The biological and the social

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To cite this article: Richard Lewontin & Richard Levins (1997) The biological and the social, , 8:3, 89-92, DOI: 10.1080/10455759709358750

To link to this article: https://doi.org/10.1080/10455759709358750

Published online: 25 Feb 2009.
Struggles for legitimacy between political ideologies come down, eventually, to struggles over what constitutes human nature. At present, in its starkest form, the struggle is between a vulgar biological determinism, typified by sociobiology, and an extreme subjectivity. For determinism, all social phenomena are merely the collective manifestation of individual fixed propensities and limitations coded in human genes as a consequence of adaptive evolution. At the opposite pole, subjectivity claims that all human realities are created by socially determined consciousness, unconstrained by any prior biological and physical nature, all points of view being equally valid. At best, liberal thought attempts to combine the biological and the social in a statistical model that assigns relative weights to the two, allowing for some component of interaction between them. But the division of causality between distinct biological and social causes which then may interact misses the real nature of their codetermination.

Like any other species, human beings clearly have certain biological properties of anatomy and physiology that both constrain and enable them, properties that are partly shared with other organisms as a consequence of being living systems, and that are partly unique as a consequence of the particular genes possessed by our species. We all have to eat, drink and breathe; we are all susceptible to attack by pathogens; there are limits to the external temperatures that our naked bodies can survive; and we will all die. No historical contingency or change in consciousness can remove those necessities. But at the same time, the central nervous system of human beings combined with their organs of speech and manipulative hands leads to the formation of social structures that produce the historical forms and transformations of those needs. While human sociality is itself a consequence of our received biology, human biology is a socialized biology.
At the individual level our physiology is a socialized physiology. The time course of blood pressure or serum glucose with age; the integrity of the epithelial interfaces between the insides and outsides of our bodies; the ways in which we perceive distance or pattern; the availability of our immune systems for confronting invasions by other organisms; the formation and disruption of linkages in our brains are all variably dependent on class position, the nature of work, the social status of our ethnicity, the commodities that circulate in our society and the techniques of their production.

At the next level we select our environments actively or they are selected by others for us, sometimes on a moment to moment scale as when one is forced to work in the heat of the midday sun, or sometimes through less frequent decisions about where to live, what work to do, with whom to associate, when and how to reproduce. But an environment for settlement or work has many more properties than those that guided the selection. A site on a river may be chosen as a political center for the ease of collecting tribute there, but can also be a breeding place for snails that transmit schistosomiasis.

The socially conditioned construction and transformation of our environments are determinative of the actual realization of biological limits. The boundaries of human habitation do not correspond to the geographical extremes of temperature or oxygen or food availability that could support us in a socially untransformed world, but to those places where economic activity and political power provide the means to regulate our temperature, provide oxygen and import food. In so doing we also change the determinants of the boundaries of other organisms. The northern boundary of wheat in North America is not the limit of where wheat plants can mature successfully, but where the profitability of wheat in good harvest years makes up for the poor ones so that an average profitable return on wheat is greater that for alternative crops.

As technology provides cultural mediations between ourselves and physical conditions, new environmental impacts are created. A severe winter in an urban environment does not produce frostbite, but hunger, when the poor divert resources from food to fuel. Racism becomes an environmental factor affecting adrenals and other organs in ways that tigers or venomous snakes did in earlier historical epochs. The conditions under which labor power is sold in a capitalist labor market act on the individual's glucose cycle as the pattern of exertion and rest depends more on the employer's economic decisions than on the worker's self-perception of metabolic flux. Human ecology is not the relation of our species in general with the rest of nature, but rather the relations of different societies, and the classes, genders, ages, grades, and
ethnicities maintained by those social structures. Thus, it is not too far-fetched to speak of the pancreas under capitalism or the proletarian lung.

The socialization of the environment also determines which aspects of individual biology are important for survival and prosperity. Melanin metabolism, no longer of much relevance for heat balance, has become a sign of social location that affects the way in which people have access to resources and are exposed to toxicities and insults. But an organism under stress along one axis of its conditions of existence will be more vulnerable to stresses along other axes as its conditions of homeostasis are taxed. Thus, there will be clustering of harmful outcomes to health and well-being in households or families under deprivation or stress, even when the conditions that precipitate the cluster seem physiologically quite trivial. It is the social mediation of individual biological phenomena that turns a single day's incapacity from the flu into the loss of a job for an already marginalized worker, with consequent catastrophic economic failure and a disintegration of health and the general conditions of life.

Beyond the transformation of biological needs into forms that are specific to different times and places, the kind of social interaction that is biologically possible for the human species has an even more powerful property, the property of negating individual biological limitations. No human being can fly by flapping his or her arms, nor could a crowd of people fly by the collective action of all flapping together. Yet we do fly as a consequence of social phenomena. Books, laboratories, schools, factories, communications systems, state organizations, enterprises, are the means of production of airplanes; fuel, airports, pilots, mechanics make it possible for any of us to do what Leonardo could not. Nor is it “society” that flies, but individual human beings who go from one place to another through the air. No human being can remember, unaided, more than a few facts and figures, but a social product, the Statistical Abstract of the United States, as well as the library that contains it, constitute a negation of that limitation. But the social process leading to such a negation begins only when a condition of existence is perceived as a limitation, that is, when an alternative world is deemed possible. While it may indeed be a generalized biological property of the human central nervous system to be able to make mental constructs of things that do not exist and to plan actions in advance of their willful realizations, the domain of what we imagine to be changeable is socially constructed. Indeed, the vulgar reductionist claim that human beings are inevitably driven by their biology to behave in certain ways is self-fulfilling, for it takes those behaviors out of question and places them in the domain of
unquestionable "facts of life," part of the substrate of unexamined conditions of existence. That is why the present ideological struggle over the biological and the social is the elementary political conflict between those who wish to change the nature of human existence and those who prefer to keep it in its present state.