

Introduction

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This first Monterey Dunes conference is an integral part of what is obviously a major thrust of both biology and behavioral science in the last third of the twentieth century: a thorough examination of the biological basis of behavior. We might well ask why such an obvious area of study is, in many ways, so tardy an arrival.

Why did so many generations of scholars work so hard to create a biology-free social science? There are, obviously, many reasons. At least one of them grows out of the Western cultural premise that human beings are "different" from animals—that we neither "descended" (Darwin) nor "ascended" (Bronowski) from them. That premise is manifest at many levels: linguistic, religious, and scientific. At the most fundamental linguistic level, we find whole sets of words differentiating the body parts of animals and humans. People have hands, but cats and dogs have paws. The immediate response of speakers of Indo-European languages to that point is that hands and paws are structurally quite different. That is true—but not enough: for many, perhaps most, languages do not make that distinction. In many African languages, for example, the same word does for both. Indeed, it even does for "hoof." The list could continue but that is not the point: the point is a more or less out-of-awareness premise that people are so different from other animals (and usually the word "other" does not appear when this kind of statement is made) that you cannot even describe their body parts with the same words. There are further linguistic dimensions to this Western attitude toward animals: human beings, when they are at their worst, "behave like animals" in accordance with "the law of the jungle." Thus, we are likely to ascribe everything that we do not like about ourselves—our least admired traits—to "the animal in us." The implication is that we ought to get over being animals. Therefore, at either a conscious level or an out-of-awareness level, there is a built-in premise that an achievement as admirable and as "human" as "law" surely does not have any animal base—indeed, law is, in the popular view, one of the signs

that we can transcend our animal beginnings! Except, of course, "when man, with his monopoly on law, behaves like an animal." Our plea is that, in examining the biological infrastructure of law, we—even those who obviously do not harbor any of these prejudices and will tell us that these phrases are "just idioms"—do not allow ourselves to be tricked by the idioms, as we always are when we fail to examine."

Premises about the differences between human beings and animals also lie at the basis of religion. Many a child is confused by the idea that he or she has a soul (although in some religions, in some periods of time, there was some doubt about women) and so do parents and siblings—but the family dog does not. The dog was banished from heaven just for being a dog. The dog is of a "lower" order and apparently it is the presence of the soul that creates the higher order. Of course, in the process of growing up, those very children soon become involved with more important issues. They become enculturated and forget the doubts they felt about the missing soul of the dog. And in the next generation, they again tell children that dogs and cats do not have souls, but human beings have.

Although we talked about it very little during the conference, many participants realized that besides the intellectual interest of the subject matter, we also had an emotional stake in this matter. In differing degrees, we all had difficulties in reconsidering some of our cherished values that seemed to be threatened by the new biological findings and by the tremendous consequences that might arise from tomorrow's discoveries. Reality and utopia—law and justice. How do we arrive at the concept of justice? It was suggested several times that we could not deal rationally with an ideal like justice. It was repeated that nobody can be completely free of all prejudice or preconceived ideas when it comes to something so fraught with personal conviction as justice. Our point here, however, is that early behavioral sciences—despite writings by Darwin and others on the biology of behavior—seemed always to let such hidden premises (not to say sensibilities) get in the way of their thinking. We are still struggling with them today. Westerners "instinctively" (and much of this kind of "instinct" is, of course, cultural) read out the biological dimensions from the human behavior they regard as most uniquely human. Natural scientists do it as much as social scientists though the arguments used to cover up their premises may differ. We have tried not to do that—probably without total success, for premises lie very deep. In this context, we must add another difficulty that Western

children sometimes experience -ideas about the concept of justice. In the United States, school children daily repeat the Pledge of Allegiance —it contains the words "with liberty and justice for all." What does justice mean in that context? We do not get much encouragement to ask that question. Even some scientists and philosophers are adamant that justice cannot be defined in scientific terms. As a result, the idea of justice, like most other cultural ideals, is a little bit more circumscribed each time we do not ask. Of course we cannot turn to science alone for definitions of justice. Yet, every culture has some view of what is right or wrong, or of fair play, even if it is not always put into words. So we can ask whether there are proto-historical precursors to such ideas and concepts. Also, whether it is possible for a society to function without some more or less vague sense of justice, no matter, how perverted it may sometimes become.

Two factors get in the way of understanding our subject: one is the overzealous extension of the scientific kind of premise. Of course we must not oversimplify and look for the genes of justice! But it is important that we not exclude all of biology from our discussions when we reject part of it. The other factor is more subtle: much of our culture, like the grammar of our language, is out of awareness. The premises behind the concepts of justice that our courts dispense are usually not made overt. That does not make them the less powerful lever on our thoughts.

We are convinced that, if we can get these points into the overt agenda, they will bother us little. But if we do not, then we are truly beset by our unstated premises.

It will be apparent, as you read the following papers, that the idea of pairing law and biology still seems daring. All contributors to this volume have been careful —and a few have been skeptical even about discussing the two in the same breath. Several of the papers warn us in uncertain terms. Mark asks why we should think law even has a biological dimension. The social scientists are as stern, but make different points: Schwartz warns us to be very careful in just how we bring biology into law as it is practiced, and emphasizes that, in his opinion, lawyers and judges must base their knowledge and decisions not on science, but on the mores or standards of the community. Adamson Hoebel urges us to recognize the limits of our own naive vet.

Today, the underlying premises —particularly those of the scientific community—are much more subtle than those of a few years ago. Hence, in spite of the need for care we all felt, the biology of human behavior is not as treacherous a topic as it once was. The intellectual

[xiv]

climate of the present is kind to an examination of this problem than, that if only a very few years ago. However, such a statement must be read in context: this introduction is being written during the time that the "second Scopetrial" is going on in Arkansas. Obviously, there is still a large segment of the population that denies any biological basis of all human behavior.

Today's biology and social science are brought ever closer together not just by their shared interest in behavior but also in trying to overcome the popular denial of basic scientific facts. It is not just in Arkansas that people today deny what the most eminent scientists of our time hold as truth, where the state's attorney argues on behalf of those who believe that there is a scientific basis to one and only one specific version - the Judeo-Christian version - of the story of creation. It is not just in Arkansas where some people close their eyes to the fact that human beings are biological organisms, subject to biological commands as much as to religious or cultural influences (these latter differing in different parts of the world), and that the two must be understood as part of a single coevolutionary process.

And what about policy? Have people in policy-making positions been exposed to the biologically based findings of behavioral science - and have they been exposed at an early enough age to build these findings into their Weltbild?

The remainder of this introduction will deal with the following topics that were discussed at the conference:

- (1) a history of the relationship among law, biology and anthropology;
- (2) the relationship between morality and law, and the evolution of both;
- (3) educating lawyers and fostering law-abiding behavior..

LAW, BIOLOGY AND ANTHROPOLOGY

Adamson Hoebel's paper gives a sound view of the relationship among law, biology and anthropology. Here we add some complementary points.

Law is just as subject to the premises about the sacred difference of human beings from the "animals" as is everything else. Thus our forebearers such as Maine and Ehrlich did not talk about the evolution of "law" from early hominid behavior or even about the precursors of law. It also assured that they did not even talk about the fact that human beings, as legal creatures, were simultaneously biological

[xv]

creatures and that the two dimensions may have some things in common.

It is true that anthropology has, for well over a century, been committed to the proposition that the human organism evolved from "lower" forms. But it is also true that early in this century, cultural and social anthropologists banished that idea into a special branch called "physical anthropology." These specialists could study it separated from day-to-day cultural activities and nobody was bothered by any kind of cognitive dissonance.

This is the background for today's question: how do we link the human biological system with the human cultural system? And, in this case, especially human legal systems? Are there biological imperatives and how are they to be linked with cultural commandments? Are the two unrelated, for all that they often work against one another

Law evolved in one biological species, *Homo sapiens*, a highly specialized animal. But what are its infra-cultural roots? Insects deal with many comparable matters by "hard-wiring." But human beings deal with them by a special evolutionary step: the introduction of culture, which includes the capacity—indeed, the necessity—to choose and ultimately to create both policy and the law that underlies and directs policy.

That proposition takes us instantly to the second point.

LAW AND MORALITY

Richard Alexander, Christopher Boehm and others at our conference suggested that the evolutionary origins of morality lie in conflict resolution-conflict management. Indeed, Boehm's idea—that human ancestors had (to put it into lay terms) more talent for interfering in dyadic conflict (thus turning it into triadic solutions) than they had for mere submissive behavior—clears up many difficulties. Both types of behavior, interfering and submissive, appear in today's non-human primates. And of course humans too utilize submission in their power plays—indeed, people like Gandhi thought we underutilize it. Thus if we are careful not to turn it into too direct an analogy, it is easy to find "proto-morality" among non-human primates, especially in their characteristic ways of dealing with dominance and submission, and to a lesser extent their capacity to interfere in disputes (usually on the side of the weaker animal) in order to regain "peace." It seems to us, that it is not going too far to suggest that some human ancestors (or

some or all hominoids) had the very qualities we find in some of today's primates.

Three points are essential here.

(1) The dominance -submission-reassurance sequence is the seedbed of law and the idea of right and wrong.

(2) Submission -even weakness -brings its own kind of power. The dominant animal is restricted in what he can do. Watch a hummingbird guarding his food source -it is a fulltime job. The non -possessing animal (weaker for the moment) has immense advantages in mobility and choice to further his personal gain and status. The submissive animal has more options than the dominant animal.

(3) Primates appear to be better at interfering in conflicts within the group and restoring peace by reassurance than are most other animals. In many instances they seem to prefer this method to exclusive use of) submissive behavior patterns. The desire for balance, harmony and peace seem to motivate the dominant animal to reassure the weaker.

It seems that in the course of evolution, the triadic solution to dyadic conflict has been the basis on which more flexible and therefore more adaptive social systems could be built. Instead of the mere dominant/submissive dyad, with reassurance, human beings have built a primary set of institutions on a dominant/submissive/interferer triad, whereby the reassurance part may be in danger of being lost. This kind of interference—Boehm calls "the moral community" and Malinowski called the "social machinery" —would seem to have gained a central cultural position.

It was also pointed out at the conference that conceptualization of the self is involved in this matter, and it was suggested that there is a development (ascent if you will) self -conceptualization/group morality/ definition of social gains / goals Thus, proto -morality seems to have evolved into legal behavior and the concept of justice by the working of two conjoined forces:

(1) the triadic form of interaction, complete with "interferer,"

(2) the growth of self -conceptualization, which involves the realization that the other person is also a human and merits consideration and that what we do to him may happen to us -as we have come to see in terms of a concept of justice.

We can, as a result of positing these changes, see in evolutionary biology what we once saw only in philosophy. Masters' paper deals -further with the philosophy and shows something of the overlap..

Law itself, as we know it, builds on one other distinctly human capacity: the capacity to *state* what the law is. Unless such statements of the law are too divergent from actual behavior or desires, human beings would seem usually to go along with them, then feel confident because they know what "the law" is. Undoubtedly, some people know what the law is and still want to break it, but it is nevertheless important to define the boundary of behavior that is acceptable to the *I* group. Therefore, we have man-made law. In short, specific laws *do* work best when they are overtly stated. However, their effectiveness is not limited to such "statements." The statement itself allows a rule for behaving to be moved from one social context to another—a phenomenon that (although, as Schwartz suggests persuasively, it is not enough) is one of the most remarkable aspects of human law.

However, we often experience a certain "disjunction" between mores and the law—which implies that the legal institutions have, taken on a life of their own and perhaps are inadequately connected with the other institutions of human society, let alone with human biology.

THE EDUCATION OF LAWYERS AND JUDGES

Lawyers and judges, like doctors, have to make decisions on the basis of inadequate information. Scientific information, including biology, might well go into and even improve their judgments if it is used wisely—but judges cannot know everything any more than the rest of us. So where does one draw the line?

We know that law school curricula need simplifying, not complicating. Therefore the problem remains: how do we introduce scientific information (including biology and other behavioral science) as a simplifying mechanism instead of a complicating one into the professional training of lawyers and judges? Perhaps it can be done in high school and college.

During the last 100 years we have paid a lot of attention to the health of individuals—and have built our social expectations on medical progress. When medical anthropology joined the effort by studying the links between disease, medical practice, culture and biology, the result was an even greater advantage of therapeutic possibilities based on new technology and scientific findings. Could we make comparable advances in law? Is not law related to human behavior as much as medicine is related to physiology and biochemistry—and (we are coming to understand today) behavior?

The emphasis of Western law has long been on the individual social relationships have been largely reduced to individual rights. But today we realize that part of being human means having sound relationships with at least some other individuals. It is for these *relationships*, rather than merely for individuals, that we need rules, structures and laws. How far can we go medically and legally in treating human relationships as we treat an organism? The social side of this organism should be helped and sustained in the same way as the individual side. And this can only be accomplished by the individuals whose *Weltbild* encompasses the biological nature of man. Of course, the cultural context in which the individual acts is also part of human behavior. Human ontogeny is possible only in a cultural context.

Lawyers have indeed been "treating" individuals, even dyadic relationships. But too often they do it without realizing that they are treating only a small area of individual well-being, let alone social well-being. Individual rights and healthy relationships—these are the two sides of a coin. To assure their well-being, you need the same basic sciences—you cannot treat one without affecting the other. You cannot have the accumulation of knowledge on the one hand and on the other not allow anything new from the philosophical and scientific—including behavioral scientific—are not to inform the legal procedure.

We need a broader horizon in legal education. The scholars and scientists responsible for the professional training of future lawyers and judges—these are the people who have to be concerned, so that training for the legal profession is built on both a humanistic and scientific platform. *Then* you can learn law as a craft in three years of law school. Education for undergraduates (including those who plan to enter law schools) and graduate school curricula must be based on the state of knowledge and the state of the art. What we need are legal scholars who will reach to the sciences for relevant data to further their own research—the scientists cannot know what is needed to improve legal processes.