FOLK PSYCHOLOGY, FREE WILL AND EVOLUTION †

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Abstract. Theorists concerned with the evolution of human behavior often unwittingly strive to "explain" attributes that owe more to our unexamined folk psychology than to biology. Our folk psychology is Cartesian with self-awareness as a sort of homunculus in control of the body. It is more likely that awareness is the organ of impression management and has no executive powers. Evolutionists need to explain the ordering and sequencing of behavior rather than the rise of an executive self. **Keywords:** evolution, free will, Descartes, self, folk psychology.

I. Introduction.

When evolutionists talk about the evolution of the human mind, they frequently couple a sophisticated understanding of biological evolution with a very unsophisticated folk psychology. As a result, they are likely to ask the wrong questions and to devote their time to explaining the evolution of phenomena that may not exist, at least not in the way they understand them to exist. Worse, since folk psychologies by definition may differ from culture to culture, they may be ethnocentrically accounting for a conception of mind that is largely Western in nature. In the meantime, they are failing to ask questions that may move theory and research forward. Our folk psychology, as we will see, tends to view awareness as an executive, a directing agency. It is a good deal more likely that awareness is simply the organ of impression management, and has no directive powers.

II.Assumptions of Folk Psychology

"*Knowledge does not guarantee motivation to change in the face of powerful biological urges*" (Koshland, 1988:541). That quotation, from an editorial on AIDS by the editor of the journal Science, implicitly has to do with our folk psychology. Every culture has an ethnopsychology. Ours is Cartesian. It posits spirit and body as separate. The spirit or mind is a sort of executive, expected to be in control, to make decisions and to take responsibility. It is like a pilot flying a plane. The mind is considered to be the "real" person. The mind controls the body. Emotions represent the body's attempt to challenge that control, and the mind is expected to be stronger than those emotions or the individual loses in social standing. Koshland is warning us, in the quotation, that even when armed with knowledge the mind may not be able to control the body. When the body/emotions do win out, this is considered somewhat shameful. The worst thing that can happen to us is to have the mind weak, so that we cannot control -- fear of this happening is the fear of insanity, as Alexander Leighton (1982) has pointed out. Oh, alcohol is conceived of as artificially weakening the mind so that the body can seize control -- therefore the individual is often not considered "responsible" if under the influence. And that, in extreme summary fashion, is point one, the idea of our executive self folk psychology.

III. Errors Evolutionists Make

When evolutionists accept this Cartesian, homunculus-type idea of mind and volition, they are likely to conclude that self-awareness is itself an adaptive tool; and then want to develop theories about how natural selection could have generated it. This kind of thinking is quite old -- it brings to mind writings of G.H. Mead, of A.I. Hallowell, as well as Blakemore (1977). The problem is not that they ask how self-awareness may have evolved, the problem is that they assume that this awareness is a homunculus, an executive in control.

A related error evolutionists make when they fail to examine our folk psychology is the "the (biological) truth shall set you free" fallacy. Knowledge of evolutionary biology is somehow supposed to strengthen that folk psychological force, the "will." This is the position adopted by E. O. Wilson (1975, 1978) and by Richard Alexander (1979, 1987). In the battle between mind and body, this approach implicitly assumes, knowledge is a weapon. Arm the mind by giving it biological knowledge, so that it will know what the body is up to. Thus, Alexander (1979:93) writes that:

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> *Whatever the extent or nature of biologically based constraints on the modifiability of human behavior, therefore, such constraints seem most likely to be effectively bypassed or superseded by humans who individually and collectively are aware of them and understand them well.*

E. O. Wilson's position is similar, here. On the one hand, he (1978:196) stipulates that "the principal task of human biology is to identify and to measure the constraints that influence the decisions of ethical philosophers and everyone else," on the other he reassures us that these "constraints" are "not so tight that [they] cannot be broken through an exercise of will." Similarly, Lumsden and Wilson (1983:179) tell us that the epigenetic rules "preserve free will." In short, the folk psychology of an executive self is unchallenged and unexamined. These writers never tell us what "will" is or whether it can be selected for, and they never face the problems of intentionality.

Perhaps knowing some evolutionary biology will make me behave in a more ethical or moral manner, and I doubt if it will do any harm (though knowing a fair bit about nutrition doesn't seem to help my weight problem). The difficulty remains that acceptance of unexamined folk psychology leads us to neglect our task of building theory and seeking testable hypotheses. Instead, we get ourselves wrapped up in logical paradoxes, imagining that some evolved portion of the mind -- the will -- somehow must transcend other evolved portions of the mind.

IV. Complex Psychology Approaches to the Mind

Instead of folk psychology, let us take a complex psychology approach to the mind, the kind of approach that Don Symons (1987, 1989) has been calling "Darwinian psychology." From this perspective, our expectation is not that biological knowledge will provide some special enlightenment about morality or ethics: instead, we expect that understanding evolution will lend some insight into the kinds of problems our brains evolved to solve (Tooby and Cosmides, 1989).

V. Self-Awareness

Because my time is soon going to run out, I am going to present an outline of a theory of self-awareness and self-deception that, I hope, is at least consistent with a more cognitive science approach to these phenomena. Parts of what I will be saying have been published previously (Barkow 1983 and, especially , 1989).

Think of our species as having been selected for a sort of cognitive mapping of physical and social reality. The social map includes internal representations of significant others, our relative standing vis-a-vis each of them, whether they are likely to be good reciprocity partners, and so forth. A map is no good if you do not know where you are: this cognitive map would include an internal representation of oneself. Let us call it the *self*. I will take as axiomatic that an organism with a complex internal representation of itself experiences consciousness or awareness of some kind. Thus, I am taking what some would consider an "identity" solution to the problem of psychophysical dualism -- awareness is in some degree identical to or at least isomorphic with aspects of neurophysiological reality.

I am not making this internal representation into an executive and I am not putting it at the top of a hierarchy. I am following a number of contemporary cognitive scientists in seeing the mind as consisting of a substantial number of specialized processors or modules. Cosmides (Cosmides and Tooby, 1989) discusses the algorithms that may be used by the processor involved with reciprocal altruism. Fodor has discussed some of the algorithms involved in the specialized processor for visual perception. Here, I am discussing the specialized processor controlling the internal representation of the organism itself, its self. I am emphatically not presenting a theory of volition -- or more properly, a theory of the organization of behavior. Presumably, there are processors and decision rules governing the organization of the stream of behavior, rules for setting priorities for goals, and so forth. The processor responsible for the self is hardly likely to govern the stream of behavior -- that is a conceptually very different task from that of generating an internal representation of the organism.

The self-representation will necessarily be abridged and inaccurate, rather than be some kind of miniaturized man or homunculus. Other specialized processors or "mental organs" should be frequently providing various types of information to the self about both internal and external circumstances. Only information having potential bearing on the organism's genetic fitness should be included. There is no need for a register for bilirubin count, for example -- other processes are controlling it and its effects. On the other hand, general physical health directly affects ability to compete with others and to procure resources, so the internal representation should include information about it. Relative position vis-a-vis others should be included, as should physical location, location of potential allies, the size and strength of one's membership groups and of other local groups as well, and so forth. We can add to this inventory at much greater length but the important points are two: individual experience will have major bearing on contents and boundaries of this self-representation; and it should often be inaccurate in a predictable manner. The effects of individual experience on the self are of interest to psychological anthropologists, for I am really putting in other terms what A.I. Hallowell termed "the culturally constituted self." For this audience, however, self-deception may be the topic of greater interest.

It was Robert Trivers who introduced the idea that natural selection would have favored selective biases in the self representation. For Trivers, Alexander, Lockard and others (references in Barkow [1989]), these selective biases aid in our manipulating the behavior of others because it makes us more efficient in deceiving those others, that is, we deceive the self in order to deceive others. I prefer, however, not to use the vocabulary of "deception." Let us think of the specialized processor maintaining the self-representation as systematically biasing certain kinds of information because, back in the Pleistocene, such distortions tended to enhance genetic fitness. It is possible to recast most of the Freudian defense mechanisms, for example, as specific types of transmission of information biases. Thus, "repression" would have to do with blocking transmission of information about an internal state from one processor to another, the self. "Denial" would be a similar blocking, but in this case information about external reality is blocked.

Information about decisions being made by the brain/body system is subject to the same kinds of distortions or filters as is other kinds of information. Thus, from this perspective, it is more accurate to say that "I became aware that my brain/body system has made a decision" than "I made a decision." Our awareness is of course likely to be inaccurate, as when we "decide" to end a relationship or make a New Year's resolution. Perhaps we should amend the meaning of "I" from a folk psychology "I" that reflects only a single specialized processor, to an "I" that refers to one's entire brain and body.

From this perspective, too, evolutionists would be advised to do without terminology involving individuals "unconsciously" striving to enhance genetic fitness, for such drastic abridgements skip over a myriad of complex processes whose ultimate effect on fitness is both problematic and, in the short term, of no theoretical importance. It is accurate to say that the various specialized processors presumably tended to generate fitness-enhancing behavior back in the Pleistocene and may still do so today. However, whether the processors are or are not resulting in fitness-enhancing behavior today is a much less interesting question than asking what the domains of the various processors are, how they interact and what their algorithms are.

What of your subjective experience of yourself as an agent, an executive, a doer? You know you make decisions, do you not? No, you do not, if the "you" concerned is your awareness rather than the sum of your brain and body together. The self, in this formulation, is the organ of impression management but not much else, and, because in our culture we allocate higher relative standing to those who can appear to be acting in accordance with successful behavioral plans, you strive to convince me that "you" are in charge. Whatever you may claim and however you may experience yourself, you cannot decide to fall in love, or not to love or to lust, or to stop smoking, or (for many of us) to go on a diet. You cannot. There are various evolved information channels to particular specialized processors, and the proper information, once inputted, can lead to a change in behavior - but that is not the same thing as making a decision. The question of these information channels and how information gets into the brain/body system to change behavior would be beyond the scope of this paper, since it would lead to a discussion of psychotherapy on the one hand and advertising on the other. All I can say here is that both sets of techniques turn out to be quite compatible with the present framework and with an evolutionary perspective in general.

One last bit of evidence in support of the argument that the self is essentially a tool of impression management and the product of a specialized processor. Severely brain damaged individuals, even those subjected to commissurotomies, maintain a steady stream of rationalization and denial of their handicap. They appear to be striving to convey an impression of being reasonable and sensible (Gazzaniga 1985). The algorithms of the self's specialized processor appear to demand this.

VI. Conclusions

Once we begin to challenge our folk psychology we find that much changes for us. Folk ideas about personal responsibility and knowing right from wrong, important as these are to our legal and moral systems, turn out to lead to nothing but confusion when we try to apply an evolutionary perspective directly to them. The particular views of self and specialized processors I have presented here may certainly be in error, but at least they lead us to build theory and to test hypotheses. The time is past for us to bundle psychological, sociological, and neurophysiological processes together as mere proximate causes and try to leap from evolutionary theories applicable to gene frequencies directly to complex, culturally ordered behavior. Now it is time to do the hard work of filling in what comes between the genes and the behavior, and this is what I have been attempting to do, in a regrettably sketchy and abbreviated manner, today.

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