The burden of this paper is that 'cultural', 'social', and 'biological', the very names of three branches of anthropology, have been used equivocally in anthropology to the point of utter confusion. I will discuss these equivocations and suggest how we may avoid them in the future.

At the outset, I should state that I am interested in the development of cultural anthropology as a natural science, not as a humanistic discipline; my philosophical basis is naturalism, a form of philosophical materialism akin to scientific realism and "common sense" philosophy (Cloak, in press). Accordingly, I'll try to formulate certain anthropological concepts and propositions in a language more concrete than is customary.

'Cultural', as I point out in a recent article (Cloak, 1975), is used equivocally to refer both to neural instructions acquired in certain ways, mainly by observational learning; and to the behaviors and the products thereof, resulting from the actions of those cultural instructions. The ambiguity of these usages becomes manifest when we discuss cultural dynamics: Cultural instructions are acquired, stored, and enacted by individual organisms; thus, individual repertories of cultural instructions develop through the life cycle. Because they are acquired via observational learning, the observer-learner of an instruction today may become a demonstrator-transmitter of that instruction tomorrow, and so a people comes to carry a cultural tradition. Moreover, the cultural traditions of peoples evolve through the centuries; and certain cultural instructions diffuse (again via observational learning) from one people to another, as part of that evolutionary process.

Cultural behaviors and products, on the other hand, do not participate in those processes. The acquisition of an artifact is a very different thing from the acquisition of the instructions for making artifacts of that sort; when one speaks of the diffusion of a social custom, one can only mean diffusion of the instructions for practicing that custom. One can say,
loosely, "The spoked wood wheel evolved from the solid wood wheel" (Cloak, 1968), but that is only a metaphor for "The instructions for making spoked wood wheels are an evolutionary modification of the instructions for making solid wood wheels."

I think the equivocation of 'cultural' can be overcome simply by staying conscious of the two senses; by thinking and speaking in terms of cultural instructions and repertories on the one hand, and in terms of cultural behaviors and products on the other.

Equivocal use of the word 'social', however, may be better overcome by shunning one use altogether. 'Social' properly refers to behaviors which elicit or are elicited by behaviors of other organisms, generally of the same species, and to certain products of such social behaviors -- social relations, groups, institutions, organizations, etc. 'Social' is often used, however, as if synonymous with 'cultural'. This usage is generally justified by three assertions: One, that culture is acquired in a social context; two, that human society depends upon culture; and three, that all cultural behavior and products are social. From these assertions it is argued that human society and culture are so interdependent that it is meaningless to distinguish among them.

I think that for understanding cultural and social processes we do need to distinguish between 'cultural' and 'social'. First, not all instructions acquired in a social context are acquired culturally. An event of observational learning entails very specific social behaviors by the observer-learner and, as a rule, by the demonstrator. At least some instructions acquired in a social context are acquired not by observational learning but by simpler processes of conditioning.

The classic example is the child being slapped as punishment for slapping another child: Via observational learning, he is acquiring cultural instructions to slap smaller people (including his own children, some day) when they annoy him; simultaneously, via operant conditioning, he is acquiring non-cultural instructions not to slap other children when his parent (or whoever is slapping him) is likely to find out.

A social context is not, moreover, absolutely necessary for the acquisition of cultural instructions: Crabtree and Bordes have shown that one can acquire cultural instructions asocially, by copying artifacts.
Second, not all human social behavior is based exclusively upon instructions acquired via learning. I think it highly likely, for example, that at least some of the instructions involved in observational learning are acquired genetically.

Third, I think the idea that all cultural behavior is social must be based on the premature and rather simplistic generalization that all cultural behavior has a social function. Thus a person making an arrow-point all by himself is deemed engaged in social behavior because he may later share the game he kills with it with others. But if we define a behavior as social or not by its observable features and its immediate antecedents and consequences, then some cultural behavior is social and some isn't.

In their primary realms of discourse, then, 'cultural' and 'social' are neither synonyms nor antonyms; rather, they refer to different aspects of human behavior -- 'cultural' to a mode of acquisition, 'social' to an immediate cause or effect. Each can, and should, be kept in its proper domain.

Now I want to turn to the relation of 'cultural' and 'social' to 'biological'. Culture is not acquired genetically, of course: Observational learning and genetic programming of neural instructions are two very different processes. True, a given instruction, and certainly a set of instructions for a complex behavior, may be an outcome of both processes; nevertheless, the variations in behavior and behavioral results that anthropologists are interested in are generally due to variations in cultural, rather than genetic, programming. And that goes for variations in social behavior and its results, particularly.

But to infer from that that human culture and society are not biological is fallacious, taking a part of 'biological' for the whole. 'Biological' is not synonymous with 'genetical'; 'biological' refers to any activity, internal or external, of a living organism; so I think it's obvious that all acquisition of neural instructions, cultural or otherwise, and all human behavior, social or otherwise, is biological; and so, by derivation, human culture and society are just as biological as those of any other species.

To repeat, this does not mean that anything cultural is acquired genetically; in my usage, that would be a simple contradiction in terms. Nor does it mean that human culture and society exist only to perform a biological function, such as promoting the survival and reproduction of
organisms or of gene-pools or of the species. On the contrary, I think the function of cultural instructions, social or not, is to promote their own survival and replication, sometimes even at the expense of organisms and gene-pools and the species.

The reason I want to emphasize that human culture and society are biological in the proper sense of that term is that many authorities appear to believe otherwise -- that culture, in particular, is either (a) mental or (b) superorganic, that it consists of or depends on such non-material things as meanings, symbols, values, ideas, rules, information, choice, anticipation, free will, the Human Spirit, etc. In other words, these authorities assume a priori that human affairs involve special humanistic principles which are not amenable to naturalistic explanation, an assumption that effectively prevents them from adopting, or even countenancing, a naturalistic program of research.

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Now, all of this "definitional argumentation", as one authority has dubbed it, is really only a prologue to a naturalistic cultural anthropology, a clearing away of some conceptual underbrush so that we can proceed to the real work of anthropological explanation. We can take it as a working assumption that cultural instructions, acquired by observational learning, produce culture in the Tyloorean sense -- cultural behavior and its products. With that assumption, we can proceed to explain variation in the latter, including of course variation in social organization, by explaining variation among repertories of cultural instructions.

REFERENCES

Cloak, F. T., Jr.

