Lumpy preference structures

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Abstract. A widely held and durable normative position has been that policy analysts should attempt to estimate the evaluative reaction of those who will be most directly affected by a government sponsored or regulated technology. The premise of applied welfare economics is that citizens would divide, substitute and additively recombine their assessments of the project's impacts in the same manner. This paper outlines an alternative theory by arguing that citizen preferences will often be contingent upon, rather than divisible from, the substantive and procedural characteristics of the context in which a choice takes place. Moreover, one can predict that the manner in which these evaluations are substituted and recombined will vary with the internal structure of one's value and belief system. By representing that system in terms of a hierarchical model composed of four factors - common orientation, procedural judgment, desire for personal control and substantive evaluation - it is argued that the evaluations of a project will be combined by way of interactive, indirect and non-recursive relationships as well as the common additive expectations. Some of the implications of this alternative theory for policy analysis are explored.

Policy analytic techniques were developed to improve the quality of decision-making. In democratic societies, a widely held and durable normative position has been that the measuring rod of quality should be the preferences of those who will be affected by the governmental action under consideration. In other words, if citizens had the opportunity to judge a particular policy or project, what would their evaluation be? Providing this information about even simple policy choices can, at times, be a complicated process.

When the decision involves large technological projects such as the siting of a power plant or toxic chemical dump, the policy analyst faces a much more difficult task because the number of parameters to take into account quickly multiplies. A single project, for example, can significantly shape a diverse range of value impacts (e.g., environmental, social and risky effects) over a wide expanse of space, extend for a long period of time and affect a large number of heterogeneous individuals. To estimate and compare the evaluations of different individuals across such dissimilar consequences requires a very versatile model of how citizens judge the world around them.

Applied welfare economics has dominated policy analysis, in part, because its proponents maintain that some variant of cost-benefit analysis can provide an elegant and robust approach to meet this need. In addition, they have argued, with some justification, that there is not another model of citizen evaluation which even purports to be powerful enough to contend with the qualitative range of characteristics that these choices raise.
From this perspective, one assumes that individuals share the same method of evaluation by which they readily divide a project's impacts into discrete objects of choice, continuously substitute these diverse values and additively recombine them so that they can be compared in common terms (usually monetary) with those of other citizens. In most circumstances, the argument is made that these preferences have already been "revealed" by and can be estimated from available market and choice behavior. The acknowledged limitation of this approach is that its conclusions are valid only within the present distribution of resources and judgments about redistribution are outside the professional expertise of the cost-benefit practitioner.

Despite the apparent power of this model an increasing number of policy analysts have become circumspect about its conclusions. This disenchantment began with the debate over distribution and has grown in strength as policy analysts were challenged to incorporate increasingly diverse value consequences such as environmental, social and risky impacts of technology which were previously ignored. Critics appear to share a conviction that the findings of cost-benefit analysis are in many cases incomplete for not representing all the impacts that occur and those estimates that are calculated are often viewed as being arbitrary and inaccurate. There is less agreement, however, on the reasons why or when this is believed to occur and substantial division on what theory, if any, would provide an adequate replacement to overcome these perceived limitations.¹

The purpose of this paper is to outline a broad set of principles from which one can begin to construct an alternative theory of citizen evaluation. By building on recent conceptual developments in decision-making and a range of empirical findings, I will argue that individuals are unlikely to share a common method of evaluation by which they divide, substitute and additively recombine a project's impacts. Instead, one can expect that citizen preferences will be heavily mediated by their experience and interpretations of that background that they share with others. As a result, judgments about technological impacts will often be contingent upon the specific substantive and procedural characteristics of the context in which a choice takes place and the group dependent meanings individuals attribute to those effects in that situation.

Moreover, one can predict that the manner in which these evaluations are recombined will vary with the internal structure of one's value and belief system. By representing that system in terms of a hierarchical model composed of four factors — common orientation, procedural judgment, desire for personal control and substantive evaluation — I will argue that citizens will combine their assessments of a project in terms of indirect, interactive and non-recursive relationships as well as the common additive expectations.

This alternative view of citizen evaluation presents a problem for the use of cost-benefit techniques because in most circumstances past choice behavior