contrasts *river* with *stream* (both moving bodies of water, with an idealized linear shape) and *pond* and *lake* (both stationary bodies of water, with an idealized round shape) along a dimension of size. Yimas makes no use of this size opposition, but does of the other one, *armp* "river, stream" versus *upŋk* "lake, pond." For Saussure, the meanings of English *lake* and Yimas *upŋk* are utterly distinct, because they participate in different systems of semantic contrast. If we hold Saussure's position, however, it is difficult to account for why Yimas *upŋk* enters into the same opposition with *armp* that English *lake* does with *river*. It seems more profitable to argue that the meanings of English *lake* and Yimas *upŋk* are actually very close, with just an additional semantic contrast inherent in English *lake* to distinguish it from *pond*. This also suggests that Saussure's strong relativism in the domain of linguistic concepts is misguided, but that some universal organizing principles may be at work here, a view Lévi-Strauss propounds with vigor.

Lévi-Strauss's Innovations

The crucial innovation of Lévi-Strauss to structuralist theory was to extend the Prague School notion of defining oppositional features to the analysis of meaning and, ultimately, cultural categories. As these Praguean phonetic features are drawn from a smallish, presumably universally available set, similar expectations could be held for the semantic oppositions which generate the basic meaningful categories of languages and cultures. Hence, Lévi-Strauss abandons Saussure's empiricism for a strongly rationalist position. The human mind is everywhere the same; what distinguishes French culture from, say, Yimas culture are the particular arrangements of the culture generating semantic oppositions. The surface differences are stripped away to reveal the underlying similarity of organization of all cultures (a Platonic perspective), generated by an innately endowed human mind which is everywhere the same (rationalist assumptions). Contrary to much of European anthropology prior to him (see, for example, Lévy-Bruhl (1921)), Lévi-Strauss denies significant differences in the thought processes of so-called "primitive" or non-Western peoples and the modern scientific Western culture. Rather, it is due to the nature of the materials they "think with" that the differences emerge. Traditional non-Western peoples have an inductive "science of the concrete" (Lévi-Strauss 1966:1), making generalizations from primary sensible data, an approach opposed to our scientific paradigms, which emphasize abstract measurements and deductive formal principles, but the same basic thought processes inform both.

Lévi-Strauss (1966:269) writes:

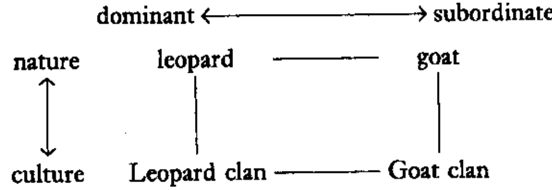
> Certainly the properties to which the savage mind has access are not the same as those which have commanded the attention of scientists. The physical world is approached from opposite ends in the two cases: one is supremely concrete, the other supremely abstract; one proceeds from the angle of sensible qualities and the other form that of formal properties. But if, theoretically at least and on condition no abrupt changes in perspective occurred, these two courses might have been destined to meet, this explained that they should have both, independently of each other in time and space, led to two distinct though equally positive sciences: one which flowered in the neolithic period, whose theory of the sensible order provided the basis of the arts of civilization (agriculture, animal husbandry, pottery, weaving, conservation and preparation of food, etc.) and which continues to provide for our basic needs by these means; and the other, which places itself from the start at the level of intelligibility, and of which contemporary science is the fruit.

The basic method of the "science of the concrete" is classification; indeed, for him, the principle function of all minds is to classify. True to his rationalist credo, Lévi-Strauss claims that all individuals, "primitive" or "civilized," classify along the same lines and use the same methods. The "science of the concrete" differs from Western science in that its practitioners classify things in terms of their everyday, overt sensible features, rather than the underlying abstract features that the scientist uses. The classifications and categories resulting from these two systems, of course, are often quite different, but the basic thought processes that gave rise to them remain the same.

What are these thought processes? They are distinctive features of semantic oppositions, very much like the phonetic features of structural linguistics. In parallel to these too, the number of semantic oppositions which generate cultural categories are limited, drawn from a universal set of potentiality. The systems thus generated are therefore not unlimited; indeed, some can be viewed as no more than formal permutations of others. Lévi-Strauss illustrates the ideas most extensively in his analysis of the phenomenon of totemism (Lévi-Strauss 1964, 1966). Totemism is common among many traditional peoples; it involves beliefs linking certain local animals, plants, or other objects with certain social groupings, typically a clan. The members of the crocodile clan may believe themselves descended from this animal, have certain rituals associated with it, and perhaps have a taboo on eating it or speaking the name. The phenomenon has long puzzled anthropologists, but Lévi-Strauss sees it as a prime example of his "science of the concrete." Totemic classifications reflect a system of oppositions through which the Native organizes the social units of his culture. These oppositions relate these social units to each other, isomorphically to the ordering in the natural world among the totemic objects. A set of natural objects organizes a set of cultural ones.

In deciding how to order the totemic objects, for example, animal species, again the principles of the "science of the concrete" are applied. The

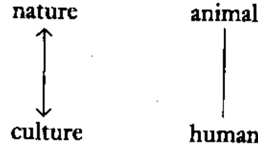
4.7



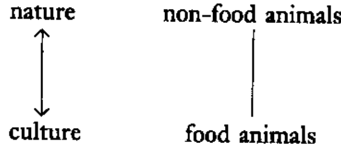
Native chooses classificatory features that reflect the sensible qualities unique to each species. These distinguishing classificatory features serve, by analogy, to organize the culture's social units, for the two are connected by the same logical principles, mere formal transformations of each other. Lévi-Strauss (1966:61) provides a telling example in the Luapula of Zambia. For example, they have a Leopard and Goat clan. Culturally, these clans stand in a joking relationship, a social metaphor of the natural relationship in which leopards eat goats. This could be represented as 4.7.

The point for Lévi-Strauss is that oppositions like this which generate these systems of classification are good to think with. It is these structure-building thought processes which distinguish humans from animals, culture from nature. As nature is an always given datum through our sensible experience, humans imitate our understanding of nature in the cultural categories we construct. The products of our cultures are ordered in the same way as we understand the products of nature to be ordered. This is always the case with human thought; totemism is merely an especially transparent example. The object of ethnography is to discover how the relations we apprehend in nature are used to generate cultural products. Ultimately, then, ethnography is a study of the processes of human thought. But Lévi-Strauss is a strong rationalist: the structure of human thought is everywhere ultimately the same, the product of an innate, universal endowment. Therefore, the systems which generate cultural categories are underlying everywhere the same; universals of human culture are at the level of deep underlying structure, not superficial fact. It is the principles of binary opposition and analogical transformation which structure the systems in which all cultural categories are generated. Ethnography as a science needs to study these principles, bracketing the cultural context so these pristine principles of structuring can emerge. A structure which appears at one level with given cultural content may reappear elsewhere with entirely different content. The structure is the goal; the observed differences in content are irrelevant. Further, because of the axiom of absolute universality of these principles, what can be discovered by analyzing cultural categories and products in one culture is merely a formal transformation of those in completely different cultures.

4.8



4.9

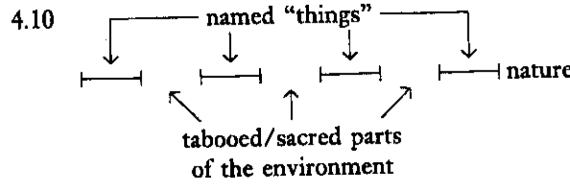


An Example of Structural Analysis in Anthropology: Taboo in English

To understand what all this entails in practical cultural and linguistic description, it is best to work through in some detail an example of structuralist analysis in anthropological linguistics. I have chosen a particularly clear and interesting study by Edmund Leach (1964) concerning taboo and animal terms of abuse in English. The themes here are similar in some respects to those of totemism, so it is a particularly apropos choice. We are interested in explaining why *you swine* is an effective epithet in English, but *you polar bear* induces only laughter. The basic distinction between animals and humans is that animals belong to nature and humans to culture (4.8). This is the basic opposition responsible for totemism as discussed above. However, other than functioning as objects good to think with in totemic classifications, the other basic concern of humans with animals is as food. Of course, what counts as food is a cultural construct. Yimas people regard snakes as inedible and find the idea of eating them revolting, yet they are a delicacy among the neighboring Arafundi people. So, to the whole domain of animals, humans apply a further opposition of nature ↔ culture, so that animals customarily eaten belong to the domain of culture and animals that are not recognized as potentially food at all belong to the domain of nature (4.9).

Poles of oppositions can be expressed by positive or negative values, p or not p, or with Jakobsonian distinctive features, so human equals not animal and not human equals animal. Leach's theory of taboo revolves around the residual, ambiguous category between the two poles of the opposition, in this case human–animal, i.e. pets. That these are of special note follows from his empiricist (Leach is British, not French like Lévi-Strauss, hence,

4.10

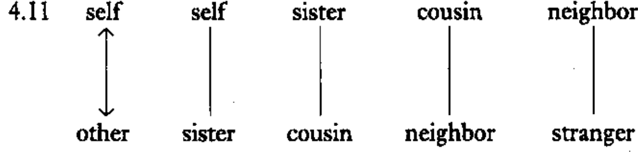


this empiricist flavor) theory that we arbitrarily segment the continuum of the world presented to us through our senses into separate named "things," reflexes of our language categories. These discriminations are clear-cut and unambiguous (we will have cause to question all this in the next chapter). But between these separately named discriminated things lie parts of the natural continuum which remain unnamed and undiscriminated, the realm of the sacred and the tabooed. Leach's (1964:35) diagram (4.10) will perhaps clarify.

To Lévi-Strauss's idea of strict binary oppositions, Leach has added the powerful idea of the borderline, liminal category, partaking of both poles of the opposition, but belonging completely to neither. We need not accept his empiricist theory of their acquisition to see the power of such categories, for they are omnipresent in human culture: initiation rites in the passage from child to adult; mortuary rites in the passage from life to death; sorcery materials focused on body exudations like semen, milk, hair, reflecting a passage from self to other (they themselves reflect a transition from clean to dirty); and incarnate deities like Jesus and Krishna, much more emotively powerful than the abstract gods they incarnate, because they are ambiguous between human and divine. The list can go on and on. Clearly, it is these ambiguous liminal categories that attract the maximum cultural interest and arouse the strongest taboos.

The two fundamental oppositions in the area of taboos and epithets associated with animals are nature–culture and self–other. The liminal category nature–culture for animals (animal–human) is pets, as already mentioned. Note that pets are highly tabooed as food. The English (and cultures derived from them such as Australian and American) do not eat their pets like dogs and cats and regard the culinary practices of East Asians, who do eat dogs in some cases, with horror. Note, however, that because these animals are tabooed, their names make effective epithets: *you son of a bitch, pussy*. The other use of the nature–culture opposition already mentioned are food animals–non-food animals. The liminal category here, animals simultaneously food and non-food, are what we might call game animals, rabbits being especially good exemplars. The name of the humble rabbit has been subjected to especially heavy taboo during the history of English, the old name *coney*, being replaced by *rabbit* because of its similarity to the common

4.11



4.12 self ⟷ other

self : sister : cousin : neighbor : stranger

4.13 self ⟷ other

self : sister : cousin : neighbor : stranger

self : home : farm : field : remote

self : pet : livestock : game : wild

name for female genitals. The choice of the name for Playboy ***bunny*** clubs was surely no accident (nor, indeed, were Penthouse ***pets***!).

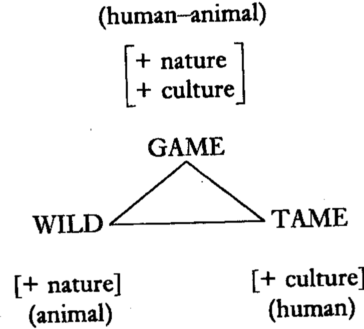
The other basic opposition, self–other, is highly generative of cultural systems. The social order is generated by applying it recursively (4.11). These recursive relations can then be represented linearly in a somewhat simplified fashion (4.12). Following Lévi-Strauss's principles of analogical transformation, this opposition of self–other can be extended to the domains of geographical space and animals (Leach 1964:36), as demonstrated in 4.13.

A sister, home, and pet bear analogous relations to self as do a neighbor, field and game animal. Thus, a pet is tabooed for food, while a sister is tabooed for sexual intercourse (the areas of eating and sexual intercourse are themselves common areas of taboo, being liminal categories in their own right between nature and culture: humans as cultural beings engaging in activities that nature ordains for survival and procreation). Game animals are those humans control, not tame, but not truly wild, like our fields and meadows are in comparison to truly wild, inhospitable areas. They are killed at set times of year, in accordance with set hunting rituals. Neighbors are not kin, but potential affines, as well as potential enemies. When we take them as spouses, we do so in accordance with set marriage rituals. The set of analogical equivalents across this opposition in the social and animal domains can be summarized, as in 4.14 (Leach 1964:44). The whole system can be summarized in structuralist formalism as in 4.15.

4.14

	kinship/social	*animals*
self ↑	incest prohibition	inedible
	marriage prohibition, but possible premarital sex relations	castration coupled with edibility
	marriage alliance friend/enemy ambiguity	edible in sexually intact form; alternating friendship and hostility
↓ other	no relations	inedible

4.15



As we have come to expect with cultural systems built up of polar oppositions like these, it is the ambiguous, liminal categories which are the focus of the greatest cultural elaboration. Consider the case of the fox in English culture; the cult of the fox is certainly a salient feature of the culture of certain social classes. The fox is a strongly liminal category. It occupies a borderline position between edible field animals (GAME) and inedible wild animals (WILD). As such it is categorically problematic, and the barbarous practice of the hunting and killing of foxes in Britain is an the barbarous practice of the hunting and killing of foxes in Britain is an elaborate ritual surrounded by extraordinary taboos. Even the language used is extraordinary, marked by special words for familiar objects, an avoidance feature so typical of the language of sacred rituals in countless other cultures. The fox itself must not be spoken of as such: it is referred to as a *dog* (the dogs themselves are *hounds*), its head as a *mask* and its tail as a *brush* (Leach 1964:52). These features are all hallmarks of the highly problematic status of this liminal category.

Structuralist analyses like this one by Leach and similar work on myth and totemism by Lévi-Strauss (Lévi-Strauss 1963, 1966, 1969) and other anthropologists attempt to lay bare the basic semantic oppositions which generate the many diverse cultural forms attested. Of necessity the work is highly abstract, invoking a Platonic and rationalist other world of innate

universals informing this very diverse apparent world of contingent facts. One finds these analyses convincing to the extent one accepts the necessity of such a level of abstraction. Geertz has probably spoken for many when he said (Geertz 1973:355):

> For what Lévi-Strauss has made for himself is an infernal culture machine. It annuls history, reduces sentiment to a shadow of the intellect, and replaces the particular minds of particular savages in particular jungles with the Savage Mind immanent in us all.

But, if one is a committed rationalist, this, of course, is exactly what one wants anthropology to do.

Summary

Structuralism is a school of thought within the social sciences which holds that the elements of a system have no significance in themselves, only in relationship to the other elements of the system. Thus, /b/ is an element of the English phonemic system because it contrasts with other such elements; *bat* contrasts with *cat* as distinct English words. This idea of functioning contrast was developed into the formal idea of opposition in the work of the Prague School, defining elements in a system as the points of intersection of multiple axes of opposition, represented as the +/− poles of binary features. This idea of binary features was taken up by Lévi-Strauss and wedded to a strong rationalist agenda as the basis for his structural anthropology. The function of human minds everywhere is to classify, and they do this in terms of a finite, universally available series of semantic oppositions which underlie all cultural categories, such as nature versus culture. Because all human minds are ultimately the same, due to the doctrine of the psychic unity of humankind, all cultures are underlyingly organized in the same way, via the universal set of semantic oppositions, the apparent differences being due simply to varying arrangement of these oppositions.

Further Reading

Structuralism has been enormously influential in this century, and there are many sources. Sturrock (1986) is an excellent introduction, while Culler (1976) summarizes Saussure's contribution. Lévi-Strauss's own work is voluminous, but the most relevant for purposes here are Lévi-Strauss (1963, 1966). Leach's (1974) short book on Lévi-Strauss is an excellent place to begin to explore this important thinker, but Pace (1986) is also very useful.