I was asked, as we all were, to outline my ideas on the general objectives of the Workshop, which include enlarging the knowledge base about processes basic for introduction of appropriate technology (A.T.) and evaluation of A.T. theories. I have neither been heavily involved in implementation of A.T. projects nor I am much of a theoretician. Therefore, I will build my remarks upon my experiences which have been almost entirely concerned with university teaching and research and then try to tie these remarks to the Workshop objectives. A study we recently completed on Appropriate Technology for Renewable Resource Utilization will also be briefly described.

Let me begin by stating that I have read the literature of the Center for Appropriate Technology (CAT) and am most favorably impressed by what has been accomplished here. The creation of CAT, in a major technological university, is an important step forward in putting appropriate technology on a firm footing for the long-term. Universities are essentially conservative places, hopefully in the best sense of the word. They are sometimes slow to accept new ideas. As one who has sought to bring about change, I can well imagine what you have been through in establishing CAT. Particularly notable is the involvement of established departments and sections in concrete projects directly linked to overseas development. I have had little success to date in my own university in this regard. My guess is that your success is a combination of the right people, hard work, luck, and a guaranteed government budget for education and research which encourages participation in A.T.

TECHNOLOGY AND HUMAN AFFAIRS AT WASHINGTON UNIVERSITY

I left traditional university positions in chemical and nuclear engineering in 1968. My prior involvement since 1961 in Volunteers in Technical Assistance

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(VITA) had given me a somewhat non-traditional perspective on technology and a strong interest in its role in international development. It is a perspective that can be described as needs based and it comes about in a variety of ways. In my case, reading and attempting to answer requests for technical assistance at the village level provided insights which could not be gotten in a more conventional academic or industrial setting in the U.S. The late 1960's were a time of turbulence and change on university campuses; Washington University and its School of Engineering were receptive to change and our Center for Development Technology (CDT) (then called the International Development Technology Program) and our Department of Technology and Human Affairs (THA) were born.

For a variety of reasons, our activities have taken on a character that differs somewhat from that at CAT. First, our research and studies tend to be planning and policy oriented as opposed to hardware oriented; that does not mean that we will not do hardware research and development -- it just hasn't been a major part of our efforts to date. Second, our activities tend to be oriented primarily towards activities and problems in the United States. We do retain a strong interest in international development work but it is not a predominant thrust of what we do.* Third, some of what we do you might find inappropriate. We have done studies of innovation in the chemical industry, of benefit-cost evaluation of breast cancer detection strategies, of communication satellite applications in education, and of earth observation data management systems. We don't use the word appropriate in the title of our department or center. I find that many engineers and non-engineers I deal with are uncomfortable with it, although Delft's initiative in establishing CAT and other initiatives may change that. It will be interesting to see how the A.T. name and concept does and the form it takes five or ten or twenty years from now. Finally, our research activities are heavily intertwined with teaching activity, with most of it housed within a single, non-traditional department in the engineering school. The focus of our Department of Technology and Human Affairs, which offers bachelors, masters and doctoral degrees, is on technology -- its applications and implications -- and on technology-