The Normative Turn in Public Choice

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I would like to talk today about a direction for public choice that is, for the most part, ignored in the scholarly literature on public choice. It is the use of public choice theory to propose and to try to implement reforms that we deem desirable.

I use the phrase "normative turn" in two senses. First, "turn" implies a change in direction. Second, as in "my turn," it also implies that it is time to make this change. I believe it is high time not only to propose but also to advocate and campaign for institutional reforms that we think will benefit society.

Throughout the ages, of course, there have been advocates of reform in many different policy areas. At the level of principle, Aristotle proclaimed proportionality a fundamental attribute of a just society, Jeremy Bentham argued for the greatest good for the greatest number, and John Rawls saw justice in raising the standards of the most disadvantaged. The principles they exhorted us to follow, however, do not carry us very far when it comes to deciding how many cabinet ministries a political party is entitled to, based on its seat share in parliament; how we make interpersonal comparisons of utility in trying to determine the greatest good; or how we measure disadvantage in trying to help out the worst off.

Jumping from high-minded principles to practical solutions, we should not be too ready to offer quick fixes, especially when there is a paucity of theory to trace out the likely consequences of these fixes. When, for example, should a country choose war over peace? While a strong response to Hitler's aggression proved necessary in the end, it is

far from clear that the assertive foreign policy that the United States pursued in Vietnam in the 1960s, and in Iraq since 2003, were or are justified. Other responses we have had to problems, such as urban renewal to wipe out urban blight—which often destroyed viable neighborhoods—or massive tax reductions to revive an economy—which sometimes created huge national debt—have proved no more helpful.

If noble principles are hollow, and quick fixes are too often quick failures, where does this leave us? Let me be clear that I think the primary task of theory, including public choice theory, is to provide explanations of behavior we observe in the world. This is certainly true of most of the papers that are being presented at these meetings, whether it is the behavior of voters, the behavior of presidents, or the behavior of individuals and institutions in between.

To be sure, there are theorists among us who find the world too messy to deal with and are both willing and able to create their own reality, whether it be a thought experiment or a mathematical model. On occasion, I have been guilty of such theoretical flights of fancy. But the imagined worlds of theorists, at least at these meetings, usually have some tie-in to how people make choices, either individually or collectively, and what consequences these choices have.

What I think is largely missing from this research paradigm are attempts to translate research findings into actions that might improve how individual and collective choices are made. In addition to writing articles and books, I believe we can afford to take some time out to advocate reforms that we find compelling—and work to get them implemented, or at least experimented with in trial runs. I would distinguish these efforts

from those who never tire of finding fault with a policy or program but do not propose constructive alternatives.

Thus, today there are numerous critics of the war in Iraq, many of whom say we should not have gotten involved in the first place. Well, we are involved, and it's now evident that terrible mistakes were made. The pertinent question is: How do we best get out, as ultimately we must?

We cannot address this question, in my opinion, without also asking how we might help to make Iraq a stable and democratic country (if this is indeed in the cards). I believe public choice theory, coupled with good local knowledge of the culture and society, can shed light on whose interests need to be represented, how this representation can best be achieved through the use of fair elections, and how executive, legislative and judicial institutions can be reformed to maintain security and the rule of law. On the other hand, if we believe elections and democratic institutions cannot do the job, we need to consider how the partition of Iraq into some kind of confederation might best reflect the diverse and divisive interests of its people.

The questions that I raise are eminently public choice questions. Unfortunately, we do not have good answers to many of them, especially in a country as faction-ridden and war-torn as Iraq today. So let me turn instead to issues on which I think our theory offers more sure-footed guidance.

At the risk of self-indulgence, I will briefly discuss two areas in which I have been an advocate of reform. I certainly do not think the reforms I've advocated offer the only answers—in fact, in one area, some members of this society have offered very different answers. Of course, they have the right to be wrong!

More seriously, I do not think you want to hear just my side of the debate. Instead, I thought it would be more useful for me to recount some of the ups and downs of my advocacy of reform in the two areas:

Election Procedures

I began working with Peter Fishburn, a mathematician at Penn State who subsequently moved to Bell Labs, in the late1970s on an election reform called approval voting. Under approval voting, voters can vote for as many candidates as they like—they are not restricted to voting for just one, as under plurality voting—and the candidate with the most approval votes wins.

Unlike the Borda count, the Hare system of single transferable vote (STV), and other ranking systems, voters do not rank candidates but simply approve or do not approve of them. Approval voting struck me as a simple and practicable way for voters better to express themselves than plurality voting, and certainly far less demanding than a ranking system, especially when the field of candidates is large.

Incidentally, approval voting is not exactly a new idea. It has been used, in different incarnations, to elect popes for many centuries and UN secretary-generals over several decades. It has also been used in places as far-flung as Venice in the 13th century and England in the 19th century. But there was little analysis of approval voting's properties until the 1970s.

After writing several articles on approval voting, comparing its properties with those of other systems, and attempting some empirical reconstruction of elections under approval voting, Fishburn and I pulled together our findings in a book, *Approval Voting* (Birkhäuser Boston, 1983). But well before the book appeared, I began a campaign to try

to get approval voting adopted, first in my native state of New Hampshire in time for its first-in-the-nation presidential primaries in early 1980.

Although I testified before House and Senate committees in the NH state legislature, met with the governor, appeared on radio and TV, and had generally favorable press in local newspapers like the *Concord Monitor* and the *Manchester Union-Leader* and national media like the *New York Times*, the bill to enact approval voting never got out of committee. Almost no politician took me, the prodigal son who had returned to enlighten the natives, seriously. Instead, New Hampshire politicians preferred to be innovative in other areas, such as enacting the first state lottery, because support of an income or sales tax to pay the state's bills would be the death knell of their careers. (This is still true today.)

So much for the Granite State. I met with politicians and testified in other states, including Vermont and New York, but to little avail. Only in North Dakota, which I never visited, did a state senator get an approval voting bill passed by the state senate in 1987, but it failed to win passage in North Dakota's house.

The only statewide but limited success we had was in Oregon in 1990, wherein the state legislature called a special election in which voters could vote for one or more of the following options to help finance education in the state: two levels of an income tax, two levels of a sales tax, or a general proposition to revise the system. Revise the system (without saying how) got the most approval, but it was purely an advisory vote; nothing more came of approval voting in Oregon.

But I was beginning to get help from political scientists like Jack Nagel and Henry Teune at the University of Pennsylvania and mathematician Sam Merrill at Wilkes

College, also in Pennyslvania. Nagel and Teune got officials in Atlantic City, NJ, to consider adopting approval voting at about the time that the casinos in that city were beginning to create major problems, and reform was in the air. Although nothing in the end happened in Atlantic City, Nagel, Teune, Merrill, and I helped convince the head of Pennsylvania's Democratic Party to use approval voting in a straw presidential vote at its 1983 state convention.

The greatest success for approval voting came in its adoption by major scientific and engineering societies, beginning in the mid-1980s and continuing to this day. About a dozen societies now use approval voting in their presidential and some other elections; my colleagues and I have analyzed ballot data from several of them. For the most part, these adoptions were not controversial, though the relative merits of approval voting versus the leading ranking systems were vigorously debated in some societies.

The most contentious adoption was by the Institute of Electrical and Electronic Engineers (IEEE), which has almost 400,000 members worldwide. Its leaders were attracted to approval voting when an insurgent candidate—representing the so-called working engineer (as opposed to the academics and insiders who dominated the society)—almost won the 1986 IEEE presidential election because two board-nominated candidates split the centrist vote.

Realizing that approval voting would allow board-nominated candidates to share the vote, the IEEE adopted approval voting in 1988 after the membership expressed dissatisfaction when the board nominated only one candidate in 1987. However, in 2002 the IEEE reverted to plurality voting when multiple candidates seemed no longer a

problem and approval voting therefore seemed unnecessary. I believe the IEEE may rue this choice in the future when multiple candidates run again.

No other society has reneged on its choice of approval voting, and all have seemed quite satisfied by the results. Our analysis of elections in several societies shows that consensus candidates tend to be chosen, who are generally Condorcet winners. Some elections have been extremely close, including the 2006 Public Choice Society election, which was decided by just one vote out of 79 that were cast for 5 candidates. The average voter voted for 2.1 candidates, with the four top candidates separated by only 4 votes.

What lessons do I take out of my experience from trying to get approval voting adopted? First, one is not likely to be successful unless one has support from within an organization. For example, it helps to know the president and have his or her support—or be that person oneself! Second, when the stakes are high because the organization is large, like the IEEE, or elections are public and there are more rewards to be garnered from winning, there will be more controversy.

Because elections are ultimately zero-sum for the candidates, they are likely to look carefully at whom an election reform will and will not benefit. Although this is true for serious contenders, however, fringe candidates, who have virtually no chance of winning, may have different goals—including not suffering from the wasted-vote phenomenon under plurality voting, whereby their supporters desert them for more viable candidates. Some libertarians, for example, have been supportive of approval voting, because they believe they will retain the support of their stalwarts even if these voters also vote for a more electable second choices.

Finally, the debate between proponents and opponents of approval voting has raised the question of whether there might be a voting systems that coherently combine approval and preference, enabling voters to express themselves more completely than under either approval voting or a ranking system alone. In fact, Remzi Sanver and I have written a paper on this subject, which Remzi is giving here.

We recommend two different systems for aggregating rankings that also include information on where voters draw the line between their approved and nonapproved candidates. I recently persuaded NYU's Politics Department to adopt one of these systems when approval voting gave, in the view of several Department members, unsatisfactory results. But I'll save this story for a later time.

Dispute-Resolution Procedures

I will be quite brief in this area, because we have so far not succeeded in getting the procedure we advocate adopted by any major users. The "we" in this case is Alan Taylor, a mathematician at Union College, and I.

Our efforts began when, in the early 1990s, we solved a 50-year-old mathematical problem: How to cut a cake—which is a metaphor for a heterogeneous good that different people may value differently—into pieces such that everyone thinks his or her piece (or pieces) is the most valued. This division is called "envy-free," because nobody envies anybody else for getting a more valued piece.

While it was known that such a division of a cake existed, there was no known algorithm, or step-by-step procedure, for making the cuts. We found such a constructive procedure, but it was very complex. Moreover, it required an unbounded number of cuts,

which meant that we could not specify how many cuts were needed, or even a maximum, though we could show that this number was finite.

Being totally impractical, we searched for other fair-division procedures that people might understand and be able to use to settle disputes. We surveyed many in our book, *Fair Division: From Cake-Cutting to Dispute Resolution* (Cambridge University Press, 1996), devoting two chapters to a 2-person procedure we called "adjusted winner" (AW).

Under AW, two players put points on the goods they wish to divide, or the issues they wish to settle, with the player who puts more points on an item winning it initially. This is followed by a so-called adjustment, whereby at most one good or issue is split, not necessarily equally; this requires only a simple calculation to determine. The allocation that results satisfies the properties of efficiency, envy-freeness, and equitability (which I won't define here). In addition, because AW is difficult to exploit unless one player has complete information about an opponent's point allocation, it is quite robust against manipulation.

Taylor and I were so enamored of the simplicity and practicality of AW that we wrote a popular book, *The Win-Win Solution: Guaranteeing Fair Shares to Everybody* (W.W. Norton, 1999), which has now been translated into six languages. This book has almost no math, makes AW its centerpiece, and illustrates its application with several real-life examples, from divorce to international border disputes.

To prevent AW's commercialization by others, NYU patented the AW algorithm in 1999 and has since attempted, largely unsuccessfully, to market AW by selling the

patent rights. Our patent is unusual; it seems to have been the first ever issued for a dispute-resolution procedure, or any legal procedure for that matter.

Although NYU received two offers from alternative dispute resolution (ADR) firms, both of which wanted to use AW to do dispute resolution over the internet (this was during the dot-com boom), NYU deemed these offers unsatisfactory. Since then, I have made numerous presentations to bar associations and given continuing legal education seminars to lawyers. In addition, I have discussed the use of AW with investment banks doing mergers and acquisitions, venture capitalists interested in the "next big thing," and companies and unions hurt by disputes that go unresolved.

I believe our lack of success in selling AW stems from two problems. First, the idea of settling disputes using a mathematical algorithm comes out of left field for most of the ADR community, whose practitioners tend to place more importance on culture and communication—not on finding an efficient way to arrive at a fair settlement. Second, for lawyers and especially litigators, winning is the order of the day; one upsmanship—and the verbal tactics, body language, and psychology to achieve it—become paramount in their attempts to get the upper hand in trials or achieve favorable out-of-court settlements.

So far, mediators, arbitrators, and lawyers have paid relatively little attention to better ways of trading off, in an optimal way, the different interests of their clients. The idea that a win-win solution can be achieved using a mathematical algorithm is foreign to many and, for some, threatening to their livelihood. Although dispute resolution is a multi-billion dollar business, we are still a long way from convincing professionals in the field, as well as the disputants themselves, that there are systematic and rigorous approaches to settling their disputes.

While the intellectual foundations of AW, and fair-division research generally, do not come out of public choice theory as such, there is no doubt that when public-sector disputes go unsettled, as in the New York City's 3-day subway and bus strike in December 2005, the interests of the public are greatly affected. I believe we need to consider better and quicker ways for settling not only these disputes but also private disputes in which plant closures or strikes may affect thousands or tens of thousands of people. Of course, this is even more true of civil and international conflicts that may erupt into deadly and ruinous wars.

Conclusions

In my view, the same mathematical ideas that have been used so successfully in the development of social choice theory, and that have fostered such reforms as approval voting, can be further developed and applied to fair division and, from a normative perspective, better procedures for dispute resolution. In trying to translate theory into practice, we should not expect instant success in getting our pet ideas, no matter how theoretically compelling, implemented.

But this does not mean that we should not make an effort to push for their serious consideration, if not their adoption. At a minimum, the debate that ensues will introduce new perspectives and help us improve, or at least make more relevant, our theory.

Indeed, there are now several papers that propose to aggregate approval votes in different ways to achieve different ends—for example, proportional representation of factions in a legislature—and other papers that propose different fairness points, on the Pareto frontier, from that given by AW.

Thereby we come full circle: Going from theory to practice—and then back to refinements in the theory. This, in my opinion, is the key to the development of good theory and—just as important—its application to pressing problems that we may help societies ameliorate, if not solve outright.