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## All Really Great Lies Are Half True

The proposition that good is preferable to evil is for most of us an axiom, a self-evident truth. Not so evident, however, is what is good and what is bad. This lack of consensus exists for a wide range of issues—political, social, and personal—as a glance at the morning paper will show.

If costs can be totally equated with bad and benefits with good, then cost-benefit analysis of medical research would appear equally axiomatic. Government and private sources of research money are increasingly asking, "In what way will your project contribute to our ability to prevent or treat human disease?" And because good is so obviously preferable to bad, to question cost-benefit analysis appears as illogical as questioning motherhood.

Questioning motherhood, however, may not be so illogical if you are 14, unmarried, and 7 months pregnant. Similarly, there are two fatal flaws in the current demand for cost-benefit analysis. First, it is increasingly demanded of individual projects, rather than of research as a whole. Second, while benefits are benefits, the costs incurred may have redeeming features—that is, they may not be wholly bad.

The first question is that of the part and the whole. The discovery of effective polio vaccines saves the U.S. community more each year than the entire medical research budget; this takes care of the global question. But it is still asked about your project, and mine, "If \$50,000 is invested, can you show us conclusively and prospectively how we will save \$100,000?"

Since the milestone study by Comroe and Dripps of the scientific basis for the support of biomedical research,\* such a question appears increasingly naïve. Effective, safe, corrective open-heart surgery involves the application of findings—more often than not of basic, undirected research—in a staggering range of fields. Could Landsteiner have provided a cost-benefit justification of his work on blood groups, on the basis that one day it would be crucial for cardiac surgery?

Second, the premise that the cost of medical research is unrelievedly bad needs careful scrutiny. In Western societies a very small percentage of people are involved in primary production of the necessities of life. The majority work in occupations that are "nonproductive" in this sense—they service, administrative, or creative. In Bangladesh, priorities may rightly favor skim milk over medical research, soybeans over symphonies; we have the luxury of options.

The politician, the treasury official, the research worker—we are all costs on the public purse. We are all judged to be more or less worthwhile on criteria different from those of subsistence farmers or hunting-and-gathering societies. Financially, the doctor may be better off in private practice, the politician back in his law office, the treasury official in a boardroom. What keeps you in the laboratory at nights, at home writing on weekends, is not cost-benefit but commitment.

And the commitment is to doing something well, not saving mankind. The pursuit of excellence—in singing, or science, or whatever—is the logical extension of our starting axiom; if good is preferable to bad, then we should strive for the best. And you know, and the politician listening to Joan Sutherland knows, that excellence is not just its own reward.

When the people of the Île-de-France began building Notre Dame, the population of Paris was 35,000; on any short-term, dollars-and-cents basis, they needed Notre Dame like a hole in the head. So the next time you are asked for a cost-benefit analysis of a particular project, think of polio, think of Landsteiner, think of Notre Dame—and innocently inquire of your questioner if he has data on the costs and benefits of cost-benefit analyses.  
—JOHN FUNDER, *President, Australian Society for Medical Research, Medical Research Centre, Prince Henry's Hospital, Melbourne, Australia 3004*

\*Julius H. Comroe, Jr., and Robert D. Dripps, *Science* 192, 105 (1976).