

outweighed for me by a number of serious disadvantages. I am a strong believer in the freedom of the informed individual to decide for himself how to balance benefits and risks which primarily concern him, and I include here the right of the patient, consulting with her physician, to elect to accept some risk in return for the benefits of oral contraceptives. To me, the role of government in this area is clear—it is to be sure that both physicians and patients are as well-informed about the state of knowledge on the benefits and risks of oral contraceptives as it is reasonably possible to make them.

A second aspect of public policy is of comparable importance. It is to protect the public from clearly unreasonable risks, both by seeing that the risks are adequately studied and understood and, in some cases, by eliminating them from the environment. In some respects the level of concern by government should be much greater than that of even a prudent individual. For example, an increase in the level of ionizing radiation over the United States due, perhaps, to building nuclear power stations, would increase the risk that I might get leukemia. If the increase were small, I might reasonably ignore it, as an individual. The government, however, must weigh the combined risk to all of us against the benefits which additional nuclear power plants might provide.

In either case it must be emphasized that reasonable judgments are only likely to arise out of a weighing of risks and benefits. It is common to hear that "even one avoidable death is too many," or that the "only acceptable level of pesticide residue on food products must be zero." Neither as governments nor as individuals do we in fact behave this way, and the refusal to weigh risks against benefits often results in the blind acceptance of risks which analysis would show to be unreasonably high. I believe, for example, that the almost disastrous errors made in the program of safety-testing for the Salk vaccine in the mid-1950's resulted from an unwillingness to accept the notion that there might be a measurable risk and to seek to evaluate its magnitude. A typical example of a known risk which we accept in return for benefit is the requirement of smallpox vaccination for schoolchildren. A small but definite number of children die as a result of being vaccinated. We accept such costs as necessary to achieve a greater benefit.

How one weighs the benefits and risks is strongly conditioned by his background and general outlook. Since 1957 I have been a professor of statistics at the University of Chicago. One of the areas of applied statistics in which I have been most interested is the design and evaluation of clinical trials for new therapies. I have served on numerous review committees for the National Institutes of Health. I am currently a member of the Heart Special Project Committee of the National Heart Institute, and I served also on the National Heart Institute's Diet-Heart Feasibility Study Review Committee. For the past 15 years I have done occasional consulting for pharmaceutical firms, although never for a company which was a manufacturer of oral contraceptives.

My interest in the problems of population growth and conception control is of long standing, but my direct involvement is recent. I participated in the preliminary analysis of data gathered at the