

New myths for old

Jon Beckwith

From Genesis to Genocide: The Meaning of Human Nature and the Power of Behavior Control. By S.L. Chorover. Pp. 238. (MIT Press: Cambridge, Massachusetts, and London, 1979.) £9.35; \$14.

In recent years a number of controversies have erupted over theories and practice in the biological and medical sciences. These debates include the subjects of genetics, race and IQ; the XYY male; sociobiology; psychosurgery; behavioural control practices in prisons; and the giving of drugs to school children said to be suffering from minimal brain dysfunction. A number of books have already appeared which deal with most of these issues from a critical perspective, including notably Kamin's *The Science and Politics of IQ* (Halsted: New York, 1974), Schrag and Divoky's *The Myth of the Hyperactive Child* (Dell: New York, 1975) and Ann Arbor Science for the People's *Biology as a Social Weapon* (Burgess: Minneapolis, 1977). However, nowhere, to my knowledge, has there been any extensive attempt to draw connections between all of these controversies. Now, Stephan Chorover, in this remarkably concise piece of writing (208 pages of text), for the first time, places all of these issues in a common framework and describes them in terms of a long historical tradition which preceded them.

Chorover, a psychologist at MIT, with a long-standing interest in abuses in psychology and psychiatry, unites what might seem to be disparate subjects by analysing them in terms of "meaning and power" in the realm of behaviour control. By these terms he refers on the one hand, to those mythologies, religious doctrines or scientific theories, which have served to structure people's view of their place in the world. "... what people believe about the essential nature of human beings has a powerful influence upon social expectations. Such beliefs tend to shape the ways in which people in a given social context are treated, and these in turn, significantly influence how they behave." Thus, "... ideas about human nature ... deserve to be regarded as powerful instruments of behaviour control in their own right". "Power", on the other hand, refers to the power of certain groups in a society to apply these theories in practical ways for social control. The extreme example is, of course, genocide practiced by the Nazis based on biological theories of racial inferiority and superiority.

The book abounds with other historical

and contemporary examples. Perhaps two of these will give some feeling for the analysis. In 1851, Dr Samuel Cartwright, a respected Louisiana physician, published a report commissioned by the Louisiana Medical Association purporting to explain among other things why there were runaway slaves. The roots of this problem, according to the doctor, lay in a disease of the mind which he termed "drapetomania", "the insane desire to wander away from home". Various punishments of the runaway slave could then be considered merely as medical treatments.

In a contemporary case study, Chorover describes in detail the story of "Thomas R." a portion of whose brain was removed during the heyday of psychosurgery in the late 1960s. Among other frightening stories associated with this case, he reports that the surgeons concluded that Thomas R. was psychotic partly on the basis that he was convinced that his wife was "carrying on with a neighbour". However, after the surgery took place his wife filed for divorce and eventually married that same neighbour. Thomas R., himself, has been socially non-functional since the operation and has spent much of his time in mental institutions.

Chorover, in reviewing the long history of what are essentially biological determinist theories, goes back to what he refers to as "Plato's lie". This term refers to the theory presented in *The Republic* that different people are born with different qualities of metals (gold, silver or brass and iron) mingled into their bodies, and that the metals in turn determine what status in society individuals will occupy. According to Plato (through Socrates) such a lie is necessary to justify existing social stratification. To Chorover "the basic texture of human nature mythology remains everywhere and always the same and ... Plato's myth of the metals may be considered a prototype for today's myths".

It must be asked, of course, whether modern science has provided a much more solid basis for theories of human nature than earlier religions and mythologies. Chorover's answer is a clear no. He points to arguments used in the nineteenth and early twentieth centuries in the name of science (eugenics, phrenology, craniology, and so on) which we now recognise as totally without foundation. As a curious means of self-justification in the face of their critics, practitioners of these sciences have always likened themselves to Galileo, persecuted for trying to present the truth. Of course, Galileo, as Chorover points out, was attacked because his theories challenged the established order of things, whereas the makers of what Chorover generally calls sociobiological theories have, for the most part, provided rationales for existing social arrangements. He sees contemporary sociobiological theories as having no more solid scientific

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basis then their predecessors and laments the "inability or unwillingness of scientists to examine the social preconceptions inherent in the organization and conduct of their own work."

Although Chorover has done an impressive job of drawing the connections between his different topics, there are times when the attempt to unite all of the issues seems strained, as represented, for instance, by the title of one chapter "Genocide: The Apotheosis of Behavior Control". Further, although the role of sociobiological theories in justifying an inferior status for women is mentioned at several points, this subject deserves much

more extensive treatment, particularly in the light of the recent resurgence of such ideas. These defects, however, do not seriously detract from the unusual service that this well-documented and well-referenced book performs for biologists, social scientists, psychologists and the public at large. For, to this reader, one is not equipped to evaluate these issues as they appear without an analysis which considers the social context and historical background to particular questions at the interface of science and society. □

Jon Beckwith is Professor of Microbiology and Molecular Genetics at Harvard Medical School, Boston, Massachusetts.

Instantaneous expertise

Thomas H. Jukes

Malignant Neglect. By the Environmental Defense Fund and Robert H. Boyle. Pp275. (Alfred A. Knopf: New York, 1979.) \$10.

THE dust-jacket of this book modestly states that it "is based upon the enormous resources and scientific knowledge and authority of the Environmental Defense Fund (EDF), the nation's leading force in the field of environmental health". One author is a journalist, one a biochemist, one a science associate, and the qualifications of the other four are not listed.

A normal metabolite, acetaldehyde, is called a "known or suspected carcinogen" (page 105), and ammonia a "toxic organic vapor". The familiar litany is recited that no level of a carcinogen is insignificant, and that the latent period for development of cancer is 5-40 years (page 6). Actually, the risk and length of time required for appearance of symptoms are both dose-related.

A graph (page 21) compares increase in cancer mortality rate for 1940-1975 (uncorrected for smoking, page 214) with increases in production of plastics and other organic chemicals. Compared with plastics, similar increases have occurred in skateboards, tomato production and pocket calculators.

Chapter 3 is about polychlorobiphenyls (PCBs). There is no lack of public information on this topic. But what is the record of the EDF on PCBs? Jensen's publication in 1966 (page 64) attracted wide attention to contamination by PCBs. The EDF virtually ignored PCBs and campaigned against DDT, so that in 1969, the "end of the ocean" by 1979 was predicted as a result of the arrest of photosynthesis in marine algae by DDT. However, Harvey *et al.* in 1973 reported

that PCBs were present in surface water of the North Atlantic Ocean at about 20 p.p.10¹², and the level of DDT was less than 1 p.p.10¹² Scott found in 1975 that DDT, 100 p.p.m. of diet, had no effect on hatchability and shell thickness in laying hens, as compared with lethal effects produced by PCBs at 20 p.p.m. PCBs were dumped promiscuously, because they were never subjected to the justifiably careful regulations that govern insecticides.

Page 102: "Driving through New Jersey... On U.S. 1, ... one begins to detect a pungent odor, like that of rotting fruit. At first the odor is faint, but as the car swings into the New Jersey Turnpike, the smell grows stronger... Closing the windows does no good; the stench pours through the vents. The sky become visibly darker, like the twilight or an eclipse of the sun. At last, ... the source comes into view. It is perhaps the largest complex of oil refineries and petrochemical plants in existence... At night the flares atop the refineries produce an eerie light that transforms the scene into something from Dante's *Inferno*... Fourteen thousand people die each year from cancer in New Jersey".

On September 24, 1979, I drove south from Newark on the New Jersey Turnpike. I passed through the "refinery complex" at 6.45 p.m. There was no odour, there were no flares, and the only visible emission from the refinery was a few wisps of steam. To the west, there was a brilliantly clear sunset in which a range of hills, 30 miles away, was sharply etched against the sky.

Alarming statements are made about diethylstilboestrol (DES) used in meat production, and it is said (pages 149-151 and 219) to be detected in 1-2% of table meat and in pancreas. It has been detected only in liver, and only 0.6% of 8,293 beef livers sampled contained more than 0.5 p.p.b. The DES intake from meat is less than 0.001% of the equivalent daily oestrogen production by a nubile woman. Page 151 infers erroneously that nitrofurans are antibiotics, and states "Even minute residues of antibiotics in meat and poultry can sensitize people and cause allergic reactions, such as rashes and shock, when one of these antibiotics is medically administered". I know of no evidence for this. Insufficient emphasis is given to the carcinogenic role of alcohol.

Arsenic and chromium, listed as