Administrative Law & Regulation

(Mis)Applications of Behavioral Economics to Regulation: The Importance of Public Choice Architecture

*By Adam C. Smith**

I. Introduction

Friedrich Hayek once said, "Unfortunately, the popular effect of this scientific advance has been a belief, seemingly shared by many scientists, that the range of our ignorance is steadily diminishing and that we can therefore aim at more comprehensive and deliberate control of all human activities. It is for this reason that those intoxicated by the advance of knowledge so often become the enemies of freedom."[1] This statement encapsulates a broad wariness of government intervention, even—and perhaps especially—intervention based upon scientific findings, into private enterprise. The problem, as Hayek points out, is that such control mechanisms, however scientifically informed, inevitably lead to unwanted consequences, often stifling the very creativity needed to foster the beneficial spontaneous order of the marketplace.

A recent strand of this government intervention has gone under the label of "libertarian paternalism," a concept popularized primarily by economist Richard Thaler and legal scholar Cass Sunstein. Sunstein and Thaler draw upon one of the most recent advances in economic research involving the integration of psychology into economics. This area, widely known as behavioral economics, has forced economists to rethink the limitations of rational choice and how deviating from the more naïve rational choice paradigm might better inform our understanding of human behavior.

No sooner has this research emerged than its practitioners are calling for its use in policy. As Thaler and Sunstein argue, the results of behavioral economics demonstrate that the "anti-paternalism" advocated by most economists belies the lessons offered by the behavioral economics research program.[2] These lessons at the very least call for an "anti-anti-paternalism" that recognizes the benefits of "soft" interventions into market activity. The purpose of such interventions is to correct for the various biases discovered in laboratory research.

The discoveries of behavioral economics are indeed fascinating and may very well produce the most important research results in a generation. Nevertheless, I argue contra Thaler and Sunstein that these results do not support policy intervention into market activities prima facie, soft or otherwise. They in fact reduce the level of competency we can expect from public officials if the biases of behavioral economics are applicable to the policymaker himself. I argue that this misapplication of behavioral economics is a manifestation of a larger problem, that of failing to produce a theory of political economy that incorporates the very arguments being used to prescribe policy. Until these concerns are addressed, anti-paternalism remains a viable position.

II. Anti-Anti-Paternalism

Before tackling the lacuna in the behavioral law and economics literature outlined above, I will first explore the link between research and policy in this emerging field. Cass Sunstein, one of the leading voices of behavioral law and economics and current Administrator of the Office of Information and Regulatory Affairs, outlines three goals of policy-relevant research[3]: positive, normative, and prescriptive. Positive research seeks to better inform our predictions regarding human behavior. It is simply meant to assess how the world appears to be working. Normative research advocates a certain value-laden goal for human endeavors that ostensibly is in the interest of the people affected by these choices. Prescriptive work follows from this advocacy by demonstrating how changes in certain institutional features might better orient our actions toward these normative goals.

Using these three approaches, Sunstein shows how positive research in the field of behavioral law and economics can prescribe better normative policy that will allow people to achieve the goals that they actually want. He bases this claim on a robust set of findings showing how people are biased in their decision-making in a variety of contexts.[4] He argues that if the people making these choices are lacking in their understanding of the broader ramifications of their choice, then behavioral correction through better "choice architecture" could facilitate better decision-making for both the people choosing and those affected by their choice.

It follows then that a dogmatic adherence to anti-paternalism is unwarranted, or at the very least a stance of "anti-anti-paternalism" becomes more credible. If people can be made better off, based upon their own unique set of preferences, then paternalism may be justified. Hence, these findings have challenged the notion of anti-paternalism as a normative argument against government intervention into private modes of choice.

In the same article, Sunstein touches upon the problem of public officials exercising authority under the same biases as their private brethren. He states:

> None of these points makes a firm case for legal paternalism, particularly since bureaucrats may be subject

** Adam Smith earned his Ph.D. from George Mason University, where he specialized in experimental economics and political economy. His academic work involves experimental applications in political economy, regulation involving behavioral economics, the economics of decision-making when no external enforcement is readily available, and the recent economic crisis of 2008-2010 with a focus on the development of the Troubled Assets Relief Program. Smith is also a visiting scholar with the Regulatory Studies Center at George Washington University. He is published in* Regulation *magazine, and the peer-reviewed journals* Public Choice *and* Social Choice & Welfare. *Smith joined the faculty of Johnson & Wales University in the fall of 2010.*

to the same cognitive and motivational distortions as everyone else. But they do suggest that objections to paternalism should be empirical and pragmatic, having to do with the possibility of education and likely failures of government response, rather than a priori in nature.[5]

Hence, the findings themselves do not provide sufficient foundation in advocating legal paternalism. Sunstein does, however, challenge those who would advocate anti-paternalism on *a priori* grounds, stating that the merits of paternalism should be considered an empirical and pragmatic matter.

Later, Sunstein, along with his behavioral law and economics coauthor Richard Thaler, outlined a specific case where what they now term "libertarian paternalism" would be effective in better organizing private decision-making.[6] In their example, a school administrator is considering where to place certain foods in a school cafeteria. They begin the example by pointing out that the administrator has to choose something, as the food will not just sort itself. In addition, the administrator has a preference to have kids eat healthy foods instead of junk foods. Accordingly, as a "nudge," the administrator could place healthier choices in the front of the line, which would make kids more likely to choose them, thereby providing a better outcome through behavioral correction, albeit of the softer variety. Alternatives to this scheme could be random ordering, ordering to maximize some other preference such as maximizing profits, or even doing the opposite by putting desserts first. Yet each of these seem less desirable as random ordering does not seem to benefit anybody and may prevent the coordination of kids during lunch time. Profit maximization may benefit food services but would involve having kids eat more junk food than the administrator prefers. Finally, doing the opposite of the administrator's preference would be just that.

This example fits nicely within Thaler and Sunstein's preferred intervention method of libertarian paternalism: libertarian because it does not impose a choice on the chooser and paternalism because the overall choice architecture is being manipulated through outside authority. This improvement of choice architecture is explored within numerous other settings in Thaler and Sunstein's popular book, *Nudge*.[7] *Nudge* utilizes libertarian paternalism principles to outline cases where nudges could improve choices, thus benefiting the lives of choosers with minimal intervention.

Along with a number of examples, the authors offer a set of responses to common objections to libertarian paternalism.[8] I will briefly summarize these given their importance to my own argument. First is the slippery slope argument, which claims that allowing for intrusive behavior of a softer variety will inevitably give way to intrusive behavior of a harder variety (in other words, when a nudge becomes a shove). They respond that nudges should be judged first on their own merits before invoking the slippery slope argument. They also show how several of their chosen nudges provide a steep slope for those who would attempt to transform soft paternalism into hard paternalism. Finally, they argue that—just like with the cafeteria example— a default position is requisite in many choice contexts. Hence, avoiding libertarian paternalism on the basis of slippery slope concerns may very well give way to an initial default of hard paternalism instead.

The next objection is the idea that public officials will become corrupt and in turn use nudges for private advantage. Their responses are two. First, public officials and private entrepreneurs both may be tempted to gain from private advantage. So any attribution of villainous motives should be applied equally across the two spheres (see Buchanan's dictum below). Second, they argue that their nudges instill greater transparency into choice architecture and hope that such transparency will permeate further into political discourse through publicly reported votes, earmarked legislation items, and contributions from lobbyists.[9]

They briefly respond to the idea that people should be allowed to fail, particularly if they are cognizant of their actions. While they have no objection to this latter behavior, they question whether all choosers are indeed cognizant of making bad choices. If some choices could be improved with outside assistance, then this assistance should be made available to them.

They then discuss the question of whether redistribution through government is ethical and how nudges could conceivably add to these undesirable transfers. While arguing that redistribution itself is not wrong or even undesirable, they confine their advocacy to only those programs where a default has to be defined anyway. Here again they reiterate their claim that certain policies require and are improved through establishment of an effective default position. Those policies that do not require such a position should not utilize nudges.

They next tackle the issue of subliminal advertising and its ethical use as a nudge. While they envision difficult cases where such nudges could be conceivably justified, such as to combat violent crime, excessive drinking, or tax evasion, they ultimately side against this practice, even if subliminal advertising is publicly disclosed in advance, stating that "manipulation of this kind is objectionable precisely because it is invisible and thus impossible to monitor."[10] Hence, they do not advocate nudges of the "invisible" variety.

Finally, they discuss the question of neutrality and whether public officials are in a position to know what is best for those doing the choosing. Here they appeal to expertise. They argue that in the case of decisions in which much is being required from the chooser, such as in choosing a mortgage plan, experts exist who would be better able to choose on behalf of the chooser than the chooser herself. They acknowledge that these experts may be self-interested but conclude that situations where conflicts of interest arise could be spotted *ex ante* and avoided.

III. The Principle of the Extended Present

Thaler and Sunstein offer convincing evidence that choice is indeed often uninformed and particularly vulnerable to the context in which it is made. Nonetheless, I will argue using longstanding public choice scholarship that their advocacy of nudges is premature, given their lack of reference to actual public choice architecture in which policy would be implemented. Most importantly, I will demonstrate that public choice scholarship should be utilized alongside the discoveries of behavioral law and economics if beneficial policy outcomes are to emerge. As Kenneth E. Boulding explains, previous research has something to offer to current research paradigms through what he termed "the principle of the extended present."[11] As new topics are explored and new knowledge gained, it is paramount that we not relegate old knowledge to the dustbin, particularly when this old knowledge is directly applicable and complementary to new research paradigms. Accordingly, it is often necessary to revisit the wisdom of previous scholars to gain perspective over current debates.

In his Nobel address, James M. Buchanan wrote, "The relevant difference between markets and politics does not lie in the kinds of values/interest that persons pursue, but in the conditions under which they pursue their various interests."[12] In other words, the persons who populate the public sphere are much like their private brethren in that they are susceptible to the same values, biases, and incentives in how they choose. It is instead the context in which they act that largely determines the divergence in outcomes. Indeed the Public Choice program, which Buchanan helped shepherd, has sought to put decision-making within the public sphere on the same footing as decision-making within the private sphere. Once the same assumptions regarding preferences are maintained across both spheres, the challenge then becomes determining what institutional and environmental features determine choice in the operative setting.

As I noted above, both Thaler and Sunstein have echoed Buchanan's dictum in their analysis. It is true that we should not judge humans working in the public sphere any harsher than in the private sphere. To assume that public officials are inherently corrupt and will botch any attempt at producing a useful nudge would be just as cavalier as stating that market participants are inherently greedy and will botch any attempt at beneficial exchange. As Thaler and Sunstein so aptly articulate, it is the choice architecture before the person that is most responsible for poor choices, not some inherent deficiency in people. They point out that though people are cognitively limited, they are generally honest and careful in making their choices. But the context within which decisions are made can be difficult to navigate and may lead to undesirable outcomes not only for the person making the decision but society at large.

Thaler and Sunstein are clearly right in that choice does not occur in a vacuum. This insight must be applied, however, consistently across public and private spheres. In other words, there should be a public choice architecture to accompany the private choice architecture they present, at least if these theories are to be applied at the policy level. To operate effectively, Buchanan's dictum not only applies to how we model the decision-maker but how we model the choice architecture in which he decides. This does not mean that we should assume that the same choice architecture exists across both contexts. Nothing could be less likely. Instead, it means that to competently advocate policy, we must examine both contexts for what they are. As Buchanan has written elsewhere, we must examine "politics without romance."[13]

Fortunately, such analysis of public choice architecture need not be built from scratch. A robust literature already exists in the field of Public Choice, particularly within the influential Bloomington School.[14] The Bloomington School has provided detailed analysis of public choice architecture using a combination of theory and empirics. Going under the label of institutional analysis, this movement has made significant progress in exposing just how choice operates within public contexts.

Elinor Ostrom, Nobel Prize winner and intellectual leader of the Bloomington School, devised an agenda for the study of institutions in practice. Her short list of institutions[15] represents the basic context we must identify in understanding the production of policy. These components are:

(1) *Position rules* that specify a set of positions and how many participants hold each position.

(2) *Boundary rules* that specify how participants are chosen to hold these positions and how participants leave these positions.

(3) *Scope rules* that specify the set of outcomes that may be affected and the external inducements and/or costs assigned to each of these outcomes.

(4) *Authority rules* that specify the set of actions assigned to a position at a particular node.

(5) *Aggregation rules* that specify the decision function to be used at a particular node to map actions into intermediate or final outcomes.

(6) *Information rules* that authorize channels of communication among participants in positions and specify the language and form in which communication will take place.

(7) *Payoff rules* that prescribe how benefits and costs are to be distributed to participants in positions.

While certainly not exhaustive, this list provides a useful template of what is needed to understand how choice operates in public contexts. Again, as Thaler and Sunstein point out, understanding the choice architecture (i.e. institutions) by which decisions are rendered is crucial in determining the likelihood of beneficial outcomes.

Yet behavioral theorists are quick to assume away these difficulties. Thomas A. Lambert buttresses this claim in response to another behavioral theorist. He states,

> Professor Slovic[[16]] advocates a governmental fix *without first asking* whether the government is institutionally capable of correcting individuals' affect-induced tendency to overestimate a risk of terrorism. This is a crucial oversight since the answer to the question is probably no. As an initial matter, there is no reason to believe that bureaucrats are any less susceptible to cognitive quirks than the citizens they seek to protect. More fundamentally, a democratically accountable agency faces *institutional* constraints that would render it incapable of correcting affect-induced overestimation of terrorism risks.[17]

Thaler and Sunstein's responses to potential objections reflect a similar aloofness regarding the actual institutions by which public decisions are rendered. For example, as I presented above, they argue that the body politic will be sufficiently informed to ward off any potential conflicting interest between policymakers (or nudgemakers) and those who would be affected by these nudges. This assessment that the sufficient level of information exists to counter any attempts at confiscating gains for private use through public nudges is unsubstantiated by the authors. With no accompanying analysis of the relevant institutional safeguards against such behavior, it is unclear where Thaler and Sunstein find their support for such an assertion. In addition, Thaler and Sunstein are naively optimistic in their hope that greater transparency will mute corrupt decision-making or that undesirable redistribution will be restrained by the limits of Thaler and Sunstein's own guidelines for proper nudgemaking. It is extraordinarily difficult to fortify policy so that special interests cannot creep in. To suggest otherwise is hubris.

Turning to the commonly-used argument of the necessity of a default position, the authors are right, of course, that in many cases a default must be chosen. After all, Ronald H. Coase made this point in reference to the establishment of property rights when transaction costs prohibit private adjudication.[18] In cases like this, the proper default should be a good one, perhaps informed by insights from behavioral economics. It should equally be informed, though, by the insights of Public Choice. What does it matter if the proper behavioral considerations are taken into account at the formative level if the actual administrator simply chooses to ignore them or worse uses them to gain an undesirable end?[19]

IV. The Importance of Public Choice Architecture

Incorporating public choice architecture into prescriptive discussion is important, for these institutions will inevitably determine the effectiveness of behavioral economic policy (or any other policy for that matter). Edward L. Glaeser has taken preliminary steps in doing so by modeling the choice architecture across two corresponding contexts, one public and one private.[20] He starts from a position of behavioral symmetry across the two contexts and then introduces certain institutional parameters to estimate the capacity for bias in decision-making. He outlines three cases where the capacity for error is endogenous to the private or public context. He finds in each case that the public context is likely to generate more errors, not fewer, than the private context. As he maintains, "the flaws in human cognition should make us more, not less, wary about trusting government decisionmaking. The debate over paternalism must weight private and public errors."

Indeed, once we incorporate institutional mechanisms by which choice is effected, it no longer becomes clear that behavioral economic policy directly follows from its relevant research findings, even when we start from the same cognitive assumptions. Knowledge of the basic institutions of political decision-making is needed to understand the interaction between policy recommendation and political action. At a minimum, those who advocate policy based upon laboratory research should be able to show how their policy recommendations will operate effectively through the various rules Ostrom presents.

This lack of discussion of choice architecture in the public sphere constitutes the central dilemma of behavioral economic policy. Drury D. Stevenson provides a thought experiment that encapsulates this lesson nicely.[21] He posits the idea that a vaccination for cocaine addiction—which is in fact already in existence—might be utilized along the libertarian paternalism contours that Sunstein and Thaler promote. The example is useful in that addiction to hard drugs is something most people find abhorrent and a ready candidate for positive nudging. As I presented above, Sunstein and Thaler even use drug addiction as a possible candidate that might justify subliminal nudging. The thought experiment draws out a larger argument of this paper, so I will briefly discuss Stevenson's thesis.

Stevenson outlines several environments where a nudge in the form of a default of requiring vaccinations against cocaine addiction might be considered beneficial to society at large. Prisoners incarcerated on drug charges, welfare recipients, public schoolchildren, and even air traffic controllers are all examples Stevenson uses to illustrate his premise. The central idea is this: We can think of various reasons that all of the above categories of persons would benefit from a default of vaccination. The problem, though, is that these considerations would take place alongside stronger inclinations on the part of policymakers that would substitute for and in some cases dominate any considerations led by libertarian paternalism.

Take welfare recipients as an example. Having welfare recipients accept vaccination against cocaine abuse as a condition for receiving aid could be considered beneficial on libertarian paternalistic grounds. Welfare recipients are most likely better off without pouring scarce resources into an addiction. Instead, these funds should be used for their intended purpose of bringing welfare recipients out of poverty. Furthermore, welfare acceptance is voluntary so recipients are free to opt out of the program altogether if they find cocaine vaccination too invasive of their private activity. The problem, though, is that this consideration based upon the logic of libertarian paternalism would inevitably reside alongside other considerations that do not follow from libertarian paternalism and it becomes difficult to divorce this pure motive of nudging from other motives.

As Stevenson points out, scholars such as Christina Fong argue that reciprocity, not rational choice optimization, is the primary motivator behind redistribution through the welfare system.[22] That is, voters are generally sympathetic to the plight of the poor and are willing to provide more resources than a rational choice model would predict, but only when they feel that the poor are not wasting redistributed funds on illicit substances such as cocaine or crack. Once these ulterior motives are discovered, voters tend to be largely unsympathetic to these wayward recipients and are willing to incur a cost to punish them, even when this punishment is negative-sum. Accordingly, voters are far more likely to punish wayward recipients based upon disapprobation rather than a consideration of optimal redistribution.

If this is indeed the case, then policymakers will undoubtedly respond to these other motives alongside of or even in substitution of libertarian paternalism. To illustrate this point, compare the welfare scenario to that of public schools. Cocaine vaccination could be beneficial in these sorts of public environments, as it would prevent early addiction and stop the contagion of addiction fostered by peer pressure and network externalities. Despite these benefits, Stevenson maintains that policymakers are far more likely to be sympathetic to this latter category of persons than welfare recipients and accordingly will be far less likely to impose vaccinations based upon other motives such as reciprocity. Instead, any gains from having a default of vaccination would be balanced against considerations of imposing an unwanted practice. In other words, a nudge would be less likely to turn into a shove.

This comparison shows that what the economist wishes to implement is not always conducive to the public choice environment. Stevenson's thought experiment illustrates the dilemma policymakers face when presented with a viable means of nudging. Contra the cafeteria example, encouraging cocaine vaccination would undeniably be useful in certain environments but would be equally likely to run up against countervailing notions of reciprocity and social utilitarianism that have little to do with libertarian paternalism. The thought experiment is certainly not trivial as the state of Florida just passed a requirement that welfare recipients be screened for drug use. It is easy to imagine this enforced drug screening moving to enforced vaccination. It is difficult to see how libertarian paternalism is the dominant force behind these political outcomes.

Ignoring the policymaking dimension is unfortunately nothing new in paternalistic attitudes generated by economic research. James Tobin, an advocate of many policy initiatives fraught with political difficulties, such as incomes policy and the "Tobin tax" on foreign exchange reserves, once responded in an interview regarding the skepticism of Buchanan and the broader Public Choice school:

> If we are advising government officials, politicians, voters, it's not for us economists to play games with them. It's not for Keynes to say, I am not going to suppress the *General Theory* and not tell the House of Commons, the Labour Party, the Tories, whomever, that it would be possible to reduce unemployment by public works expenditure. If I am giving advice to them about war finance—or whatever else my advice will be not to do bad things—I am not going to decide myself that they are so evil and irresponsible that I don't give them advice about what actions will do what. I don't think that Jim Buchanan has, or I have, the right to withhold advice from Presidents of the United States or Members of Congress or the electorate on the grounds that if they knew what we know, they would misuse it. I don't think that is for us to decide."[23]

Tobin's remarks get at the heart of this dilemma and expose the real danger of advocacy without institutional analysis. Tobin's assertion that it is not for the economist to decide whether policymakers are capable of implementing their suggested policy is difficult to reconcile with the purported objective of prescriptive analysis; that is, using theory to better orient behavior to acceptable normative goals. If policy is ineffective in gaining these goals, whether due to the base theory or to some aspect of the political institutions through which it will be administered, then it cannot be considered a valid recommendation. After all, what results from one's recommendations is the outcome of importance, not the substance of the recommendations themselves.

A similar conclusion can be applied to behavioral economic policy. It is not the theory that is in question. The more popular results of behavioral economics have been replicated across a wide range of environments and are robust to a variety of institutional parameters. Nevertheless, the organization of this research into a framework that incorporates the policymaker herself is sorely lacking.

V. Conclusion

So why should those who hold anti-paternalistic views cede their pessimism, even on *a priori* grounds? Behavioral economists have failed to produce a theory that speaks to how policy will bring about effective change in practice. Barring such evidence, it seems that those who advocate a stance of anti-paternalism should find more reason to advocate their stance on *a priori* grounds based upon the findings of behavioral economics as they demonstrate even greater shortcomings in human decision-making than previously recognized. Sunstein's original claim that these results endorse a sentiment of anti-anti-paternalism amounts to stating that results showing that humans are more flawed in making decisions than we previously believed prescribes greater responsibility for humans at the level of government with its accompanying expansion in discretion and authority over a vastly more complex set of human interactions. Again, far from challenging anti-paternalism, behavioral economics seems to offer new evidence toward strengthening this position. At the very least, it does not *ipso facto* call for a cessation in such attitudes.

At the heart of this non-sequitur is the lack of nuance in describing the relevant institutions and environmental features before the so-called planner; that is, the public choice architecture by which decisions are rendered. It is ironic that a research program that so carefully examines the choice architecture in the private sphere would fail to do so in the public sphere. This violates Buchanan's dictum that choice in the marketplace and choice in politics should be assessed from the same state of assumptions. If indeed choice does operate differently in practice, then a theory incorporating the decisions of policymakers must account for this. In the context of implications derived from behavioral economics, a theory must be offered to show how policymakers themselves will somehow not be susceptible to the very biases and miscalculations that they seek to curtail in the marketplace. Giving policymakers access to laboratory research or fine-tuned optimization schemes simply won't do. After all, subjects often do just as poorly, even when offered these same tools. Why should policymakers be any different?

As the ever-prescient Hayek also said, "Are we really so confident that we have achieved the end of all wisdom that, in order to reach more quickly certain now visible goals, we can afford to dispense with the assistance which we received in the past from unplanned development and from our gradual adaptation of old arrangements to new purposes?"[24] It is, after all, through our freedom to choose that the spontaneous order of the marketplace corrects for many of the behavioral aberrations we encounter in the laboratory. Richard Thaler ironically provides one of the strongest examples of this in his private capacity as a partner in the firm Fuller & Thaler Asset Management, Inc., which arbitrages against perceived behavioral aberrations in investment markets.[25] Thaler's firm is a shining example of how to properly incorporate newly-acquired knowledge from the frontiers of scientific discovery, not through paternalistic coercion, but through voluntary, competitive recourse.

This reinforces the notion that adopting behavioral economics into policymaking must consider not only the private choice architecture in which it hopes to improve but the public choice architecture in which it must inevitably operate. This is why it is imperative that we couch these discoveries within pre-existing theories of political economy. Let us hope, in the case of behavioral economics applied to law, that the equally-important findings in the Public Choice and Bloomington Schools are at some point bound to this still-maturing field of discovery.

Endnotes

1 Friedrich A. Hayek, The Constitution of Liberty 26 (1960).

2 Richard H. Thaler & Cass R. Sunstein, *Libertarian Paternalism*, 93 Am. Econ. Rev. 175 (2003).

3 Cass R. Sunstein, *Behavioral Analysis of Law*, 64 U. Chi. L. Rev. 1175 (1997).

4 *See, e.g.*, Daniel Kahneman, Nobel Prize Lecture: Maps of Bounded Rationality (Dec. 8, 2002), available at http://www.nobelprize.org/mediaplayer/index.php?id=530 (presenting a survey of these studies)

5 Sunstein, *supra* note 3, at 1178.

6 Thaler & Sunstein, *supra* note 2.

7 Richard H. Thaler & Cass R. Sunstein, Nudge (2008).

8 *Id.*, chapter 17.

9 *Id.* at 243.

10 *Id.* at 249.

11 Kenneth E. Boulding, *After Samuelson, Who Needs Adam Smith?*, 3 Hist. Pol. Econ. 225 (1971).

12 James M. Buchanan, *The Constitution of Economic Policy*, 77 Am. Econ. Rev. 243 (1987).

13 James M. Buchanan, Better than Plowing and Other Personal Essays (1992).

14 See Paul Dragos Aligica & Peter J. Boettke, Challenging Institutional Analysis and Development: The Bloomington School (2009) for a survey of this literature.

15 Elinor Ostrom, *An Agenda for the Study of Institutions*, Pub. Choice, Vol. 48, No. 1, at 3, 16 (1986).

16 *See* Paul Slovic, The Perception of Risk (2000).

17 Thomas A. Lambert, *Two Mistakes Behavioralists Make: A Response to Professors Feigenson et al. and Professor Slovic*, 69 Mo. L. Rev. 1053, 1059 (2004) (emphasis in original).

18 Ronald H. Coase, *The Problem of Social Cost*, 3 J.L. & Econ. 1 (1960).

19 See the example of cocaine vaccination below.

20 Edward L. Glaeser, *Paternalism and Psychology*, 73 U. Chi. L. Rev. 133 (2006).

21 Drury D. Stevenson, *Libertarian Paternalism: The Cocaine Vaccine as a Test Case for the Sunstein/Thaler Model*, 1 Rutgers J.L. & Urb. Pol'y 4 (2005).

22 *See* Christina Fong, *Social Preferences, Self-Interest, and the Demand for Redistribution*, 82 J. Pub. Econ. 225 (2001).

23 *Quoted in* Brian Snowdon & Howard R. Vane, Modern Macroeconomics: Its Origins, Development and Current State 155 (2005).

24 Friedrich A. Hayek, The Constitution of Liberty 291-2 (1960).

25 I was alerted to this connection by Geoffrey Manne in an online symposium found at the following url: http://truthonthemarket.com/2010/12/06/geoffrey-manne-on-interesting-doesnt-necessarily-mean-policy-relevant/.