

social programs thus reinforce the job programs but the job programs also reinforce the social programs. The worst thing that could happen would be for us to educate and to train people, to change their environments to raise their hopes and then not to fulfill their hopes because there are not enough jobs in the economy.

The third leg is transfer payments—pure money payments for no services rendered. Transfer payment programs are not primarily opportunity. They are recognition that some people cannot use work or training opportunities. The aged can make little fruitful use of such opportunities and the same can be said for many female family heads. Transfer payments also provide interim money for those who are waiting for opportunity programs to pick them up. But in one major way transfer payment programs also do provide opportunity. Money means ability to choose. A man with a family to support may, if given money, have the choice of taking training for a decent job instead of having to grab the first available job of any type in order to feed his family.

This is the structure of our analytical system and note that I have described it without mentioning cost-effectiveness or cost-benefit once. Nonetheless it is systems analysis made systematic by organizing problems and programs into a structure where it becomes possible to examine alternatives and magnitudes in relationship to one another. Of course that is not all of it. Let me give some further examples of the kinds of analysis we did internally within this structure.

1. I have already mentioned the crucial nature of the definition of objectives with Opportunity in the top position, and the quantitative measurement of these objectives, even though this measurement must be over-simplified.

2. We used quantitative analysis to confirm intuitions. Our intuitions told us, for example, that family planning would be a highly cost-effective program. We looked at family planning and discovered that this was indeed the case. Program costs were estimated to be low and effectiveness was estimated to be high. Our estimate is that, had family planning programs for the poor been started a generation ago, there would be about 4½ million fewer poor people in the country today. This is highly cost-effective, although not quite as good as suggested by the summer interne who burst in and told us that a particular family planning program had proved effective after only six months of operation. In any case the family planning case also provides a good example of the political constraints on the uses of analysis. We are pushing ahead with family planning programs, but cautiously.

3. We also used quantity to make at least one discovery we did not expect, although please note that it is a large rather than a small quantitative difference. In the Job category of programs, we started out with the aggregate demand hypothesis that tight overall employment would take care of almost all the job problems of the poor. We made estimates however, of the size and projected changes of unemployment in various categories of the poor and discovered that it just ain't so. Our estimates have since been confirmed by the fact that even at the lowest unemployment rate in 13 years, the poor still do not have enough jobs. On the basis of these estimates we recommended substantial job creation programs, although with unemployment at current levels (much lower than the time we made our proposals) job creation is no longer our major emphasis.

4. We made numerical evaluations of alternative programs. Looking again at the job category, we looked in last summer's context of over four percent unemployment, at job training, aggregate demand programs and housing construction programs and estimated that none of these would provide enough jobs for the poor. We therefore became quite interested in community employment programs to take poor people into useful public service jobs such as teachers' aides, health aides, other subprofessional categories and maintenance jobs as well. This seemed the most cost-effective mode of creating jobs and at the same time it would help fill the vast need in this country for an increase in public services.

5. Our definition of objectives implies that what we are out to do is cure rather than ameliorate poverty and thus in looking for effectiveness, we looked for the causal relationships between various problems and poverty and we looked for fundamental rather than ameliorative programs. Because we had questions about whether things such as poor housing and bad health care caused poverty rather than being spectacular symptoms of poverty, we gave programs in these areas relatively low priority relative to jobs and education—whose causal connection to poverty is clear.