a distinction between the two realms.

Yet all the foregoing argument is the product of very abstract thinking. As Lévi-Strauss (e.g., 1962) has elegantly demonstrated, most people find it easier to think and talk about metaphysical, nonempirical and abstract relationships in terms of relationships between concrete entities. Besides, especially when trying to explain a nonempirical phenomenon to an ignorant person, child or foreign anthropologist, talking must almost necessarily refer to categories of concrete things, the relations between which the questioner directly perceives. To some extent, therefore, Thunder's non-metaphysical shapes may be products of the naive question "What does Thunder look like?" To that extent, Thunder is, say, a giant gibbon in the same sense that in America electricity is "juice." One might add that electricity is also, for most Americans, "magical" in the sense of being an ill-comprehended power.

But why so many different forms for what most Semai seem to regard as a unitary entity? To say that, in a situation like that described in the

foregoing two paragraphs, any reified metaphor will do seems too simple. Nor do the various forms ascribed to Thunder seem to elucidate his functions in the way Semai descriptions of the three forms of the soul seem to account for the soul's characteristics (Dentan 1968a:82-83). The blackness of the storm is reflected in the blackness of the animal which embodies Thunder. Aside from that, the resemblances seem very *ad hoc*.

Gardner (1966) suggests that among peoples like the Semai — peoples with, e.g., a history of defeat by more powerful neighbors, bilateral kinship, weak social hierarchy and an emphasis on nonviolence — knowledge is often "memorate." That is, people learn things from personal experience and casual conversation, with the result that much of their knowledge is shared with few, if any, of their fellows. Without recapitulating Gardner's argument, I would say that a great deal of Semai ideology is memorate. For example, people usually disagree about plant names, and almost everyone has a personal pharmacopeia based on his personal experience. It seems possible that everyone has his own, more or less personal notion of the form of Thunder, with local group membership affecting that notion (cf. Benjamin 1966:11-12).

Besides this personalism, there is the fact that, although there are intellectual Semai, not all Semai are intellectuals. Many people are probably satisfied with sketchy impressions of the form of Thunder, and perhaps others have given the question no thought at all. Since, moreover, there is no distinction between singular or plural (in most of my field notes, Thunder occurs with a passive verb, which also does not distinguish between plural and singular), pressed by an ignorant but amiable anthropologist, a Semai might feel that mere friendliness forced him to fabricate a response on the spot.

Dragons. By contrast, informants are in substantial agreement on the form and habits of dragons. The question thus arises of why people should be so precise about this non-empirical creature. The most remote possibility is that dragons exist and are fully empirical entities. The interior of Malaysia is still relatively unexplored, and the dragon story is so widespread that the British have mounted at least one dragon-hunting expedition. Moreover, popular writers (e.g., Holiday 1970) have marshalled evidence from many parts of the world for animals which reportedly look very much like Semai dragons. In the absence of any really solid evidence, however, it seems proper to follow Burch's lead (1971:156-57)

and to leave dragons in the nonempirical category.

The Semai terms for dragon are definitely cognate with Sanskrit *naga*, a term used widely by aborigines and Malays (see, e.g., Collings 1949:89; Ogilvie 1949:15-16; Williams-Hunt 1952:72). Moreover, Semai dragons appear to look like certain sort of Malay dragons (Wilkinson n.d. II:160-61). It is therefore possible that the Semai notion of flood dragons is merely a borrowing of a widely disseminated idea. Certainly the Semai respect "Malay wisdom" (*ilmu Gop*) enough to have borrowed from it in other fields.

Yet this explanation does not seem sufficient to handle the central role of dragons in thundersqualls. The Semai, both in theory and in eating rituals, distinguish sharply between the immiscible categories or animate food creatures from land, air or water. Within the first category, they likewise distinguish arboreal, terrestrial and "subterranean" animals. From a wide variety of evidence discussed elsewhere (Dentan 1970:19-23), it seems possible that, in at least some cases, large animals constitute a synecdochic superordinate taxon and that the dragon is the "ideal type" for subterranean animals, i.e., lizards and snakes. In other words, whatever their reality and wherever the idea comes from, dragons seem

necessary as perceivedly empirical creatures in order for the Semai rigidly to divide their world in a way they content is distinctively Semai. The concreteness of dragons, in short seems to be the product of the exigencies of Semai zoological taxonomy, rather than of thundersqualls.

It is even conceivable that, given the inundation of a settlement, which like most Semai settlements is on a bluff next to a stream, by a deluge of rain from above, the Semai distinction between habitats requires for cognitive assonance a comparable inundation from below. Since a thundersquall is often followed by flooding rivers, this opposition is not empirical. The non-empirical entities to which the Semai attribute rain and floods may not seem to be logically contrastive, one coming from Sanskrit tradition and the other from aboriginal tradition. But contrasting Thunder and Wind above the earth with dragons beneath it would fit with the basic contrasts which establish an orderly worldview for the Semai.

The Internal Logic of the Thundersquall Complex

Introduction. Most of the things with which a Semai should not "fool around" seem to fall into one or more of five categories: dark things; cold, wet things; flashy

things; "unnatural" behavior; and social disorder resulting from individual loss of self-control. Whether the Semai would articulate these categories must remain an open question. The point here is that these categories follow logically from the characteristics of a thundersquall.

Dark-colored things. The Semai word *rangah* refers to any dark color (cf. Carey 1961:120), e.g., the color of the sky during a storm. Of the animals listed in Table I, some of the birds, millipedes and ants are "dark." The hornets, leeches and weevils are all "dark". Dragons are black. Soot blackens cooking vessel and storage baskets, which are often old backbaskets. Finally, in all his animal forms Thunder is black.

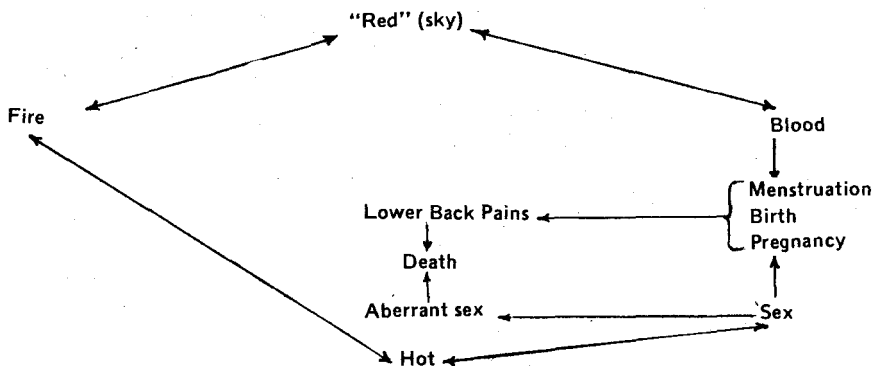
Cold, wet things. Bringing a blackened cooking vessel in contact with water obviously aggravates the danger of "fooling around" with the vessel, since rain and floods, i.e., water, accompany a thundersquall. Land leeches which come out after a heavy thundersquall, are as cold and wet as water leeches. Cold blooded land animals (snakes, turtles) often feel cold and wet.

Flashing things. The black and white fur of the Malaysian sun bear, the white "hands" of the gibbon, both marks of Thunder, seem to represent lightning. Taken outdoors, a shiny object flashes like

lightning. The rapid wing movements of moths, butterflies and possibly some birds may make them also seem to "flash."

Nyamp. The nyamp complex seems associated with the thunder-

squall complex through the shared prominence of blood and fire, both of which are "red" and warm. Diagram I illustrates what appear to be the internal relationships within the nyamp complex.



**DIAGRAM I: HYPOTHETICAL
NYAMP COMPLEX**

The arrows can be read as the word "suggests" e.g., above, the color "red" in the sky "suggests" fire and blood. It might be noted that the Semai try to keep a woman's womb warm immediately postpartum lest she fall sick.

If, as the Semai explicitly state, the red of the sky suggests blood, the notion of blood almost certainly suggests menstrual and puerperal discharges, which the Semai like many other peoples regard as very dangerous. Menstruating and pregnant Semai women often com-

plain of pains in the lower back, as they are expected to do. Another example of the connection between these two physiological states is the fact that the warmed leaves of *m³ng* (*Cucurligo latifolia*), which are large and sturdy enough to be worn as ornamental headbands or sun hats, are sometimes used as menstrual pads or postpartum bandages, one lead covering the crotch and tucked into another wound around the waist. Mixed with sugar and with the morning dew (which, incidentally is supposed to be brought by

Enku), sliced *mog* fruit is allegedly curative of the lower back pains characterizing the early stages of kidney stones. The Semai say such pains are potentially fatal.

The Semai also associate pregnancy and menstruation with *séx*, as many peoples do, and sexual activity, they intimate, bears within it the possibility of sexual aberration particularly incest (Dentan 1968a: 61-63, 96-101; 1968c: 140-142, 145-146, 149-152). Such misbehavior, in turn, is *terlaid* and ultimately leads to a violent and hideous death, often through the agency of a thundersquall.

Social disorder. The foregoing account should already have made it quite clear that fear of the thundersquall complex serves as a fairly effective social sanction against antisocial behavior among the Semai. What I should like to suggest here that the traditional sharp distinction made by anthropologists between "nature" and "culture" does not apply very easily to these data. What Euroamericans see as "social" norms and sanctions are, in a Semai sense, grounded in nature. As Hooker (1972:2) suggests, "From our own point of view we can also say that there is a pattern of action binding on all men everywhere (whatever the different contents of such action may be) grounded also in 'nature'. . . Value is therefore founded in the fact of existence and as the

contexts of existence vary from one society to another so will the forms of value behavior." One might possibly discourse on "nature culturized," but to do so would obscure the inferential fact that the Semai seem to regard their cosmos as a vector of interacting forces, nature and culture interpenetrating and inextricably intertwined but not forming a unity.

The relationship between social order and natural order, between social disorder and natural disorder, is salient in Semai ideology but hard to express in generalized English terms. Perhaps eliminating some possible interpretations before giving my own tentative ones would help clarify the problem.

The Semai notion of the natural world and their position in it is not, as Babbitt (1919:79) describes Rousseau's, "only the projection of . . . temperament and its dominant desires upon the void." There are inherent, dangerous anomalies in the Semai view of nature, unprovoked disorders that can disastrously affect human life. On the other hand, the Semai are not Noble Savages, at one with nature. They appear about as comfortable with their cosmos as a Manhattanite with 42nd Street. The surroundings are familiar and humdrum, but there is always the risk of personal injury, whether brought on by one's own injudicious actions or by

sheer bad luck. Like the medieval painters discussed by Foucault (1967:28-29), and perhaps like many other peoples, the Semai seem to feel that, within the orderly world of man and nature, there lies potential violent disorder, a possible madness that can totally disrupt the fabric of existence. People and other creatures which behave aberrantly set off ripples of entropy throughout the natural and social universe.

CONCLUSION

Needham's Argument

Needham's usually elegant and clear prose seems to falter in the closing pages of his paper, leaving the vague impression that he begs the question he originally poses, viz., how such similar thundersquall complexes might originate among three widely separated and culturally disparate peoples. At the risk of setting up a straw horse, the following paragraph attempts to paraphrase and summarize Needham's (1967:281-85) conclusions.

(1) With intelligent modifications of the work of earlier authors (e.g., Wilken 1912; Levy-Bruhl 1938), he makes a convincing case that certain natural phenomena make a "primordial impress" on all human beings. "Primordial" in this context seems to refer to the sort of archetype postulated by C.G. Jung, to whom the article is dedicated.

(2) This "primordial impress" elicits among many different peoples similar "ritual" or linguistic responses. (3) Since, however, symbols are "by definition" cultural and the nonhuman phenomena under consideration natural we are confronted with the problem of how these people can "mediate" between two such inherently "opposite" entities, entities whose inherent opposition is consciously or unconsciously recognised by everyone. (4) The "rituals" and beliefs in question perform this "reintegrative" function.

A Modification

This section takes up the conclusions attributed above to Needham. (1-2) Given the monotony of ordinary rustic life, the natural phenomena discussed here offer most of the few diversions the Semai have. To the extent that these phenomena are dangerous, either in fact or as anomalies in the Semai map of the cognitive world, they elicit practical or "ritual" defensive measures. The stronger the stimulus, i.e., the greater the perceived danger, the stronger the response will be. So far, this interpretation agrees substantially with Needham's, except in phraseology. It is possible, however, to explain the way in which the Semai respond to these natural phenomena in simple behaviorist terms as above, eliminating

TABLE I: Especially Dangerous Tørlaid

A. "Fooling around with" (løgug) organism	Remarks
1. Mammals	cf. Schebesta 1927:17, Evans 1923: 199, 200
macaque	cf. Evans 1923:199
cat	cf. Evans 1923:199
dog	cf. Schebesta 1927:17
2. Birds (cheb)	friend of Thunder's wife (i.e., lives in hills)
chudar	
cherwar ¹	
holag' (or wertabø')	
Kachaug ¹	night owl
Køligend	domestic fowl
pug	
sømpøg kuend ¹	
søntørluad	
søtlød	
tadeid	friend of Thunder's wife
taraag	hornbill
tintøg sømørløø'	? Dissemurus sp.
wøtwand ¹	
egg of any bird	cf. Evans 1923:201
3. Reptiles	
Turtles or tortoises	cf. Schebesta 1927:17
Snakes	especially feared are the four species of blind snakes, Typhlopidae, and two other blind snakes, Xenopeltis unicolor and two dark-colored water-snakes (Natrix piscator , N. trianguligera) are also connected with squalls, which are called "Headbands of Thunder," (cf. Tweedie 1961:26-30,70).
4. Arthropods	cf. Dentan 1968b
børløngah	maggots
nrel	see text
gølo	daddy longlegs

¹Although most of these birds proved impossible to identify, the ones footnoted here were said to be dark colored birds whose call, which as Evans (1923: 200) notes is not to be listened to or imitated, allegedly precedes a thundersquall.

gəruid	termites, which are "crazy" (papa)
jəŋŋkand	large eyed grub that eats tobacco leaves
kəldaldəg	large black millipede
kələtein'	reddish millipede
kəmər jərļa'	large, poisonous spiny grub
	(Attacus atlas)
kuidbaid	large, whttish grub
laas	all species of ant, especially dark ones
mangəŋ	dark, hums (probably a hornet)
roi	housefly
siwei	dark-colored weevil (?) found in
tawag	moth, butterfly
5. Leeches	land leech (cf. Schebesta 1927:17, Evans 1923:199, 201; Needham 1967:277-78); burning pələp is especially dangerous.
	see text
jəlo'	
B. Other kinds of tərlaid	
What not to do	What not to "fool around"
"Fool around with"	chəweil , a basket blackened by being hung over the fire
"Fool around with"	old, worn out backbasket (raga)
Flash outdoors	Mirror or other shiny object. (cf. Carey 1961:178)
Laughing	one's reflection in a mirror
Carrying water in	Cooking vessel blackened by being in the fire.. (cf. Schebesta 1927:17)
Wearing	haircombs during thundersquall or' a month after someone in the settlement has died
Be intimate or disrespectful	older kinsmen (affinal or consagui- neal); if prepubescent, with half- grown child of opposite sex.
Expose	genitals, anus
Watch	copulating dogs, etc.
Show demonstrative joy	reunion
Laugh aloud or shout with glee	anything
Red gum	cf. Evans 1923:199

any lurking archetype. Since the arguments for this behaviorist position have been made elsewhere with respect to Semair "rituals" (e.g., Dentan 1965, 1970), here it needs only to be said that, if the behaviorist arguments sufficiently account for the body of data to which Needham addresses himself, then they are superior to Needham's with respect to the principle of parsimony (cf. Lounsbury 1969: 212-213). They also fit better into the scientific context of work being done in other fields; that is, they better meet the "social" criteria that Salmon (1966:259-260) proposes on the grounds that explanations occur, not in epistemic *vacua*, but against the background of previously tested hypotheses.

(3-4) An assumption that appears to underlie Needham's conclusions is that there is a clear empirical distinction between "natural" and "cultural," an assumption he shares with most social anthropologists, although to a lesser degree with primatologists. It is conceivable, however, that this nature/culture distinction is culture bound, the product of a social order in which society's relationship to nature is essentially that of a rapist to his victim. Alienation from (let alone opposition to) nature by "culture" might seem as bizarre to some peoples as the idea of an individual's being alienated from all his fellows

would seem to a great many peoples. Certainly, it is difficult to understand how cursing thunder is "reintegrative," although it might be construed as temporary alienation.

Rather than taking nature and culture as empirical opposites then, it might be profitable to consider this opposition as an analytical construct that may be immensely fruitful in considering certain types of data, as the distinction between "ritual" and "substantive" acts is. Perhaps Levy-Bruhl (1938-174) was closer to correct than most Anglo-American anthropologist thought when he spoke of "participation" by people in powerful natural phenomena, although he was probably wrong in assigning such participation solely to "primitives." After all, Lutherans, for example, avowedly believe the doctrine of consubstantiation, viz., that after consecration the Eucharistic bread and wine remain bread and wine but, are **simultaneously** the true body and blood of Christ. It may even be the case that Needham and other followers of Levi-Strauss are resisting the logical implication of their analyses, viz. the realization that what Lao Tzu (e.g., 1963:60) calls "the myriad creatures" are semipetrified categories of a cosmos which renders such categories always and necessarily inadequate (but, in fairness, cf. Levi-Strauss

1967:327). Semai meteorology, in this sense, is a way of dealing on the spot with cosmic incursions into human schemes — by trying to schematize them.

Some Questions

Is it not possible that the Semai notions of thundersqualls are “consubstantive” ways of dealing with the fact that they deal with that “great image” which, maddeningly for thoughtful schematizers, “has no shape” (Lao Tzu 1963:102)? Is it not conceivable that the Semai,

like good biologists (e.g., Dobzhansky 1972: 664) or anti-Platonists, allow their categories enough flexibility to come closer to reality than rigid categories could? Perhaps it is merely the fault of English orthography that renders the Semai treatment of thundersqualls seem strange. For analysis, one might write “ENKU” for the “deified” aspect of thunder, “énku” for its “natural” aspect and “Enku”, on occasions when the aspects are inextricably mixed; but one need not assume that the Semai have fallen into this analytic trap.

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