

Biology and the Human Condition: Interview With Lionel Tiger

How would you define yourself?

When I first grew up and had to have a job, I was defined as a sociologist because that is the degree I got—Political Sociology from the University of London. But since I had done research in Ghana (and hence studied black people), it was commonly felt that I must be something of an anthropologist. For a long time, when I was asked the question you asked, I would tell students that sociologists study white people and that that was the only useful distinction—the most parsimonious distinction—one could make between sociology and anthropology. I have since come to think that the distinction is more serious, chiefly because anthropologists still retain a lingering interest in human beings, while sociologists have become, in a certain sense, condemned to being concerned with systems. It was really through concern with the behavior of other animals and evolution and biology that I became an anthropologist. Professionally, I do not really identify myself as an anthropologist but as part of the larger enterprise of comparative zoology. I try to do my work as a zoologist, drawing heavily on the ethological tradition.

How would you actually define the work you do?

There has been a shift in the conception of what biology is, which I think can be linked to the development of ethology as a science. Ethology is the study of the behavior of animals, including humans, in the context of the evolution of the animal and its behavior. And this is in a real way a kind of revolution. By that I don't mean a political revolution, but a turnabout in the attitude to behavior, because for a long while the social sciences tried to

distinguish themselves from any work based on the assessment of "instinct." In the United States and in the Soviet Union, there was for a time, and for obvious political, antiracist, ideological reasons, a concerted effort to avoid making any kind of genetically linked statements about behavior. But recently this has become clearly an untenable attitude, particularly in view of the fact that human beings continue to be recalcitrant about their life cycles, they continue to exhibit behaviors that are plainly more related to their evolution as a species than to the social conditions in which they live, and also because of the vast amount of new biological information that we have.

A central notion of many social scientists, and I think this is not a totally impudent comment, is that, by and large, human behavior is principally constrained by other human behaviors—by circumstances we can generally call cultural. This has certainly been the tradition in sociology since Emile Durkheim, for example, who argued that we could only explain the social by the social. It was linked to an effort to break away from the natural sciences. However, there are such clearly biological events as the life cycle, for example, which must constrain, if not deeply influence, the social behavior of any individual human, another primate, a turtle, or whatever animal you care to name.

In the human, the life cycle, the aging process, is quite an astonishing biological event. You can take a tiny organism, which may be a foot long, and within reasonably close limits predict its physical form over a seventy-years' span. That is under biological control. There is not much we can do about it. We can speed it up, reverse it a bit, repair it if it goes wrong, improve the system a little, but there remains the basic biological event, the life cycle, which constrains everything else. It would seem unlikely that something so important did not also have behavioral analogues.

Adolescence is one such behavior in which the organism suddenly shifts, becomes an entirely different thing, much more involved, much more charged, much more stimulating to members of the opposite

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sex and, presumably, to members of the same sex, perhaps with hostile stimuli. People are much more interested in different things in adolescence; they see things they did not see before—for example, secondary sexual characteristics. The biological event of the life cycle is a major constraint on the social phenomena of existence. And it seems that in sociology and political science, economics, and so on, the assumption is proudly made that humans are sapient, that we are governed primarily by a kind of reason, and that we can explain everything we do without looking seriously at this biological substratum.

I realize it is a somewhat conventional argument to say that there is an "instinctive" behavioral base, but at the same time the ethologists come back to the question. They have given us some indication of how sophisticated this instinctive pattern is and how much there is a reciprocity between behavior in an animal and its genetic endowment. Not instinct in the old sense such as a knee-jerk reflex; it is far more complicated, far more sociological.

What results from an effort to study the biological substratum is, in fact, a greater attention to human similarities. Traditionally, social scientists have focused on differences between peoples; these were our stock in trade. The ethological approach permits one to begin to look, without being pious, anxious, or simpleminded, at human similarities—because we all share the same gene pool. The ethological conception demands that we see how behaviors, which are biologically governed, require sociological circumstances for their expression. That is to say, you can, for example, lower the age of puberty of female rats by subjecting them to sexual stimuli (and I would not be at all surprised if the reduction in the age of human menarche, or first menstruation, may not be subject to some similar influences). Thus it is clear that biology now requires the understanding of sociogenic factors as well as purely physiological or other ones. In this sense ethology becomes a sub-field of comparative biology or comparative zoology, and from that point of view the social sciences will have to become part of the overall biological enterprise in the scientific sense.

There are two principal issues involved in adopting a biological perspective on the human condition. The first is substantial and has to do with the fact that we are primates and that we share many of the physiological characteristics of the primates, in terms of the composition of our blood and so on. Presumably, some behavioral similarities are also shared. That is a matter for discussion, examination, and testing. But the other aspect is theoretical or methodological and evolves from the origins of assumptions about what life is like. It seems to me increasingly, if painfully, clear that the tacit assumption we have been using before, that we are the total creators of our lives, may have to be tempered by an understanding that we are also subject to certain con-

straints that are deeply rooted in our evolutionary history. As someone said, those who do not learn from history are condemned to repeat its failures and its errors. In the human case we may be condemned to repeat our successes. For example, we have been a very successful breeding species; we maintain ourselves in the state of constant sexual readiness; we have a reproductive structure that permits repeated impregnations and births; and we do this extremely well. So well that in some parts of the world we approach disaster because of our very success as a breeding species.

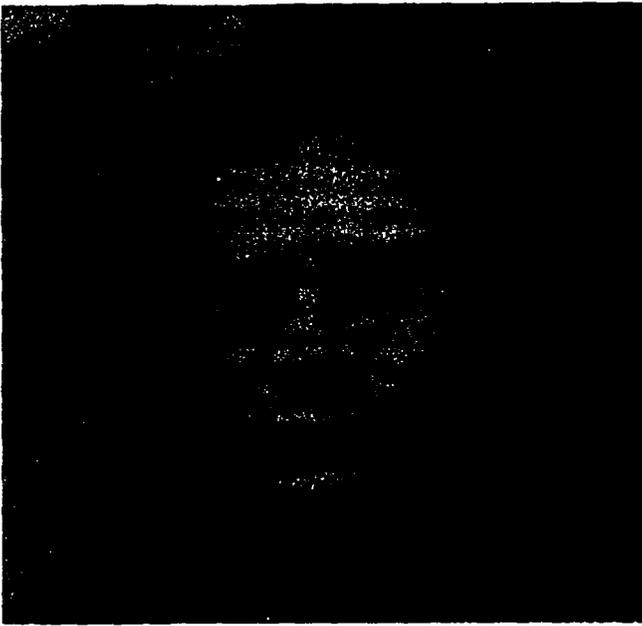
Now, it is all very well to accuse people of being irresponsible for having children or not understanding the global problems they are creating. On the other hand, they are simply responding as very healthy organisms, tempered over several million years by high mortality, slow socialization of children, great risks for children, and so on, to breed enthusiastically and repeatedly.

You say "very healthy organisms." But where we are approaching disaster is in the Third World countries. There the people are not very healthy.

They may not be physically healthy, but their response to their existential condition is a healthy one. That is, they say, "Let us reproduce." Healthy in the sense that you can say that an animal in a zoo that is unable to reproduce for sociological reasons is really an unhealthy animal—and it is the success of particular zoos to have healthy conditions so that animals can reproduce. This becomes increasingly important as species approach extinction. In the human case it is healthy to be able to reproduce; it is the kind of health that represents our previous successes in having populated the globe.

Unless we understand the origins and contemporary manifestation of some of these forces, we will be condemned to repeat our successes, which will indeed be catastrophic. The line that produced us is some seventy million years old. Basic human adaptations occurred not earlier than two or three million years ago. To quote somebody fancy, "To the blind everything is sudden." My suspicion is that the sense of human life as totally contemporary is a form of blindness and that people concerned with understanding social arrangements must go beyond the obvious, the immediate, and try to see the historical depth of some of the phenomena that they observe. This may be imprudent, since it can easily generate an overwhelming and paralyzing sense of tragedy.

On the other hand, more tragic even might be an unfettered sense of optimism about the human condition, which, as we know, leads political leaders to adventures that may or may not work—to the peril of the people for whom they should be responsible. The biological perspective also has the capacity, I



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think, to replace a sense of tragedy about reality by providing a rounded and multifaceted vision of what the nature of existence is. As we are forced to live in a world increasingly compacted, in which there are more people and relatively fewer resources, we are going to have to become delicately aware of what we are, who we are, why we are; and in the crudest sense we are going to have to take an almost veterinarian view of the species and ask ourselves under what conditions does this animal not beat itself to death, not overpopulate itself to death, not run riot, not commit acts hazardous to the overall survival of the human group. And this is not solely a sociological enterprise; it has to involve comparative biology, since we are dealing here with the very nature of life itself.

There is emerging in the field of genetics at the moment a remarkably powerful new conception called the "genetics of altruism," which begins to make even clearer why human beings have so many children. The genetics of altruism in its simplest form asserts that humans as well as other animals become aware of the genetic implications of having children. I don't mean that in any simple sense, but people are aware that their own children are more meaningful to them as organisms than children of somebody else, though children of relatives have a greater claim on their attention than nonrelatives. Why do people have children at all? They are such utterly inconvenient and costly creatures, and persist in troubling parents for extensive periods of time. Yet routinely people continue to have them. The "genetics of altruism" argument makes it a little clearer why people suffer such inconvenience and difficulty in order to reproduce themselves. This is, after all, what a species is about: reproduction. The

kind of argument being developed suggests that reproduction is not a blind, selfish activity, but is very broadly based in a social system and is one of the principal underlying factors in the persistence of kinship systems and family structures of various kinds. In addition, of course, children are biologically able to be stimuli that provide joy and interest to parents, and therefore pay their way, as it were, by making adult organisms feel a kind of connection to the world that is very difficult to have purely with other adults. Being with children is to social life as sonatas are to traffic noise.

Is it not also true that in rural societies they were useful?

Certainly in agricultural communities and in others as well, children could provide useful labor. But I suspect that was not all. Since they existed, they were made useful. We find them existing even when they are not useful, so that it could not be simply utility that is responsible for fecundity, though it is undoubtedly a factor. In India, to cite one case, there are very important social-security implications in having large families. It is unwise to ignore this, which happens even in highly sophisticated countries. The Rumanians had a very elaborate abortion system, the birth rate had fallen very low, and it was discovered if they continued with their abortion practice, there would be too few births to support the adults presently in the population. (Children, in time, would not generate enough pension funds.) So abortion practices were curtailed: the birth rate is now going up. That is very much like the case of the Indian family. It may gleam with the veneer of sophistication, but its effect is similar in the end to what the Indian peasant does because of his alleged craven ignorance "of the real forces of life." The more sophisticated kind of bureaucratized biological process will become increasingly important as we begin to live in a world in which the fixed relationship between resources and people becomes ever more perilous.

Bureaucracy is often seen by sociologists as the most elaborate expression of rational social arrangement, yet I suspect that over the next thirty or forty years we are going to become aware of how unnatural it is. Not that I can foresee any alternative ways of organizing governments or any large corporation, for example. But nonetheless bureaucracy places enormous strains on individual human beings. Bureaucratic structures precisely maximize the lack of control that individuals can have over their circumstances by demanding that individuals not intrude their own personal passions and fears and enthusiasm into a situation, but rather act as any other human in that office might act. Max Weber set up a distinction between the officeholder and the office or the person and the office. He described this

distinction, which is an immensely powerful tool to use in organizing communities, because it reduces, if you will, all the primate passions and enthusiasms I described. However, at the same time as it reduces their importance it may also reduce the commitments of people to the job they are supposed to be doing.

I think we can see this most clearly in the corporate business system on this continent, in which it is routine for business personnel to be frequently moved from place to place on the grounds that having proved that they can be good assistant general managers of X, they should then become general managers of X, and that requires moving them from one part of the continent to another—a decision made on the impersonal bureaucratic grounds that the person does not matter. But what about that person? What about the wives and children, who are shifted endlessly from place to place in the name of some supposed efficiency, which is really profoundly anti-primatological? We know that children are extremely conservative creatures and require long periods of exploration and consolidation. They respond very well to known stimuli and are not at all pleased or reassured by totally novel stimuli, particularly when everything is varying all the time and at once. So business people, who are extremely important in deciding the form of the community, live in a kind of critical isolation from it, a profound isolation from their own community, simply because they have been moved around so much. Many people move every year or two in order to conduct themselves in a professional manner in the business world. The human implications of this are simply staggering, and the thought that people making important decisions about other people are so unrooted in communities is, in a primatological sense, quite frightening.

For migrants to run power structures is rare, but I think what we see in American business is a government by migrant people. Some of the consequences, in terms of social irresponsibility, in terms of lack of concern for local communities, in terms of a simple lack of understanding and concern about what people feel in communities, may be due not only to the venality of capitalist procedures at their worst—and to simple greed—but also to a kind of profound misunderstanding of the nature of existence, which rootless migratory executives practicing a kind of scorched-earth policy may engage in. Looking at the Marxist conception of alienation in a biological sense—biological in that Marx claimed that people were alienated when they were no longer in touch with the fruits of their labor—how much more alienating it is not to be in touch with one's life as a result of one's labor. When one has to move constantly in order to work, it is profoundly alienating.

I am sure that were Marx able to observe this pattern as it has come to full fruition in the modern world, he would see the problem of surplus value as

possibly less critical than the problem of reduced opportunity to live in a primatologically compassionate way. In this sense, Weber's "rationality" is uncomfortably close to Marx's "alienation," an interesting connection between Marx and Engels and biology, which has neither been explored nor understood. It is not widely known that Marx offered to dedicate *Das Kapital* to Darwin on the grounds, it seems, that he felt they were both preparing cognate major systems of thought. Both Marx and Darwin were concerned with reciprocity and with interdependence of organisms; both were thinking on a grand scale—Marx studying the economic reciprocity, Darwin concentrating upon other reciprocities. But I think Marx understood something that his successors or followers have not understood: Biology is not the enemy of reciprocity but in fact the agent or the basis of it.

It is commonly assumed that biological thinking is reactionary in political terms chiefly because it has been all too often associated with racism, élitism, and various other reactionary social patterns. But that is a perversion of biology, because the problem of organic social interdependence is profound. Both Marx and Darwin approached it, but their successors have not successfully assimilated their various systems.

In the Soviet Union, for example, one finds a devoutly anti-Darwinian conception that culminates in Trofim Lysenko, who as late as 1964 said that genetics does not matter and that by changing the environment of an animal you can even change its genetics. The same pattern emerges (with a somewhat different nuance and, certainly, with less political implication) in the United States, where a symbolically equivalent figure, B. F. Skinner, also assumes that by changing the reinforcement schedule (basically this is also the environment) you can also change the nature of an animal. Skinner, however, does not go so far as to assume that you can actually change the genetics of the animal. Typically, Skinner doesn't deal with the problem of what you do with the offspring of this changed animal, because he would be obligated to recognize that he would have to undertake the reinforcing and scheduling all over again. That would of course be very tedious, to say nothing of being unlikely to work. The lack of appreciation of biology in Marxism originally has led in this perspective to an ignorance of what the human organism brings to the human community; what is in the black box, if you will. Skinner is not terribly interested in the black box. Lysenko figured he had a way of changing the black box. But in neither case does it seem to me there is any quick compassion about what that black box itself might be, and in that sense I think a structural antihumanism exists in these sciences.

My sense of what is likely to happen in biology is that it will emerge as a much more progressive or ameliorative science in the years to come. I keep

thinking of the analogy between economics and the Fabians in England, when the Fabians understood that in order to change social conditions in England, they first had to understand what was happening and engage in an extensive demanding process of examination of English society. I like to think that it might be possible to generate a biological Fabianism that will do the same thing on a species-wide kind of perspective to try to find out what are the real biological conditions in terms of which humane social policy can be created. What are the limits of our opportunity? What sorts of things can we do well? What sorts of things can we do badly? What strengths have we as a species that we can utilize? What weaknesses have we to be understanding about as we try to change the consequences of these weaknesses?

I suspect that we are going to see a rather different place for biology in the policy sciences in the years to come, and I suspect that ethology as a science will find an important application in social medicine, in seeking ways to maximize the opportunities for humans to live in unstressful and pleasing ways and minimize contrary experiences. Yet it may be a characteristic of the human brain that we try to make distinctions between nature and culture, and it may be difficult to break that down in any real way. If we can't, then this kind of provident biology that I am somewhat piously anticipating may never become effective, because powerful people in the world such as politicians will continue to maintain rigorously a distinction between themselves and the rest of the natural world.

There is also a general, very perplexing problem about ideology, which is that ideologies really *do* matter to people; there are whole hosts of communities who organize themselves on the basis of some belief in some promise, or some particular tryst with destiny or another, or some particular ethical syndrome. Then they act on those bases rather than on the basis of what they see around them. They make up complicated schemes in their minds that come to define their reality for them.

I sometimes become depressed at the receptivity of the human imagination to ideological statements. I presume this represents a personal antipathy that arose out of an early experience of mine in a Labor Zionist group in Montreal, the Habonim. Part of the assumption of membership of that group was that you would go to Israel and live there. I was never wholly convinced that the people running the organization would have me emigrate to Israel for my benefit, and I finally concluded that it was primarily for their benefit. So I became very suspicious, in that rather indecently naïve period of life, of any effort to tell people how to run their lives and of ideologies in general.

In that sense the brain is probably the most dangerous organ in the body, because it can create the most spectacular pathologies of real behavior; it is the

brain that decides that it is desirable to kill people of group A, simply because one is of group B, or that people of group B can make the decision whether it is extremely useful and desirable to kill people of group A because they are not of group B. And this is a symbolic distinction. The brain, in that sense, is a very treacherous catalyst for potentially dangerous behavior. An Irish Ambassador to the United Nations said "the most underdeveloped area in the world is under men's hats." In a real sense, yes, because the brain magnifies all the other forces that go on in the human being and not all of these forces are in the direction of sobriety, thoughtfulness, restraint, and so on. Often the brain magnifies enthusiasms and frivolities and treacheries we could well be without. I am looking at the brain here as a kind of megaphone: The new part of the brain, the cortex, amplifies the other messages in the brain and enables us (endlessly and with very sophisticated means) to extend what is happening within us.

How did you come first to be interested in biology and sociology?

When I was doing my dissertation research in Ghana, two things happened. First of all, I became impressed with how similar Ghanaians were to Canadians. I had formerly studied Canadian bureaucrats; now I was with Ghanaian bureaucrats. There seemed to be very little difference. Clearly a good deal of similarity had to do with the common British socialization the administrative systems shared, but even so, that was not a sufficient explanation. When I began to move around the countryside and saw the people who were not bureaucrats but just mere Ghanaians I compared them with my own family and my extended family in Montreal and the kind of ethnic squabbles that one grew to understand mainly in Quebec and in Canada. I could see no spectacular difference to justify the great apparatus of explanation that sociologists and anthropologists had generated.

Secondly, I was introduced to a South African political refugee, Walter Pope, a marine biologist, who had been working with some of the people involved in excavations in Southern Africa in general. He told me about the implications of those finds and of Louis Leakey's work, Raymond Dart's, Robert Broom's, and then of the work of the animal behaviorists. It was very exciting to begin to think in the generous terms that biology permits. The biological perspective seemed to me more generous because it permitted an expansion of sociological imagination to include all members of the species with equal validity; one ceased instantly talking about advanced and backward people. You ceased instantly talking about progress, you ceased instantly to be concerned about primitives, and so on.

One of the things that marked me from my time

in Ghana was that I developed an unshakable hostility to any notion that would say that people such as Ghanaians are backward by virtue of the fact that they don't have complicated electronic factories. When I talk to students who are usually irresistibly drawn to the notion that technology confers superiority, I ask them, when they describe how important technology is, if they can make a typewriter. Of course, none of them can, and I then point out that in terms of their technology they are as primitive with respect to it as they could possibly be. Yet persons supposed to be less sophisticated could make their own canoes and their own clothing.

Working in Ghana made it very plain to me that there was enormous prejudice in talk about things like modernization and industrialization which traditional societies are supposed to lack. Now we are beginning to see that you can modernize all you want and you can still end up having Pakistan and India fight, just the way you get American and Vietnamese fighting. This has nothing to do with technology. It's a simple function of the passions of the participants. You can have as skillful a dictator in a rich country as in a poor country—there is no difference.

I should add that I am very grateful that I was trained sociologically, because sociologists learn very clearly how to deal with systems; it is this ability to think systematically that I perhaps most value from my sociological training. Thinking systematically is of course biological in the provision of social interdependence.

Can you trace any influence in your life that led you to this search you are now pursuing?

I spoke before about why I got originally interested in biology. Being a Jew growing up in Montreal in the '40's and '50's made it somewhat clear to me that social arrangements were fragile and that you had to at least try to understand them for self-protection. I grew up in Montreal—a city in which everyone thinks himself to be a member of a minority group, including the majority. It was probably a very special crucible, because it provided a kind of formal cynicism that you simply had to have. It was a good way of becoming quickly skeptical about systems.

It has taken me a long time to realize that I was very fortunate that I belonged to a community such as the Montreal Jews, because it was an extremely tenacious, powerful, skilled, and assertive community—a group of about 140,000 people living, on the one hand, with white Anglo-Saxon Protestants and, on the other, with French Canadians and Greeks,

Italians, Poles, and so on—and it has managed to retain its own sense of integrity as a group. I still am routinely rebellious against all of its dictates, and that has given me a kind of certainty about who I am and who I am not. Still I have to admire the real commitment to the social group involved in that particular community, and I am very sorry that both the requirements of my job and the skepticism of my way of approaching my job and my life even have made it quite impossible for me to cultivate wholeheartedly that particular garden.

All this underlines for me the importance of a stable childhood. I know how important it is when I return to Montreal to see faces from my childhood that are now in my stage of the life cycle, and it provides a kind of reassurance that cannot be achieved any other way. The vast mobility of much of the world seems to me as dangerous as nuclear weapons in terms of creating consternation and fear and uncertainty and a kind of heady sense that nothing matters among people whose experience of life is that it is always in the state of becoming something else, because one is always moving on somewhere else. So that experience in Montreal I always knew was very important, if only because one had to struggle against it.

But now I think it is even more important than I knew to have been part of what was an actively ongoing, self-confident, and self-aware group of human beings of all ages. For example, I have been involved with an Israeli sociologist in the study of the kibbutz movement in Israel in which we have been looking at the situation of females. We are still analyzing the data, but it looks quite clear that all the major ideological efforts of the kibbutz have been achieved. Communism, agriculturalism, Zionism, communal child-rearing, etc. Except for the question of sex differences, where it has become clear that females do not participate in higher management or in politics or security matters, and so on, in any way, shape, or form such as one would have expected—even though they don't depend on males for their income, and they don't have to raise their own children, and so on. Here is a case where ideology has failed to tell people how to behave in a way that will be effective from their own point of view and where some kind of biological perspective might help in a real way to achieve the ideological ends. Because with ideological conceptions alone, I think, that system has failed to achieve its goals as far as sex roles are concerned, and since sex is, of course, a biological category, my expectation is that a biological perspective of the problem will be at least as rewarding, if not more so, than the ideological ones that have so far not succeeded.