

**ANALYTICALLY SPEAKING**

The column of our corresponding editor

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SOCIAL STUDIES OF SCIENCE AND US. II.

Last time I discussed some of the general findings concerning science, technology and workers in those fields that were presented at the Society for the Social Studies of Science /4S/ meeting in November. Now I'd like to present some information related to the nuclear activities.

Wesley Shrum of LSU is interested in why some fields and some subsets of these fields are rated higher than others. He chose two fields: nuclear waste and photovoltaics. A primary difference between these two is that photovoltaics has a large commercial sector. Shrum surveyed 100 people who work in nuclear waste and another 100 in photovoltaics plus some government employees involved in managing these programs. He wanted to find out which areas of study were perceived as innovative and whether there was any correlation between this perception and the perceiver's own job.

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In nuclear waste, studies of ceramics were seen as more innovative than those involving salt dome storage or barium silicate glass. In photovoltaics amorphous silicon was seen as more innovative than conventional silicon studies. There was no relation, however between total activity in a field and innovativeness. Shrum concluded that not all workers will rate their work as innovative but there is a bias in that people in the less innovative areas rate their work higher than outsiders. The elite - those who have greatest authority or reputation - are less likely to be biased. In photovoltaics, for example, the elite has a dim view of CdS semiconductors and the solar powered satellite. In nuclear waste, however, there is between the elite and the government's program a tight promotional liason that results in advocacy for it.

Shown twice during the meeting was a one hour documentary "How Much is Enough". This film traces the history of nuclear weapons from the beginning in Los Alamos to the present tremendous overkill capacities of the major nuclear powers. Through conversations with scientists, politicians and interested citizens the film proved pretty conclusively that the world has more than enough nuclear weapons. Still the race goes on. Those of us on the periphery should like to be able to do something, but I guess most feel pretty helpless. Many of us feel that knowledge and associations - personal or through publications and correspondence - have made the scientific community one world. Somehow this understanding and friendship fails to come about at the diplomatic and political level. Maybe it is because we deal in facts and data whereas they are always hypothesizing and indulging in verbal and ideological controversy.