An Approach to the Welfare Analysis of Inter-Temporal Resource Allocation by Jerome Rothenberg, (Lecture Series No. 22). Athens: Center of Planning and Economic Research, 1967. Pp. 75.

Rothenberg's book contains three lectures read at the Center of Planning and Economic Research in Athens. The author starts by arguing that the problem

of welfare comparisons over considerable time intervals is simply that the populations being compared in the two periods are not unchanged. The normative criteria economists usually use for making welfare comparisons an unchanging population, *i.e.*, each individual must be present in the various situations that are compared. The author, by contrast, intends to examine situations where only some individuals are present in one of the two situations compared. His treatment of the linkage between two situations over time is based on two key assumptions: *i*) the population composition changes almost continuously, *ii*) the new additions to the population are familiarly linked to the existing members. The author concludes that under certain simplifying assumptions—e.g., that the utility function of each individual remains unchanged through life and that parents act on behalf of their heirs—no important problem of intergenerational comparability arises except where intertemporal externalities are involved.

The author then discusses some aspects of individual and social time preferences. He asserts that conventional analysis assumes that an individual typically has a positive time preference, *i.e.*, period 1 income increments are worth more than period 2 increments. This is attributed to a combination of the following assumptions:

- i) consumption needs grow over a life cycle;
- ii) the possibility of death;
- iii) impatience.

The author argues that for the society as a whole the first factor can be largely disregarded because the aggregate of households will involve households at all different stages of life.

As to the possibility of death, the author disputes the commonly held view that the private rate of discount is greater than the social rate of discount because the individual is concerned about mortality while the society is not. His argument is that an individual will not be more concerned about death than the society because the voters transmit their evaluations to the government. His view is that the only reason why the present population delegates responsibility to a government for certain intertemporal decisions is because of its inability to make such decisions efficiently on a private basis (e.g., because of the existence of important externalities). It seems, however, that his arguments are based on the questionable assumption that state decisions are simply a mirror reflection of private decisions. But for this to be true we have to make the further questionable assumption that all government decisions are based on unanimous public referendums.

The third factor determining the individual time preference is impatience. Here there may be, the author argues, a genuine difference between private and collective decision-making, even when the collective decision-making is influenced by the same values that shape individual decisions. The author seems to define impatience as a situation in which an individual, when he acts upon his short-run preferences, acts inadvertently with respect to time in terms of his long-run preferences. If he could, he would like to postpone satisfaction. In such a situation he may be able to act more in accordance with his own long-run utility function by delegating power to a third party either to act for him or to induce (or even compel) more appropriate short-run behaviour from him. If this is so, the author argues, we would expect collective decisions to reflect systematically less impatience (if at all) than do private decisions. Thus, social time preference may be lower than private time preference.

In his final lecture, the author examines some implications of a discrepancy between social and private discount rates. He concentrates on an example where two alternative resource uses are possible, viz.

A — use the resource in an irreversible manner

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B—use the resource in a reversible manner, *i.e.*, a manner which keeps open the option of making the shift to A at any time in the future. This he calls the "conservation" use. (By the same token, "non-conservation" would foreclose any such possibility.)

The essence of the model rests on its asymmetrical reversibility. Within the framework of this simple model, the author discusses the influence that expectation of new information has on resource choice and on the value of the reversibility option at a later date.

The author in most part of his book bases his analysis on very restrictive assumptions. However, as this book draws attention to important problems, it is recommended to those especially interested in welfare theory.

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