Senate Subcommittee on Government Research
Hearings on the human impact of advance in biological science

Testimony by Joshua Lederberg, March 8, 1968

How the human species can foresee and plan its own future is the real subject of these Hearings. No subject is more important, short of the care we must take to ensure that there is a future, against the risks of global annihilation.

The replication of DNA and the transplantation of the human heart have dramatized the advance of biological science. But they are only the most visible signposts of a deeper revolution. This is the understanding that human intelligence and industry, expressed in science, have brought the species to a new level of mastery. Whether it concerns the outer world of the earth in space, or the inner one of man's own nature, there is no enterprise consistent with the laws of physics and chemistry that is beyond human reach. This is the technical conquest; but of course we reach nowhere without the concert of human will, without effective social decision on the priority of our commitments.

These issues are, if anything, too important to be left to a national commission. I oppose its being charged with making substantive prescriptions, after one year's study, about the biological policy of the human species. A commission should be formed under the charge to make recommendations on procedure, on the best ways to educate the public and its political representatives on the impact of science, on how to reach informed decisions on biological policy consistent with our democratic ideals. The commission's own report might be the first step in this educational process by helping to air the most pressing questions and weigh their priority against the other challenges to judgment, intellect and social conscience.

In practice, I cannot conceive of any one-year national commission of any stature doing otherwise; but why not convey a meaningful charge in a document that has the dignity and force of law?

In reading S.J.Res.145 I was struck by how little its language had to do with Senator Mondale's introductory discussion. Section 4(A)(1) elaborates on the "economy, efficiency and effectiveness" of health research efforts, but 4A asks for comprehensive study of the "legal, social and ethical implications of medical research" as does Senator Mondale's introduction. I do not think the same group of people would be best suited for these two kinds of tasks. There have been extensive hearings before on the coordination of health research, and the Senate might indeed wish to make its own consideration of the detailed criticisms of the administration of health research grants. But this is an unwieldy stretching of the principal mandate of the proposed commission.

The present proposal might be contrasted with S.2882 (introduced by Senator Jackson) which asks for a commission to deal in more substantive detail with the federal, legal and budgetary problems raised by artifical organs and organ transplant. This is a very concrete challenge and I would wholeheartedly

support such a study with a clear cut objective of great human importance.

We might also refer to S.Res.68 (introduced by Senator Muskie) which proposed to "establish a select Senate committee on Technology and the human environment". This resolution was premised on the indispensable educational value of a continuing study on the impact of technological change. My principal criticism of this proposal was that it was possibly too far removed from the budgetary process to have a real impact on national policy. But I am persuaded that it will be very difficult to reconcile the short range pressures on the budgetary process with the need for long term and sober reflection on major policies. I would however leave it to further debate how indispensable such a standing committee in Congress would be as a counterpart to ad hoc studies by civilian expert commissions. It is also difficult to decide whether to segregate the issues that pertain to the inner world of human biology and medicine from those of the outer environment and industrial economy.

Although it may have a somewhat less glamorous title, the present committee is indeed already performing a very useful service in this direction, and one which will be augmented even more if it continues hearings like this on a regular basis.

I will make only some very brief remarks on substance.

Clear thinking and rational decision on biological change is hardly helped by invoking slogans like "genocide", "who decides on life or death", or "genetic tampering". Every act of Congress has a deep impact on the facts of birth, life and death of many individuals whether intended or whether foreseen or not. But Congressmen can have the brief comfort of not having to observe all the private consequences of their public actions. Using the kinds of phrases I have quoted to introduce the discussion of biological innovation is about as constructive as talking about "thought control" as an introduction to discussions of policy on public education, or "cultural genocide" as a description of the establishment of English as the lawful language of this country.

Many forms of compulsion are available to the state in its dealings with individuals. The perfection of biological engineering will add only a few minor subtleties to the existing repertoire of a totalitarian government. The only assurance we have for the preservation of individual dignity comes from a political system that minimizes the role of the state in private life. Indeed the very guise of "protecting" individuals from the impact of new technology may cloak the most pernicious intrusions of the state into individual freedom.

The state clearly has a role in insuring the liberty of individual decision and action in private matters, to prevent and punish duress and deception, and to set the least intrusive limits demanded by social order.

Finally I must remark that the commission may have very little work to do unless we reset our course for the support of advanced education and medical research. Nothing will more surely frustrate further advance in scientific knowledge than the sudden draining off of our graduate students and the continued retrenchment of support for basic science in the Federal budget.