Any Non-welfarist Method of Policy Assessment Violates the Pareto Principle: A Comment

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In a recent article, Kaplow and Shavell (2001) claim that any method of policy assessment that is not purely welfarist violates the Pareto principle. Kaplow and Shavell use the term "welfarism" to describe notions of social welfare "under which assessment of policies depends exclusively on their effects on individuals' utilities" (p. 281). A welfarist policy assessment uses a social welfare function $W(U_1(x), \ldots, U_n(x))$ from the set of states of the world, X, to the real line, R, to rank policy alternatives, where x denotes the state of the world, U_i denotes the utility of individual i, and n is the number of individuals. That is, social welfare is a function of x only insofar as x affects the vector of individual utilities U_i. Kaplow and Shavell distinguish other methods as using a function $F(x)$ that is not confined to effects on individuals' utilities. They claim that any such method of policy assessment violates the weak Pareto principle; that is, for any such $F(x)$, there exist states $x, x' \in X$ such that $U_i(x) > U_i(x')$ for all i and yet $F(x') \geq F(x)$.

This claim is derived from a crucial assumption (p. 283) that any non-welfarist method F under consideration violates the Pareto indifference condition, a condition that stipulates that if $U_i(x) = U_i(x')$ for all i, then $F(x) = F(x')$. It then follows straightforwardly that, under an ancillary continuity assumption (p. 284), any such F must violate the weak Pareto principle. This deduction is correct, and others have derived similar results (see, e.g., Suzumura 2001; Campbell 2002); but it does not have

the broad implication suggested by Kaplow and Shavell, specifically, that a Paretian policy maker must rely on a welfarist social welfare function.

Kaplow and Shavell (p. 283) base their crucial assumption on an "observation" that welfarism and the Pareto indifference condition are equivalent. This claim is surprising because it is well known among social choice theorists that no Pareto condition by itself entails welfarism (see, e.g., d'Aspremont and Gevers 1977; Sen 1986, pp. 1121–22). If we consider only social choices based on a unique profile of individual utility functions in society $(U_1(x), \ldots, U_n(x))$, then the Pareto indifference condition implies that transitive social preferences can be expressed as preferences over utility vectors $(U_1, \ldots, U_n)$ with no role for non-welfarist considerations. Welfarism, however, as this concept is understood in social choice theory, requires that the social preference relation in utility space (represented by the function W) be the same for all possible profiles of individual utility functions.[1] To derive this strong neutrality property, we must combine Pareto indifference and transitivity conditions with an independence condition requiring the social ordering over any pair of alternatives to be independent of information about other alternatives.[2]

Thus we cannot derive welfarism from the weak Pareto principle without imposing additional restrictions on social preferences. A continuity condition is necessary to derive the Pareto indifference principle from the weak Pareto principle; transitivity and independence conditions are necessary to derive welfarism from the Pareto indifference principle. As long as we relax some of these restrictions, we can construct non-welfarist methods of policy assessment that satisfy the weak Pareto principle. Fleurbaey and Maniquet (in press), for example, propose the following non-welfarist function $F(x)$ to rank all social states:

$$F(x) \;=\; \max_{\mathbf{p}} \min_i \frac{E_i(\mathbf{p},\; U_i(x_i))}{\mathbf{p}\mathbf{\Omega}},$$

where $\mathbf{p}$ is a price vector, x_i is individual i's consumption, U_i is her utility function, E_i is her expenditure function, and $\mathbf{\Omega}$ is a fixed reference vector of resources (e.g., total resources available in the economy). This function satisfies the weak Pareto and Pareto indifference conditions but violates independence and strong neutrality conditions and thus is not a welfarist social welfare function.[3] Chang (2000, 2001) suggests other examples of non-welfarist methods of policy assessment that respect the

[1] For a formal statement of this strong neutrality property, see Sen (1986, p. 1121).

[2] See Sen (1977, 1986) and Roberts (1980). Furthermore, we must require that these conditions hold over an unrestricted domain of possible individual preferences.

[3] This social welfare function focuses on budget inequalities and is congruent with a prominent view of fairness in recent non-welfarist theories of justice that advocates that people should be given equal market resources (see, e.g., Rawls 1971; Dworkin 2000).

weak Pareto principle but violate continuity and Pareto indifference as well as independence conditions.[4]

We agree that the Pareto principles restrict the use of non-welfarist reasoning. Indeed, there is an extensive literature on these restrictions, including Sen (1970), Gibbard (1974), Moulin and Thomson (1997), and Brun and Tungodden (2004). Much of this literature, however, imposes weaker demands on social preferences than those imposed by Kaplow and Shavell (2001) regarding transitivity, completeness, and continuity. Therefore, although Kaplow and Shavell make a contribution to this literature, their result is not, as they claim (pp. 282–83), a generalization of prior results, such as the impossibility result in Sen (1970). More important, as we have shown, their result does not at all warrant the bold conclusion that any non-welfarist method of policy assessment violates the weak Pareto principle.

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[4] Furthermore, an otherwise welfarist social welfare function W can be influenced by non-welfarist concerns if the shape of W is determined partially by such considerations.

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