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Lewis A. Kornhauser

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The Non-Consequentialist Uses of Economic Analysis: A Comment on Dagan and Kreitner, *Economic Analysis in Law*

Lewis A. Kornhauser[†]

Introduction

Dagan and Kreitner have offered a rich and elegantly written discussion of the normative uses of economic analysis of law.¹ For Dagan and Kreitner, a scholar uses economic analysis normatively either when she evaluates a legal rule or institution or when she makes policy recommendations. These two normative uses of economic analysis are closely related but distinct. Evaluation often starts from some ideal theory while policy design is clearly non-ideal. Moreover, in policy design, questions of institutional competence and capacity play a central role that they do not have in straightforward evaluation. I do not, however, pursue these distinctions here.

Evaluative approaches divide into two classes: consequentialist and non-consequentialist. Dagan and Kreitner discuss the role of economic analysis in both classes. The role of economic analysis in consequentialist evaluation and design flows naturally from economic methodology. Any consequentialist evaluation or policy design requires a theory of how individuals, both private citizens and public officials, behave in response to legal rules. Economic analysis of law offers the most clearly elaborated and developed theory of such behavior. In addition, the structure of the theory provides a natural way to make welfarist evaluations as the theory explains behavior in terms of the preferences of the agents.²

Dagan and Kreitner describe in Part II a number of inarguably reasonable uses of economic analysis for consequentialist evaluation. As they

[†] Frank Henry Sommer Professor of Law, New York University. The support of the Filomen D'Agostino and Max E. Greenberg Research Fund of the NYU School of Law provided financial support.

1. Hanoch Dagan & Roy Kreitner, *Economic Analysis in Law*, 38 YALE J. ON REG. (forthcoming 2021).

2. The normative use of economics for consequentialist evaluation does present problems that I do not address here. Perhaps the most significant difficulty concerns potential discrepancies between an agent's motivational preferences and her evaluative preferences. An agent's motivations to act may diverge from her (or our) concept of well-being; an agent does not always do what makes her life go best. For further discussion of different understandings of preference, see Lewis A. Kornhauser, *The Domain of Preference*, 151 U. PA. L. REV. 717, 728-9 (2003).

note, economic analysts already pursue these. In what follows, I put these uses of economics for consequentialist evaluation to one side.³

In Part III, Dagan and Kreitner suggest two extensions of economic analysis to new uses “beyond its [economics’] comfort zone.”⁴ These extensions generally argue for the use of economics to address non-consequentialist evaluations of legal rules or institutions. Such applications lie outside the comfort zone of economic analysis of law because economic analysis of law seeks to understand the consequences that legal rules and institutions create.

In this essay, I focus on the uses of economic analysis in non-consequentialist evaluations. I proceed in two steps. First, I consider the applications that Dagan and Kreitner suggest in their Part III. I argue that (a) economic analysis has already contributed to these inquiries; and (b) that Dagan and Kreitner have not adequately specified the task to be undertaken.

Second, I argue, through an extended example, that Dagan and Kreitner have overlooked arguably the most significant use of economic analysis in non-consequentialist evaluation: the investigation of the logical relation among various values that we may endorse.

I. Democracy, Deliberation and Self-Authorship

In Part III, Dagan and Kreitner seek to expand the reach of economic analysis of law to inquiries that incorporate non-welfarist criteria.⁵ In this Part, I address Section B, which considers democracy and deliberation, and Section C, which considers self-authorship. With respect to Section B, I suggest that the literatures they hope for already exist, at least in nascent form. With respect to Section C, I express confusion about what Dagan and Kreitner want economists to do, as I do not think they have adequately specified either the values at issue or what they want done.

My difficulties in understanding Dagan and Kreitner derive from their failure to specify clearly what role economics should play in these non-consequential evaluations. The role of economics in consequential evaluations is clear as the analyst first determines what consequences a legal rule or

3. I also put to one side two other issues. First, I do not comment on their distinction between “economic analysis of law” and “economic analysis in law,” which I do not find wholly satisfying or clear because I do not fully understand or accept their account of legal theory which they develop at greater length elsewhere. See Hanoch Dagan & Roy Kreitner, *The Character of Legal Theory*, 96 CORNELL L. REV. 671 (2011). Second, both they and I ignore empirical studies.

4. Their Part III discusses three extensions, but the first, to questions of redistribution, seems to me to be an instance of consequentialist evaluation as distributional questions concern the consequences of various policies and behaviors.

5. As noted in the Introduction, Section III.A of Dagan and Kreitner’s article proposes the application of economics to distributive issues. The sentence in the text is thus not quite accurate as distributive justice might include the distribution of welfare. On some definitions, these inquiries would be welfarist. I will not, however, discuss this suggestion.

institution has.⁶ The structure of the theory, moreover, facilitates welfarist evaluation as the predicted consequences derive from the agents' preferences. Neither of these conditions applies to non-consequentialist evaluation.

As a first step, then, it is important to determine what economists should do. The two examples Dagan and Kreitner offer suggest that economics can solve or at least illuminate problems of measurement and aggregation.⁷

Consider democracy and deliberation first. "Democracy" is a very vague term; I am not sure what Dagan and Kreitner mean by it. Do they mean election of rulers through majority rule? Or do they mean something deeper? After all, in the United States, a large economic literature has developed around both the decision in *Reynolds v. Sims*⁸ that announced the principle of one person, one vote and the Voting Rights Act⁹ that prevents discrimination on the basis of race. These literatures developed indices of electoral power that had some influence on federal case law¹⁰ as well as techniques for measuring racially polarized voting and gerrymandering.¹¹ This literature is both theoretically and empirically rich; moreover, it has informed academic, legislative, and juridic debates.¹²

Now consider deliberation. A literature exists here as well though perhaps not as normatively relevant, as this literature seeks to understand how deliberation persuades and under what conditions it facilitates finding the truth.¹³ None of these works deals directly with law but it clearly awaits

6. The evaluation of institutions presents further problems as the consequences of an institution depend both on the set of individuals that populate the institution and the circumstances (or environment) in which the institution operates. Evaluating institutions thus requires evaluation of both factual and counterfactual situations.

7. Note, however, that these two aims appear to be at odds with the idea of non-consequentialist evaluation as aggregation and measurement have a consequentialist tinge. Note also that measurement itself raises normative issues as any measure either implicitly or explicitly makes normative assumptions about the relative value of different aspects of the phenomenon measured. Measures of inequality, for example, implicitly distinguish between transfers that change the measure of inequality and transfers that do not. For a discussion see, for example, AMARTYA SEN, ON ECONOMIC INEQUALITY (2d ed. 1997).

8. 377 U.S. 533 (1964)

9. 52 U.S.C. §§ 10101, 10301-14, 10501-08, 10701-02.

10. See, e.g., John F. Banzhaf III, *Weighted Voting Doesn't Work: A Mathematical Analysis*, 19 RUTGERS U. L. REV. 317 (1964-1965). For a discussion, see Jean-Pierre Benoit & Lewis A. Kornhauser, *Game-Theoretic Analyses of Legal Rules and Institutions*, in 3 HANDBOOK OF GAME THEORY (R.J. Aumann & S. Hart eds., 2002).

11. The literature here is voluminous. On racially polarized voting, see, for example, Bernard Grofman, *Multivariate Methods and the Analysis of Racially Polarized Voting: Pitfalls in the Use of Social Science by the Courts*, 72 SOC. SCI. Q. 826 (1991). On one person one vote, see, e.g., Nathaniel Persily, Thad Kousser, & Patrick Egan, *The Complicated Impact of One Person, One Vote on Political Competition and Representation*, 80 N.C. L. REV. 1299 (2002). On gerrymandering see, for example, Gregory Warrington, *A Comparison of Partisan Gerrymandering Measures*, 18 ELEC. L.J. 262 (2019).

12. One might argue that the literature sits not in economics but in political science, but most of the methods, both theoretic and empiric, are common to the two disciplines.

13. See, e.g., Dimitri Landa & Adam Meirowitz, *Game Theory, Information and Deliberative Democracy*, 55 AM. J. POL. SCI. 427 (2009) for an article that may address some of the

application to legal theory and, possibly, doctrinal development. These literatures, however, do not treat deliberation as an end in itself. Dagan and Kreitner might then have something else in mind, though I am unclear what.

How do they understand the value of deliberation? Is it *good* for the agent who participates in the deliberation? On this account, deliberation would be a component of the agent's well-being. Is it a valuable aspect of autonomy? Or is deliberation good, not for each deliberating agent, but for the deliberating agents together? This account treats deliberation either as an instrumental good or as a communal good.

Consider now the value of self-determination. Dagan and Kreitner develop their argument through an example, agreements not to compete. They then suggest that economic analysis should advance the inquiry through the development of a method of aggregation across each time- t agent.

They suggest that aggregating "self-determinations" should be no more difficult than the project of preference aggregation was. But we have a much thinner understanding of self-determination than of preferences. Preferences have more structure; they are rankings. And it is rankings that we aggregate. This structure helps both define and constrain the aggregation process. The nature of the ranking determines what information may be used in the aggregation and what assumptions need to be made to aggregate. Arrow's theorem aggregates ordinal rankings. Both the absence of intensity measures and of interpersonal comparability limit the ability to rank.

What does it mean to aggregate self-determination? In the non-competition example, Dagan and Kreitner consider a single agent whose degree of autonomy varies over time because of the agreement not to compete. We thus have an infinite number of agents t , each representing the single agent at a given time t . Each agent t could compare her situation in the presence of the agreement not to compete to her situation without (though we would have to be careful to specify what this counterfactual world looked like). We could aggregate these agents through majority rule.¹⁴

Similarly, aggregation through majority rule over two alternatives applies straightforwardly to aggregation across individuals rather than within

concerns that animate Dagan and Kreitner. Another literature on diversity of opinion implicitly relies on deliberation to yield its results. See, e.g., S.E. PAGE, *THE DIFFERENCE: HOW THE POWER OF DIVERSITY CREATES BETTER GROUPS, FIRMS, SCHOOLS, AND SOCIETIES* (2008); H. LANDEMORE, *DEMOCRATIC REASON: POLITICS, COLLECTIVE INTELLIGENCE, AND THE RULE OF THE MANY* (2017).

14. As there are an infinite number of voters, this would not be easy. We could take a majority vote for each time T and see if the result converges to a unique outcome. Note that we have, for each finite T , an axiomatic characterization of majority decision for two outcomes.

individuals.¹⁵ Characterizing the counterfactual may become more difficult as one needs to determine what happens to each individual rather than merely specifying a history for a single individual.

Two obvious problems, however, beset this procedure. First, why consider only two alternatives? There are many possible counterfactual histories, at least some of which would correspond to distinct regulatory regimes. Presumably, the agent should rank them all and the analyst should integrate these more complex rankings. The multiplicity of possible counterfactuals renders the problem of determining the agent's ranking more difficult.¹⁶

Second, and more problematically, self-determination is unlikely to have a single dimension. Do Dagan and Kreitner want an aggregation for each dimension? Of each dimension into an all-self-determinations-things considered judgment? Each of these tasks requires a substantial amount of philosophical work before economists can grapple with an aggregation problem.

II. Consistency Among Values

Dagan and Kreitner do not discuss how economics can clarify normative thought. Social choice theorists, beginning with Kenneth Arrow, have examined the mutual consistency of various conditions.¹⁷ These investigations come in two types. First, one may provide an axiomatic characterization of some value or institution. Kenneth May, in an early instance, provided a complete characterization of majority rule (over two alternatives).¹⁸ More recently, Eric Maskin has provided an axiomatization of utilitarianism,¹⁹ which permits an assessment against a prior characterization of leximin.²⁰ These investigations can help clarify debate by identifying more sharply what is at issue when one adopts one normative criterion over another.

15. Across individuals, the aggregation is more straightforward as there is a finite number of individuals as opposed to a continuum of time slices of a single agent.

16. One might say that we have a measurement problem similar to the one that arises in the preference aggregation context. One might understand, as Dagan and Kreitner apparently do, cost-benefit analysis as a solution to that measurement problem. But cost-benefit analysis does not in fact solve all the measurement problems. See, e.g., Lewis A. Kornhauser, *On Justifying Cost-Benefit Analysis*, 29 J. LEG. STUD. 1037 (2000).

17. K.J. ARROW, *SOCIAL CHOICE AND INDIVIDUAL VALUES* (3d ed. 2012).

18. K.O. May, *A Set of Independent Necessary and Sufficient Conditions for Majority Rule*, 20 *ECONOMETRICA* 680 (1952).

19. Eric Maskin, *A Theorem on Utilitarianism*, 45 *REV. ECON. STUD.* 93 (1978).

20. P.J. Hammond, *Equity, Arrow's Conditions and Rawls' Difference Principle*, 44 *ECONOMETRICA* 793 (1976). Leximin derives from Rawls' difference principle. It differs in two respects. First, the difference principle assesses differences in primary goods; leximin assesses differences in well-being. Second, leximin compares policies first on the basis of the well-being of the worst-off. If the policies do not differ there, it considers the effects on the well-being of the second worst-off, and so on. It is not clear that Rawls' difference principle has the same lexical character.

A second strand of these conceptual investigations has a similar function. This strand identifies a set of plausible criteria of evaluation and then determines what institutions, if any, satisfy these criteria. Arrow's theorem famously initiated this strand by proving the inconsistency of the Pareto Criterion, universal domain, non-dictatorship and independence of irrelevant alternatives.

These studies are very abstract. One might consequently question their relevance for the more concrete questions that occupy legal theory and doctrine. In making normative judgments, however, it is important to understand what is at stake. Moreover, most applications of non-consequentialist criteria to legal problems rely on ideal theories even though the legal setting is clearly non-ideal.²¹

I shall illustrate this issue by suggesting that debates over efficiency in the law would be better informed if they paid more attention to the rich literature that has identified the tension between the Pareto Criterion and a wide variety of other, equally compelling normative intuitions. The Pareto Criterion is the primary welfarist criterion that economists use to evaluate institutions (and actions).

The Pareto criterion states that if each individual in the relevant society ranks option x over option y , then society ranks x over y .²² This unanimity criterion seems both innocuous and highly intuitive. Indeed, some scholars consider the Pareto Criterion so intuitively compelling that they contend that any violation of it evidences the irrationality of the decision or decision criterion.²³

The Pareto Criterion is highly intuitive but, despite common belief, it is not innocuous. The style of analysis described above has shown that the Pareto Criterion is inconsistent with (1) the existence of communal goods;

21. Rawls' theory of justice, for instance, is explicitly an ideal theory. On the contrast between ideal and non-theory see, e.g., Alan Hamlin & Zofia Stemplowska, *Theory, Ideal Theory, and the Theory of Ideals*, 10 POL. STUD. REV. 48 (2012).

22. This sentence elides a number of issues. The Pareto Criterion is usually described in terms of preference; but "preference" is a technical term that designates a linear order (i.e. a ranking) over some domain. A preference could then be any evaluative ranking including moral ones. Typically, the ranking at issue ranks options in terms of the agent's well-being. A ranking based on the agent's well-being, of course, may differ from the ranking that reflects the agent's (all-things-considered) motivations. For further discussion of the concept of "preference" see Jennifer Arlen & Lewis Kornhauser, *Can the Law Change Preferences?*, THEORETICAL INQUIRIES L. (forthcoming 2021). This essay treats the Pareto Criterion as a welfarist criterion. In some instances, however, adherents ground the criterion not in welfare but in autonomy. They say, for example, not that society ranks x over y because each individual does so but because each individual has consented to x over y . But consent does not necessarily follow well-being. The intuitive appeal of the Pareto Criterion may thus conflate two distinct normative intuitions. For further discussion see Lewis Kornhauser, *The Pareto Criterion* (unpublished manuscript, on file with author).

23. Louis Kaplow & Steven Shavell, *Fairness vs. Welfare* (2006). Kaplow and Shavell try to assimilate non-consequentialist criteria into the welfarist framework. They incorporate "tastes" for non-consequentialist values into the agent's preferences. For an argument that this strategy of incorporation fails, see Lewis Kornhauser, *Preference, Well-Being, and Morality in Social Decisions*, 32 J. LEG. STUD. 303 (2003).

(2) aggregate rationality (under uncertainty); (3) fairness (as envy-freeness); (4) autonomy as “minimal” liberty; (5) autonomy as responsibility for one’s actions; and (6) autonomy as democratic self-governance. Each of these other ideas also has strong intuitive appeal. Their inconsistency suggests that our intuitions cannot be relied upon to integrate the various evaluative concerns that we hold. In the design or evaluation of our institutions, we may be required to choose one value over another.

A. Communal Goods

The Pareto Criterion rests on a principle of personal good that holds that something can be good for us only if it is good for someone.²⁴ Are there goods that can be good for no individual but good for *us*? For this claim to be true, “good for an individual” must mean something different from “good for *us*.”

Consider equality. The agent’s well-being constitutes what is good for her. Of course, what is good for *us* should incorporate what is good for each of us. But it may incorporate more. It might, for instance, incorporate a concern for equality. Understanding individual and social good reveals how the Pareto Criterion and equality may conflict.

Suppose that both individual and social good are welfarist in the sense that each depends only on the well-being of individuals.²⁵ We may thus represent a state of the world x by the well-being x_j enjoyed by each agent J ; thus, $x = (x_1, x_2, \dots, x_n)$ where there are N individuals in the society. Recall that x_j represents the well-being of agent J . A welfarist evaluates states of the world as a function $W(x)$ of this vector of individual well-beings. As the function $W(x)$ may take any form, it is easy to see that a welfarist social welfare function need not satisfy the Pareto Criterion.

A social concern for equality, for example, may imply that the social ordering does not satisfy the Pareto Criterion. Let $W(x) = \sum_j x_j - \sum_j (x_j - \mu)^2$ where μ is average well-being in society. Society cares about aggregate well-being and equality; variance is a measure of inequality and as inequality increases, social value declines. This social welfare function is welfarist and violates the Pareto Criterion. Consider two allocations $x = (1, 1, 1, \dots, 1)$ and $y = (2, 2, \dots, 12, 12)$. For ease of exposition assume that the size N of the society is even with precisely $N/2$ citizens having each of the two possible values of well-being. Every member of society prefers y to x because each person’s well-being is higher in y than in x but society prefers x to y $W(x) = N$ while $W(y) = 7N - 25N^2 < W(x)$ (for $N > 1$).

24. See Larry Temkin, *Harmful Goods, Harmless Bads*, in VALUE, WELFARE AND MORALITY 292 (R.G. Frey & Christopher W. Morris eds., 2009).

25. This definition relies solely on the information that is necessary to determine individual and social good. Some authors such as Kaplow and Shavell incorporate the Pareto Criterion into their definition of welfarism.

The existence of communal goods is thus inconsistent with the Pareto Criterion. If we believe that equality is a communal good, we must choose between it and the Pareto-prescribed efficiency.

B. Aggregate Rationality

The prior subsection rests on an assumption that social good should depend on individual good. Democratic theory accepts the parallel assumption that social policy should depend on each individual's assessment of policy. In a world of uncertainty, policy desirability depends not only on an agent's preferences but also on her beliefs about how that policy applies in varying states of the world. Economists generally assume that agents have preferences over actions that satisfy the axioms of subjective expected utility theory. Consequently, we may represent their preferences by a "utility" function over outcomes and a set of beliefs represented by a probability distribution over states of the world such that the agent prefers action A to action A' if and only if the expected utility of A is greater than the expected utility of A' .²⁶

Aggregate rationality requires that the group of preferences over actions derive from the preferences of the individuals in the group, and, equally, satisfy the axioms of subjective utility and can thus be represented by an expected utility function. But this requirement implies that social preference will violate the Pareto Criterion whenever individuals have both conflicting interests and disparate beliefs.²⁷

The intuition behind this claim is quite clear.²⁸ Consider an event E and its complement $\sim E$. Let society consist of only two people J and K . Suppose person J thinks that E is more probable than $\sim E$ while K thinks that $\sim E$ is more probable than E . Now consider two outcomes x and y such that J prefers x to y while K is indifferent between them. Consider now the lotteries (x,y) and (y,x) where (x,y) means that x is paid in event E and y in event $\sim E$. Given J 's beliefs, she prefers (x,y) to (y,x) and, as K is indifferent between them, the Pareto Criterion implies that society prefers (x,y) to (y,x) . Moreover, from this social preference we can infer that society, if it conforms to the axioms of subjective expected utility theory,²⁹ believes E is more probable than $\sim E$.

26. Notice that these preferences over actions are meant to represent the agent's well-being as induced by these actions. In some sense, the preferences represent "expected" well-being rather than realized well-being. We might ask why we should value "expected well-being" at all.

27. See Teddy Seidenfeld, Joseph B. Kadane & Mark J. Schervish, *On the Shared Preferences of Two Bayesian Decision Makers*, 86 J. PHIL. 225 (1989). JOHN BROOME, *WEIGHING GOODS: EQUALITY, UNCERTAINTY, AND TIME* (1995) discusses this conflict and opts for abandoning the Pareto Criterion for social preferences that satisfy the axioms of subjective expected utility theory.

28. This example is taken from BROOME, *supra* note 27 at 152-53.

29. This conclusion also relies on sufficient continuity in rewards. Let J 's valuation of x get closer and closer to indifference with y ; then the range of beliefs about E that sustain his choice must get closer and closer to 50% and we must impute that same belief about E to society.

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Now consider a second pair of outcomes w and z such that K prefers w to z while J is indifferent between them. Now consider the two lotteries (w, z) and (z, w) . K must prefer (z, w) to (w, z) as he thinks $\sim E$ is more likely than E . As J is indifferent between the two lotteries, the Pareto Criterion implies that society prefers (z, w) to (w, z) . But again, if society conforms to the axioms of subjective expected utility theory, society believes $\sim E$ is more probable than event E . This inconsistency in probabilistic beliefs indicates the inconsistency of the Pareto Criterion with the conception of aggregate rationality embedded in subjective expected utility theory.

C. Fairness

What allocations of goods and services are fair? One account, initially proposed by Duncan Foley, defines an allocation as fair when it is envy-free.³⁰ An allocation $x = (x_1, x_2, \dots, x_n)$ assigns a bundle x_j of goods and services to each individual j in a society of n individuals. We assume that each individual ranks allocations solely in terms of her own bundle x_j ; that is, each individual has self-interested preferences.³¹ An allocation is envy-free if each individual ranks her portion at least as highly as the portion of any other individual. Hal Varian proved that, for pure exchange economies, the competitive allocation from a society with an equal initial allocation of wealth is envy-free and, given the first welfare theorem, Pareto optimal.³²

This result follows quite intuitively. At the outset, before trade begins, the allocation is envy-free because each person has the same bundle of goods and services from which to trade. The initial allocation however may not be efficient. So trade under an efficient (competitive Walrasian) mechanism is instituted.³³ The resulting allocation will be efficient. It remains envy-free because, given the competitive market and the equal initial allocation, each party had the same “budget set” or set of bundles available in trade. Phrased differently, each person could have acquired the final bundle of goods and services that any other market agent acquired. So each person must be at least as satisfied with her actual bundle than any other obtainable bundle.

30. Duncan K. Foley, *Resource Allocation in the Public Sector*, 7 YALE ECON. ESSAYS 45, 73-76 (1967). Two mathematicians had earlier proposed a similar criterion. See L.E. Dubins & E.H. Spanier, *How to Cut a Cake Fairly*, 68 AM. MATHEMATICAL MONTHLY 1 (1961).

31. In fact, each agent need only have preferences over allocations that do not treat all allocations x that permute the individual bundles identically.

32. Hal R. Varian, *Distributive Justice, Welfare Economics, and the Theory of Fairness*, 4 PHIL. & PUB. AFF. 223, 240-47 (1975).

33. A Walrasian equilibrium is one in which no trades occur at non-equilibrium prices. There is a hypothetical auctioneer who posts prices until all markets clear and only then do trades occur. See GERARD DEBREU, *THEORY OF VALUE: AN AXIOMATIC ANALYSIS OF ECONOMIC EQUILIBRIUM* (2d ed. 1972).

Notice, however, the fragility of this result. If the initial allocation of goods and services is unequal then the final allocation will be efficient but probably not envy-free. The individual, call her *R*, with the largest initial share of resources faces better trading opportunities than the person, call her *P*, with the smallest initial share of resources. Obviously, *P* envies *R*'s initial allocation and that envy will remain after trade.

Similarly, if the economy includes production then there may be no envy free allocations that are also Pareto optimal. This result follows because not all goods in a production economy are tradeable. Specifically, though each person has an equal amount of leisure, the labor of different individuals may command different prices. LeBron James commands a higher wage than most other people because his talent as a basketball player is scarce. I might thus envy James' initial allocation of talent.

D. Autonomy as Democratic Self-Governance: Representative Democracy

Consideration of the normal electoral procedures for choosing legislatures (or assemblies) will clarify these distinctions. Consider a society that must make several legislative decisions: the extent and nature of health care to provide its citizenry, the form and extent of regulation of greenhouse gases, the scope and funding structure for a retirement program, which public works projects to fund, etc. Arrow's theorem assumes a framework of direct democracy.³⁴ Each individual in society has preferences over all possible legislative programs. Arrow asks, given these individual rankings of legislative programs, how should society rank these legislative programs?

Most societies, however, are representative democracies. Citizens have preferences over legislative programs, but they do not directly choose among them. Rather, they elect legislatures to enact a legislative program on their behalf. So, at best, the relevant choice procedure would ask individuals to rank legislatures rather than legislative programs. Rankings of legislatures might easily derive from our rankings of legislative programs as we might be able to identify each legislature with the legislative program it would enact.

In our actual procedures, however, voters do not, in legislative elections, rank the different legislatures that might arise; rather voters choose candidates who then form the legislature. Voters care fundamentally about legislatures (or legislative programs) and only derivatively about candidates.³⁵ Suppose that voting occurs seat-by-seat; *i.e.*, candidates declare for

34. K.J. ARROW, SOCIAL CHOICE AND INDIVIDUAL VALUES (3d ed. 2012).

35. Two points may require clarification. The results discussed in the text assume that the individual voter has fundamental preferences over legislatures or assemblies rather than legislative programs. From a consequentialist perspective, voters should care fundamentally about legislative programs. Starting here, however, makes matters worse rather than better. The analysis

particular seats and the votes are aggregated over each seat to identify the candidate that is chosen for that seat. Then a dictatorship is the only voting mechanism that produces a Pareto-optimal assembly for every (admissible) profile of individual rankings.³⁶

In this theorem, the Pareto Criterion conflicts directly with a non-dictatorship requirement. The intuitions that lie behind these two evaluative criteria are both very strong. It is not obvious that we would reject non-dictatorship in order to ensure that our electoral institutions satisfy the Pareto Criterion. After all, dictatorship satisfies the Pareto Criterion because the dictator will always choose her top-ranked assembly. But all other voters may consider this assembly a very bad one; all might even rank it last. So, though it is good for the dictator, we have no reason to think that it is good for anyone else. Some other assembly, even an inefficient one, might better serve everyone else in society.³⁷

E. Autonomy as Liberty

In 1970, Amartya Sen introduced “The Paradox of the Paretian Liberal.”³⁸ The paradox consists of a conflict between the Pareto Criterion and a condition of “liberalism” or, as I have phrased it, autonomy as liberty. Sen argued that individuals should have control over some aspect of their lives. He modeled this idea by stating that each individual had the power to determine the social ranking of some pair (x,y) of states. He then showed that for some preference profiles this liberal right, or this modicum of autonomy, would lead to Pareto inferior outcomes.

In Sen’s example, two individuals Prude (P) and Lewd (L) must decide whether to read *Lady Chatterley’s Lover*. There are four possible states of the world: both read the book (B), neither reads the book (N), Prude only reads the book (P) and Lewd only reads the book (L). Suppose Lewd ranks the alternatives $B > P > L > N$ while Prude ranks them $N > P > L > B$. Each has a right in the sense that Lewd can choose whether he reads the book or not while Prude can decide whether she reads the book or not. So Lewd chooses to read the book but Prude does not. State L

assumes that there is a well-defined (and known) correspondence between the composition of the legislature and the legislative program enacted. Second, the framework here applies to all commonly used electoral procedures including party list proportional representation systems. In these systems, each party is the candidate and the legislature is formed with members of the parties in proportion to the number of votes received by the party.

36. Jean-Pierre Benoit & Lewis Kornhauser, *Only a Dictatorship is Efficient*, 70 GAMES & ECON. BEHAVIOR 261 (2010). A less technical account appears in Jean-Pierre Benoit & Lewis Kornhauser, *Assembly-Based Preferences, Candidate-Based Procedures and the Voting Rights Act*, 68 S. CAL. L. REV. 1503 (1995).

37. Indeed, given a voter’s candidate ranking, we could infer her top-ranked assembly. From the candidate rankings we could then run a plurality rule election over assemblies. The winning assembly would be Pareto optimal. But it might not be much better than the one chosen by a dictatorial rule because the winning assembly may have received very few votes.

38. Amartya Sen, *The Impossibility of a Paretian Liberal*, 78 J. POL. ECON. 152 (1970).

prevails even though both parties prefer the state *P* in which only Prude reads the book.

F. Autonomy as Personal Responsibility

The freedom to choose requires that the agent bear the consequences of her choices. A conception of autonomy must thus distinguish consequences that are attributable to the agent's choices from those consequences that result from luck. Rawls, in *A Theory of Justice*, introduced the question of characterizing results for which the agent is responsible into the debate on justice.³⁹ Rawls famously argued that the agent was not responsible for her innate talents and then offered an account of what justice required to those with bad luck. Dworkin's elaboration of a theory of justice focused on equality of resources.⁴⁰ Dworkin emphasized that the agent had responsibility for the consequences of her autonomous choices. His argument heavily relied on a distinction between "brute luck" and "option luck"; the agent was not responsible for brute luck but was responsible for option luck.⁴¹

This structure of analysis obviously connects to the questions of responsibility and to Dworkin's distinction between brute and option luck. To define an economy, one must specify the total available set of resources and two sets of individual characteristics, those for which the agent is responsible and those for which she is not. Her well-being depends both on her share of the endowment of goods and on her characteristics, both those for which she is responsible and those for which she is not responsible.

The distinction between brute and option luck means, first, that those individuals with identical characteristics for which they are responsible should have identical well-being. Second, that individuals with identical characteristics for which they are not responsible – *i.e.*, individuals with identical brute luck – should receive identical compensation for their loss. The compatibility of these two requirements, however, depends on the nature of the correlate of the effects of brute and option luck on the agent's well-being. If the well-being of agents with bad luck are unusually responsive to that brute luck, no equilibrium that satisfies the Pareto Criterion will exist.⁴²

39. JOHN RAWLS, *A THEORY OF JUSTICE* (1971).

40. Ronald Dworkin, *What is Equality? Part 2: Equality of Resources*, 10 PHIL. & PUB. AFF. 283 (1981).

41. *See id.*

42. See MARC FLEURBAEY, *FAIRNESS, RESPONSIBILITY, AND WELFARE* (2008) for an exceptionally clear and comprehensive discussion of these issues.

G. Section 2 Summary

Economic analyses of a rule R often evaluate the performance of R in the model; R is either efficient or not efficient (or sometimes second- or third-best). To some economic analysts of law this judgment is fundamental; the normative desirability of the Pareto Criterion is a bedrock assumption, the truth of which is intuitively obvious. The Pareto Criterion does, indeed, have a strong normative appeal. If each person is better off in x than in y , how could it not be the case that x is socially better than y ?

This section has discussed six reasons that economists have offered to reject the Pareto Criterion. As plausible and innocuous as it may appear, it conflicts with other evaluative intuitions that have a correspondingly strong pull.

The argument of this section, however, is methodological as well as substantive. Each of the six reasons derives from a formal analysis of the logical compatibility of the Pareto Criterion with each of six other evaluative criteria.

Conclusion

Dagan and Kreitner have rightly argued for the use of economic analysis of law in non-consequentialist evaluation. I have argued that, nonetheless, they have underestimated both the set of methodologies that may advance our understanding and the extent to which the methodologies they indicate have already contributed to legal theory.

More significantly, normative economic theory advances both consequentialist and non-consequentialist evaluation in a way that Dagan and Kreitner do not identify. Economists have investigated the logical compatibility of a number of evaluative criteria. In particular, they have shown that the intuitively compelling, and superficially weak, Pareto Criterion conflicts with many other intuitively appealing evaluative criteria such as liberty, responsibility, self-governance, and fairness.

These investigations rely on a clear specification of each of the criteria studied. Clear specification must thus precede the analysis of logical compatibility. Similarly, measurement and aggregation too require the same prior specification of the value to be measured or aggregated. The task of specification of these values is not obviously an economic one but the shared task of scholars of many disciplines.