The Moral Voter Hypothesis: Economic and Normative Aspects of Public Policy and Law within Democracies [1]

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Abstract

This paper develops a model of self-interested norm-driven behavior and uses it to analyze public policy formation within a democracy. If voters are concerned with broad normative issues, politicians will take policy positions in part to advance voter interests in "virtue" or "the public interest" as voters assess it. Consequently, many of the laws adopted within a democracy will advance private normative agendas as understood by pivotal members of the electorate. In this sense, a "public interest" interpretation of at least some government policies is entirely consistent with a rational-choice-based analysis of decision making within a democracy.

Many of the positive predictions of the moral voter hypothesis differ from those of narrow self-interested models of policy formation. For example, the model predicts that laws regulating conventional externalities will be more stringent (or less stringent) than can be justified by ordinary economic considerations whenever such laws affect behavior that is relevant for widely held normative theories. Criminal sentences for some crimes in the United States are consistent with the model's implications.

JEL Categories: H1, Z1, D7, D6

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I. Introduction

The “public interest” critique of "self-interest"-based models of politics call attention to a variety of public policies that either contradict self-interest-based analysis or are beyond the scope of such models. For example, there is the long-standing argument in public finance about the extent to which some government services are provided simply because they are “good” or “meritorious” rather than as consequences of special interest group activities and/or voter demands to correct a traditional market failure (Musgrave, 1959; Head, 1966). More severe critics of the rational politics approach reject fundamental propositions about private optimization as a methodology for analyzing public policy formation and argue that, rather than self-interest, a sense of public interest motivates policies (Lewin, 1991; Udehn, 1996). The aim of this paper is to address simultaneously the critics of rational choice models who claim that rational decision making cannot account for norm-driven behavior and public choice practitioners who argue that only models based on narrow self-interest models can account for public policy in modern democracies.

Several theories have been developed that partially bridge the gap between normative and pragmatic interpretations of government rule making. Olson (1993) points out that the encompassing interest of dictatorships may lead them to make investments that tend to maximize national income. Becker (1983) demonstrates that political decisions generated in a competitive political system dominated by well-organized interest groups tend to be Pareto efficient. Consequently, laws created to advance the self-interest of dictators or powerful interest groups may also broadly advance the public's interest. Noam (1980) and Wittman (1995) argue that democracies may satisfy the Pareto norms even if no single voter casts their votes with Pareto's normative theories in mind. An implication of all these analyses is that normative theories can be used to predict public policy outcomes that depart from narrow models of self interest, even if normative considerations do not drive public policy at the margin.

This paper takes a different, although complementary, approach. It argues that normative theories directly affect the manner in which many individuals behave in their private lives and also the manner in they vote and lobby for public policy.

Normative behavioral theories have previously been incorporated into models of economic activity and in discussions of the law, but have not generally been applied to analyze the formation of public policy from a rational choice perspective (see, for example, Elster 1989, Epstein 1995, Elickson 1998, or Lindbeck et. al. 1999). Two noteworthy exceptions, Brennan and Lomasky (1993) and Brennan and Hamlin (2000), analyze how the existence of virtue should affect government design, but focus most of their attention on institutions, rather than on specific policy consequences of norm-driven behavior. The present analysis differs from this line of research both in its focus and in its analytical foundation. Norm-based behavior is assumed to directly advance individual interests rather than expressive interests. That is to say, the analysis of this paper argues that advancing a private normative agendas is a direct source of utility to many voters, including the pivotal ones.[2]

The analysis demonstrates that (1) rational voters will often favor regulating "improper" behavior, although (2) such voters will not generally be interested in regulating their own behavior. (3) Ordinary externality generating behavior will be subject to greater than economically efficient penalties whenever the behavior regulated also conflicts with widely

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[2] The "expressive" voting literature suggests that voters are interested in the "symbolic power of the policy rather than the costs and benefits the policies scatter on particular voters" (Brennan and Lomasky, 1993, p.51). They demonstrate that expressive voting can be used to explain the public provision of merit goods and other various morally based public policies. Cooter (1998) provides a discussion of expressive elements of law itself. "Expressive interests" rather than private advantage largely determine policies according to these theories. Moreover, expressive interests are assumed to conflict with self-interest--in that the "wrong" policies tend to be adopted. The analysis of this paper assumes that there is no conflict between self-interest, broadly understood, and norm-driven behavior. Evolutionary evidence of the value of norms for self-interest has been provided in numerous simulation studies. See, for example, Axelrod (1984, 1986), or Congleton and Vanberg (1992, 2001). Whether norm-driven policies are adopted for expressive reasons or the self-interested ones focused on here, does not affect the value of the policy adopted. Those favoring norm-based polices want to see such policies put in place to advance their normative theories or ethical goals. Although the norm driven approach does not address all of the issues raised by the experimental evidence, see Frolich and Oppenheimer (2006), it does address several policy puzzles left unexplained by conventional rational choice models.

held normative theories, and (4) voters will, in many cases, favor policies that subsidize the private accumulation of specific forms of moral capital.

The analysis is organized as follows: Section II distinguishes between public and private normative theories and argues that decisions to apply private normative theories can be analyzed using the conventional tools of rational choice. Section III develops a rational choice model of decision making constrained by an internalized norm and notes implications for personal behavior. Section IV extends that model to analyze voter policy preferences over policies that encourage or punish normatively relevant behavior. Section V provides examples of public policies that are consistent with the "moral voter" model and tests some implications of the theory using data from the U. S. criminal code. The results suggest that models that include both economic and normative considerations provide a better explanation of public policies than models based on economic factors alone. Section VI summarizes the results and suggests extensions.

II. Private and Public Normative Theories

There are two quite different reasons why an individual's behavior may be affected by normative theories. First, individuals may respond to normative theories because following well-established norms may open up doors for employment and contract opportunities or generate valued approval or status from those in one's community. Individuals who are indifferent about the content of widely held norms will often follow them because it is privately rewarding to do so (Congleton, 1989, 1991). Alternatively, an individual may internalize a normative theory in a manner that causes a particular normative theory or collection of theories to affect behavior whether the individual finds himself in a supportive culture or not (Buchanan, 1994). The latter is the focus of the present paper.[3]

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[3] Several evolutionary theories explain why individual dispositions to support norm following behavior may arise in the long run. For example, Axelrod (1984), Frank (1987), Congleton (1991), and Vanberg and Congleton (1992) argue that norm- or rule-following behavior has survival advantages in both biological and social competition. Over time, a disposition to follow norms may become "hard wired," because those who follow such rules do better than those who do not. For example, a norm of conditional cooperation allows a variety of social dilemmas to be overcome. Adam Smith (1984) describes how virtue may aid the pursuit of approbation in a community that supports particular normative theories. Ellickson (1998) makes a similar argu-

In order to analyze norm-based behavior, it is useful to distinguish between what might be called private and public normative theories. The distinction of interest here is not the one regarding hidden and revealed preferences regarding vice and virtue emphasized by Kuran (1995), but rather one concerning the normative theories applied. Normative theories differ widely in the reference point or norm by which behaviors and outcomes are evaluated.

At one extreme, there is a class of normative theories that requires every action to be evaluated by considering the consequences for *every* other individual in the community of interest. These can be regarded as *public* normative theories, insofar as all personal actions are potentially regarded as public goods that affect the welfare of all others in the community of interest. "Public" normative theories attempt to increase welfare in the large by encouraging behavior and policies that advance the interests of all or most affected parties. Examples include most of the widely used utilitarian, Paretian, Kantian, and contractarian normative theories. Their broad sweep makes them useful for analyzing the relative merits of grand issues and public policies of general concern. Public normative theories can also be applied to assess the merits of ordinary personal decisions. In such cases, public normative theories require individual practitioners to "think globally, but act locally" – as might be said of the modern environmental, communitarian, and benefit-cost approaches to personal ethics.

At the other extreme, there is a class of normative theories that focuses only on personal choice and behavior. The core of such normative theories is an operational behavioral norm or standard of conduct that allows "proper behavior" to be judged independently of effects of that behavior on other persons. "Thou shall or shall not..." requires no overarching consideration of global consequences. Such normative theories can be regarded as *private* normative theories, because they treat personal behavior as private goods to be judged on their own terms without refernce to the consequences on other persons. In the limit, a private or personal moral theory requires only consideration of the direct and indirect effects of alternative actions on the choosing agent, himself.

This is not to say that implementing a private normative theory is without personal cost, nor that private normative theories cannot be used to evaluate public policies. Private

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ment. These theories describe a process by which a widely held private normative theory may be transmitted to successive generations within a moral community.

normative theories counsel discipline and self-restraint in the face of many moments of temptation in day-to-day life. And, as with public normative theories, personal behavior can be more or less virtuous, more or less proper, more or less ethical, and/or more or less enriching. Generalizations of private normative theories can also be used to evaluate the merits of large-scale political issues. That is to say, actions deemed ethical or proper for an individual practitioner are often considered normatively relevant for others as well.[4]

Both public and private normative theories may be presumed to affect behavior among those who have internalized them or who live in communities where particular normative theories are sanctioned by members of the community. However, private normative theories are generally easier to operationalize than public normative theories. Public normative theories confront practitioners with enormous informational problems, because every consequence of every action has to be evaluated before the proper course of action can be determined. Moreover, in settings where conflicting normative theories are simultaneously applied, it can be difficult to reconcile alternative normative theories. For example, a practicing utilitarian should, in principle, take account of the disutility that nonutilitarians feel from each utilitarian's practice of utilitarianism. Thus, in extreme cases, one could use utilitarian logic to rule out utilitarian behavior!

These interaction effects together with the severe information requirements make it difficult for individual practitioners to adhere consistently to such norms and also make it difficult to analyze the influence of such norms on public policy formation. Such problems do not arise for private normative theories, because the main focus of private normative theories is the *behavior* of individual practitioners, rather than the *impact* of that behavior on others.

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[4] Science itself is broadly constrained by private norms. The norms of science insist that practitioners "should" be honest and logically consistent in their experiments, data collection, and writing. Other supporting norms affect work in specific disciplines. For example, within economics, methodological norms suggest that economists should not generally use tastes to account for anomalies. Consequently, most economic research focuses on the effect of various combinations of constraints rather than on implications of different kinds of preferences. The present analysis clearly violates that norm, although paradoxically, it is clear that insisting that all economists *adhere to a particular methodological rule demonstrates the relevance of the present analysis as an explanation for the behavior of economists themselves!*

To make the present analysis tractable and because private norms are of widely in evidence, this paper focuses on the implications of private normative theories.[5] Such normative theories are clearly easier to model because interaction and information problems can be neglected. Moreover, insofar as behavior may be more or less consistent with a normative theory, decisions motivated by private normative theories resemble those of the standard economic representation of self-interested rational choice, broadly interpreted. Decisions to engage or neglect norms of proper behavior are exercises in *independent* decision making by self-interested parties who are face opportunities that are partly defined by their operational normative theories of private virtue or proper behavior.

III. A Model of Proper Behavior

Although few economists have included norm-following behavior as an argument in utility functions, the utility of virtue has been discussed for many centuries. Discussion of this possibility began at least two thousand years ago, when Aristotle (1927, p. 226) argued that 'happiness is an activity of the soul in accordance with perfect virtue." Smith (1759, p. 262) continues this tradition, when he notes that "Concern for our own happiness recommends to us the virtue of prudence: concern for that of other people, the virtues of justice and beneficence." Similar ideas have informed a good deal of private and public education during much of this time, insofar as teaching various religious and secular codes of conduct have widely been regarded as important as teaching reading, writing, and arithmetic. According to such theories of personal welfare, virtue directly contributes to utility. Axelrod (1984) and Vanberg and Congleton (1992) demonstrate that norm-based behavior (programs of conditional cooperation) may also indirectly increase utility by improving one's cummulativev payoffs in settings in which PD games are commonplace.

However, to say that personal welfare increases when an individual behaves in a manner consistent with his normative theory is not to say that there is never a conflict be-

[5] A good deal of theoretical and empirical research suggests that ideology-based norms have significant effects on policies within democracies. See, for example, Kau and Rubin (1984), Congleton (1991), or Hinich and Munger (1994). However, little work has focused on the policy implications of private normative theories.

tween norm-driven behavior and one's immediate pleasure-pain calculus – what Buchanan (1991) has called an individual's "naked preferences."

The tradeoff between implementing a private normative theory and enjoying other activities can analytically be represented using an extended utility function of the sort developed by Stigler and Becker (1977). Suppose that an individual's utility increases with activities C and S and with virtue, V. Let C be a normatively neutral good or activity, perhaps ordinary consumption, and let S be a normatively relevant activity, such as shirking, smuggling, slandering, sex, or soul searching. Following Adam Smith (1759), assume that virtue diminishes when activity S exceeds the ideal standard of conduct, S^0, where the standard of conduct, S^0, is an implication of the private normative theory being applied by the individual of interest.[6] The theory used and the rigor with which it is applied reflect a wide variety of past influence – family, teachers, and culture – which, along with the individual's own nature, determine the extent to which the individual associates virtue with the behavioral dimensions of interest. These influences on the behavior are modeled as moral capital, denoted as κ, and are taken as given for most of the present analysis.[7] Moral capital influences the stringency of the ethical standard that the individual aspires to and thereby the perceived loss of virtue that follows from engaging in unethical conduct, $V = v(E, \kappa) = v(S - S^0(\kappa))$.[8]

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[6] Adam Smith's concept of virtue can be summarized as "when we are determining the degree of blame or applause which seems due to any action, we very frequently make use of two different standards. The first is the idea of complete propriety and perfection, which, ... no human conduct ever can come up to... The second is the idea of that degree of proximity or distance from this complete perfection, which the actions of the greater part of men commonly arrive at." (1759, p. 26.) Similar concepts of virtue have been employed by contemporary economic theorists (see, for example, Lindbeck et. al 1999). Rosenberg (1990) argues that Smith was also much concerned with the effect of politics and commercial life on the stock of moral capita. The former is taken up below in sections IV and V.

[7] See Wintrobe (1999) or Rosenberg (1990) for additional discussion of the role of social or moral capital. As in other areas of capital accumulation, moral capital is in actuality a heterogeneous input reflecting a lifetime of intentional and accidental training together with possibly innate skills in a variety of moral theories. The assumption that moral capital can be characterized with a single homogeneous index is made to make the analysis more direct and tractable, as routinely done for physical and human capital.

[8] The analysis of this paper focuses on improper behavior partly to simplify the prose and partly because normative theories appear agree more often about vice than virtue. Consequently, politi-

This Smithian representation of the production of virtue can be used to characterize decisions for a wide range of private normative theories and for "normative rules of thumb" derived from public normative theories.[9] For purposes of analysis, the normative theory applied is taken as given.

The subjective tension between advancing normative and other interests can be illustrated with a time-allocation problem. Suppose the individual of interest allocates his or her available time, T, between C and S to maximize utility:

$$U = u[\, C, E, v(S - S^0(\kappa))\,] \qquad (1)$$

subject to

$$T = S + C\ .$$

The utility function is assumed to be strictly concave. Second derivatives with respect to each of the three goods in the utility function are assumed to be negative.

The cross partials with respect to virtue have properties that follow from the theory applied to the problem of interest. The ethical neutrality of C implies that the cross partial of the utility function between C and V is zero, $U_{CV} = 0$. The cross partial of utility with respect to V and S is less than zero, $U_{SV} < 0$, because virtue reduces the attractiveness (marginal utility) of unethical conduct. The relationship between the unethical activity, S, and the normatively neutral activity, C, is that of ordinary consumption goods, so it is assumed that the cross partial of utility with respect to C and S is greater than zero, $U_{CS} > 0$. The “virtue production function” is assumed to be strictly concave with negative first and second derivatives. Concavity of the virtue production function implies that engaging in excessive unethical behavior reduces virtue at an increasing rate.

Solving the constraint for time spent in the normatively neutral activity in terms of the time spent on the normatively relevant activity and substituting yields:

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cal actions opposing vice are more likely to command popular support than policies promoting virtue. (Virtue-increasing behavior can be characterized with $V = v(S^0(\kappa) - S.)$

[9] A richer analysis would represent normative aspirations as a vector of interdependent behaviors. Such a model would allow us to examine cases in which a person has *conflicting ethical theories*—as a person may favor charity, but fear that charity undermines the work ethic of those receiving it.

$$U = u[\ T\text{-}S,\ S,\ v(S - S^0(\kappa))\ ] \qquad (2)$$

Differentiating with respect to S allows us to characterize the individual's utility-maximizing allocation of time between the normatively relevant and neutral activities and thereby the level of personal virtue produced.

$$U_S = U_C(-1) + U_S + U_V V_E = 0 \qquad (3)$$

The first order condition characterizing the tangency solution clearly reveals significant differences between normatively neutral and relevant activities. The first term to the right of the equal sign is the marginal opportunity cost of virtuous behavior in terms of lost utility from the morally neutral activity. The second term is the direct marginal utility (benefit) from the normatively relevant activity S. The last term, $U_V V_E$, distinguishes the effects of private normative theories from those of ordinary individual preferences. The marginal utility derived from S's normative relevance is composed of a subjective taste component, U_V, which represents the marginal utility of virtue, and a normative theory component, V_E, which reflects how one's perceived virtue is affected by the normatively relevant behavior.[10]

Equation 3 implies that interest in virtue increases the subjective marginal cost of the improper activity and, therefore, reduces the level adopted. Less of the morally relevant activity is undertaken than would have been the case had $V_S = 0$. Normative tradeoffs exist when the last term has a sign opposite the second. In that case, an increase in S reduces virtue, although S may increase utility over some portion of the opportunity set. Skeptics might argue that direct interest trumps morality whenever S exceeds the moral standard, S^0. How-

[10] In some cases, private norms counsel individuals to *improve* themselves. Such normative theories resemble idealized metapreferences (Wiesbrod 1977, Buchanan 1979, or Kuran 1996). For example, ethics derived from various religious texts emphasize a person's spiritual development. Ancient Greek normative theories emphasize the development of personal virtue(s) as a means of living a good life. Many of the secular theories of the good life expressed in modern self-help books recommend that people adopt personal lifestyle changes as a means of enhancing their quality of life or sense of well-being.

Such private normative theories provide rules and norms for becoming a better person (through accumulating moral capital). However, insofar as individuals pursue such practices as a means of increasing virtue in the long run, analytically, the choices are special cases of those analyzed above.

ever, the model suggests that, even in that case, the personal *demand for virtue affects behavior at the margin* as long as V_S is not zero. Had activity S also been normatively neutral, $V_E E_S$ would have equaled zero and the model would have reduced to the conventional economic model of consumer choice. In the case of interest, normative theories affect the level of *both* the normatively relevant and irrelevant activity levels, here S and C, by characterizing the marginal cost of virtue. [11]

A second implication of the first order condition is that an immoral or unethical activity will not be undertaken if it has no direct consumption (or wealth) value. That is to say, if U_S is zero, it will never be sensible to spend time engaging in S because S reduces virtue and other consumption. That is to say, a rational individual will not sacrifice both virtue and direct consumption without a positive return. There is, however, an asymmetry between virtue-increasing and -decreasing activities. If S *increases* virtue, $V_S > 0$, activity S will be undertaken in every case in which there is no direct consumption or pecuniary interest sacrificed. (The existence of activities undertaken to enhance virtue alone provides the clearest evidence that virtue can be an end in its own right.)

A third implication occurs in cases in which tangency solutions do not exist and, consequently, the utility-maximizing level of S is at one of the bounds, 0 or T. Such extreme forms of behavior also have plausible interpretations. The behavior of derelicts and villains arises when the marginal benefits of the unethical good dominate the marginal opportunity cost of the activities over the range of interest, $U_S > - U_V V_E + U_C$ for all $S < T$. The behavior of saints and heroes arises when the marginal benefits of ethical behavior dominates its cost over the entire range of interest, $U_S < - U_V V_E + U_C$ for all $S < T$. For such extreme

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[11] A supporting culture endows individuals with stocks of moral capital, that create a comparative advantage for particular forms of virtuous behavior. An individual's freely provided endowment in moral capital clearly affects personal behavior. For example, the "warm glow altruism" noted in Andreoni (1990)'s experiments may arise from norm-following behavior that does not involve altruism, per se.

Some readers may by this point feel that some of the language used in the paper is “loaded.” It bears noting, however, that this conclusion demonstrates the significance of normative theories for private decision making. Even language (word choice) tends to have normative implications in cultures that support normative theories. Words are only "loaded" for those who are inclined to regard particular usage as proper or improper. The existence of “loaded” words is an implication of the theory developed above.

conditions to hold under normal assumptions about individual preferences, the production of virtue for the individual in question must be relatively easy or of great importance (at the margin) for the extremely virtuous, and relatively difficult or unimportant for moral derelicts.

The implicit function theorem together with equation 3 allows the level of normatively relevant behavior to be represented as:

$$S^* = s(T, \kappa) \tag{4}$$

The implicit function differentiation rule implies that the demand for normatively relevant behavior has partial derivatives:

$$S^*_T = (-U_{CC} + U_{SC}) / -U_{SS} > 0 \tag{5.1}$$

and

$$S^*_\kappa = [(U_{SV} + U_{VV} V_E)(-V_E S^0_\kappa) + U_V(-V_{EE} S^0_\kappa)] / -U_{SS} < 0 \tag{5.2}$$

where

$$U_{SS} = U_{CC} - 2U_{CS} + U_{SS} + 2U_{SV}V_E + U_{VV}V_E^2 + U_V V_{EE} < 0 \tag{5.3}$$

Given the assumed strict concavity of the utility function, equation 5.3 characterizing U_{SS} is unambiguously less than zero. Given this and the other geometric assumptions, both derivatives can be unambiguously signed.

Equation 5.1 indicates that individual will engage in more improper behavior as available time increases. “Vice” is a normal good. Equation 5.2 indicates that an increase in moral capital increases the rate at which virtue is lost by unethical behavior, and simultaneously reduces the direct marginal benefit of that behavior, recall that $U_{SV} < 0$, causing a decrease in the unethical activity. Improper behavior declines as an individual's stock of moral capital increases. Training can change a person's revealed demand for the “improper” activities.

IV. Voting One's Conscience: Regulating Vice

The effect of private norms on government-made laws in a democracy can be analyzed as follows by extending that norm-driven behavior to political activities. Suppose that a person who is partly motivated by the pursuit of virtue, however conceived, can regulate ac-

tivity S. The stringency of moral regulation can be represented by the magnitude of the penalty, or sin tax, *t*, imposed on the normatively relevant activity S. For purposes of analysis, it is assumed that norm-based regulations do not generate additional government revenues, but simply increase the transaction cost of engaging in the normatively questionable activity by restricting outlets or requiring careful, but cumbersome identification.

Within the present analysis, there are two kinds of externalities that potentially might elicit a voter's interest in penalties for activity S. Activity S may produce a conventional externality of the sort studied in public economics (Cornes and Sandler 1996). Norm-driven voters may also favor regulating S if they have a private normative interest in the behavior of other persons, what Sen (1970) calls meddlesome preferences. In such cases, S activities engaged in by other persons may create "ethical externalities" that affect the moral voter's own sense of virtue. (He or she may have a duty to block immoral activities.)

To analyze policy preferences in areas where both kinds of externalities exist, the utility function and the virtue production function are slightly modified. Suppose that the decision maker of interest, A, is affected by decisions of at least one other person, B. Assume that the relevant activity has both a conventional external effect and an ethic externality. A's utility function in this case may be characterized as:

$$U^A = u^A(C^A, S^A, V^A, S^B) \tag{6}$$

and his or her normative theory as:

$$V^A = v^A(S^0(\kappa^A) - S^A, S^0(\kappa^A) - S^B). \tag{7}$$

The effect of a penalty on the voter's own time allocation problem is characterized with a slight modification of the temporal constraint:

$$T = C + (1+t)S \tag{8}$$

Substituting (and dropping the A superscripts) yields:

$$U = u[\, T- (1+t)S, S, v(S^0(\kappa) - S, S^0(\kappa) - S^B), S^B \,]. \tag{9}$$

In a setting where the sin tax and B's unethical behavior are taken as given, A's behavior is characterized with the following first order condition:

$$U_S = U_C(-1-t) + U_E + U_V V_E = 0 \quad (10)$$

The implicit function theorem together with equation 10 allows A's behavior to be represented in terms of the parameters of his choice problem.

$$S^A* = f(\kappa^A, T, t, S^B) \quad (11)$$

The time allocation chosen by B now influences A's behavior.

Facing similar circumstances, B's behavior or reaction function could similarly be described as:

$$S^B* = f(\kappa^B, T, t, S^A) \quad (12)$$

Note that these behavioral functions have a similar mathematical appearance, even if the two individuals do not share the same moral theory or have identical tastes.

The penalty that A prefers to impose on activity S can be characterized using these two reaction functions. A's preferred sin tax, given B's reaction function, is that which maximizes his own utility given the effect of the tax on himself and the other party or parties, here B:

$$U = u[\ T- (1+t)S^*,\ S^*, v(S^* - S^0(\kappa),\ S^{*B} - S^0(\kappa)),\ S^{*B}\ ]. \quad (13)$$

Differentiating with respect to t allows A's preferred sin tax t to be characterized as a combination of A's personal burden and the perceived marginal effects on B's unethical behavior at the margin:

$$U_t = U_C\ (\ [S^*_t + S^*_{SB} S^B*_t](-1-t) - S) + U_S\ [-S^*_t + S^*_{SB} S^B*_t] +$$

$$U_V\ \{\ V_E\ [-S^*_t + S^*_{SB} S^B*_t] + V_{EB}\ [S^B*_t + S^B*_S S^*_t]\ \} +$$

$$U_{SB}\ [S^B*_t + S^B*_S S^*_t]\ = 0$$

Or simplifying with the envelop theorem:

$$U_t = U_C\ (-\ S) + U_V\ V_{EB}\ [S^B*_t + S^B*_S S^*_t]\ \} + U_{SB}\ [S^B*_t + S^B*_S S^*_t]\ = 0 \quad (14)$$

The first term of equation 14 is A's subjective marginal cost for the sin tax. The marginal cost of the tax is the marginal value of reduced consumption of C (and S) induced by the tax. The two last terms are subjective benefits that arise from the tax. The first of these is

A's marginal utility from increased virtue generated by B's reduced unethical behavior induced by the tax and A's own reduction in the externality generating activity. The second marginal-benefit term represents the marginal reduction in losses from the ordinary externality aspect of B's unethical behavior. In the case of most interest here, both of B's responses to the tax are assumed to benefit A.[12]

Note that *either externality effect* by itself can be sufficient to cause A to impose positive sin taxes on activity S. Moreover, in the case where both externality effects are significant, the "moral voter" prefers higher penalties or taxes than can be rationalized by either effect alone.[13]

The implicit function theorem allows equation 14 to be used to characterize the relationship between the decisive voter's demand for sin taxes or behavioral penalties and setting confronted:

$$t^* = t(K^A, T^A, K^B, T^B) \qquad (15)$$

The median voter's demand for formal normative penalties depends upon his or her own normative theory, his or her own stock of moral capital, that of other relevant parties, and

[12] In some cases, the virtue and externality effects may partly or entirely offset each other. For example, A's sense of virtue may be increased by B's unethical behavior (A may feel relatively more virtuous given B's debauchery or other transgressions). Or, the consumption externality may have a positive rather than a negative effect on A's welfare (B's debauched behavior may be entertaining to watch). Moreover, one or the other of the virtue and consumption interdependencies may be completely absent in some cases.

Corner solutions are possible here, as in the private behavior case. For example the marginal benefits from changing the behavior of one's fellow citizens may be too small to justify the marginal cost of regulation, thus bounding the range of norm-based regulation.

[13] The analysis to this point has been cast in terms of revenue neutral penalties or taxes. Some might note that the taxation of “sin” does not require meddlesome preferences or theories of virtue of the sort used provocatively by Sen, 1970. It is sufficient that net revenues be increased by the imposition of sin taxes. Clearly, many activities are taxed simply in order to generate revenues to finance desired public expenditures, and as in other cases Pigovian taxes tend to have relatively small excess burdens. It bears noting there are many potential targets for excise taxes, yet relatively few are actually imposed. Which goods should be taxed is often rationalized by normative arguments unrelated to efficient taxation.

the time available to each for proper and improper behavior.[14] Such taxes are, thus, analogous to Pigovian taxes on ethical externalities.[15]

It bears noting that the effect of moral capital on desired penalties for activities that violate widely held norms is ambiguous. Recall that additional moral capital reduces (as developed above for equation 5.2) the magnitude of unethical activity and also intensifies the

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[14] The effect of a person's own moral theory can be readily illustrated by focusing on the case in which an individual has an entirely private moral theory. Solving the new constraint for S and substituting this into the utility function of equation 1 yields:

$U = u[\ T-(1+t)S,\ S,\ v(S-S^0)\ ]$

which has two control variables, S and t. Differentiating with respect to time devoted to the unethical activity and to the level of the penalty yields:

$U_S = U_C(-1-t) + U_E + U_V V_E = 0$

$U_t = U_C\ (-S) = 0$

Note that an interior solution for equation 8.2 does not exist under normal assumptions about utility functions. The marginal utility of normatively neutral consumption is positive over its entire range, $U_C > 0$. Consequently, t cannot be set at a level that satisfies equation 8.2 *unless none of the unethical activity* is undertaken, S = 0. In that case, the voter would be indifferent between all sin taxes.

In all other cases, the voter would set t equal to zero to minimize his or her own marginal cost. *An individual that adhered to a moral theory that regarded unethical behavior to be a completely private matter would not vote, lobby, or impose sanctions on behavior deemed unethical from the vantage point of that theory.* That is to say, a rational individual would *not* impose a *sin tax* on himself. Self-discipline, rather than external discipline, is sufficient to maximize a rational voter's own direct utility.

[In cases in which "self-discipline" is costly in some psychological sense, hiring an external enforcer of one's "desired" conduct could, at least conceptually, be a utility-maximizing (transactions-cost-reducing) strategy. The famous story of Ulysses asking for help in tying himself to the mast to avoid the call of the Sirens is a case in which rational optimization, self-discipline, was *impossible*, by assumption. An extended examination of the logic of using external enforcement to solve the "weakness of will" problem is developed in Elster (1979).]

[15] We do observe, and have long had, such taxes in the United States. A *pure sin tax* is imposed in order to changes incentives to engage in the disapproved activity rather than for any revenues that might be generated. Other regulations may require considerable enforcement expenditures, as current prohibitions on recreational drug use do. This is not to say that sin taxes never generate significant net revenues, clearly alcohol and tobacco taxes have historically been significant sources of government revenues.

loss of virtue generated by deviations from the now more stringent norm.[16] Consequently, on the one hand, there is a greater interest in "sin" and sin taxes, but on the other hand, there is less "misbehavior" and so less reason to apply norm-supporting taxes. If the latter dominates the former, more stringent norm-based regulations are imposed as moral capital increases. If not, moral capital and government regulation operate as substitutes with increases in moral capital leading to weaker norm-based government regulations and sanctions.

V. Evidence of Normative Demands for Public Policy

A. A Few Instances of Government Promotion of Virtue

If normative theories have substantial effects on individual decision making, we should observe government policies that are motivated by private normative theories, whenever public policies address the policy interests of typical voters. The "moral voter hypothesis" predicts that we will observe policies that regulate and punish activities that do not produce conventional externalities, and that we will also observe penalties for externality-producing activities that depart from Pigovian taxation based on economic considerations alone whenever the activities regulated or taxed are relevant for the normative theories of the pivotal voter. In democracies with a high degree of political competition, the norms sanctioned by law and other public policies will be those of the median voter.[17]

A wide variety of government policies are consistent with these predictions. For example, the U. S. tax code includes an array of narrow taxes and deductions that subsidize norms and tax "sin." Charitable tax deductions and the tax-exempt status of nonprofit organizations encourage the formation of organizations that advance broadly accepted norms, while also encouraging private charity and public service. Similarly, special taxes discourage "gas guzzlers" and "excessive" drinking in many countries around the world.

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[16] The implicit function differentiation rule together with the results from equation 5.2 allow us to analyze the effects of variation in moral capital on the median voter's demand for sin taxes. Differentiating t* with respect to K^A and K^B, we obtain: $t^*_K = U_{tK}/-U_{tt}$.

[17] Other models of policy formation have similar implications. The stochastic voter model suggests that the normative theories of all voters, including extremists, have an impact on candidate positions and subsequent legislation. The theory of interest groups suggests that we should observe interest groups with normative as well as economic policy agendas.

The effects of private norms on public policy are not limited to relatively minor or obscure areas of regulation and law. Norms affect fundamental aspects of both civil and criminal law. In both civil and criminal law, individuals who *accidentally* injure someone are subject to lesser penalties than individuals who *intentionally* impose the *same* damages on other parties. Responsibility and intent matter; the externality may be the same whether imposed intentionally or accidentally, but the fault is not. Contract law is also affected by normative theories as some contracts are ruled out because the activities contracted for violate widely held norms. Individuals may not pay "too much" interest on loans, sell themselves into slavery, or form well-enforced economic cartels.

It bears noting that norm-based fiscal policies can be very costly. For example, the 18th amendment to the Constitution, which prohibited the consumption of alcohol, was clearly a norm-driven amendment. It was also a very costly reform, because prior to Prohibition, the federal tax on alcoholic beverages had generated nearly a *third* of U. S. federal tax revenues.[18]

B. Some Quantitative Evidence: Normative Theories and the Punishment of Criminal Acts

The moral-voter hypothesis suggests that both economic and normatively relevant aspects of criminal activities will affect public policies. For example, most property crimes involve involuntary transfers of wealth from a victim to a criminal. The owner is clearly made worse off by that transfer. In this sense, the activities of persons engaged in property crimes may be said to generate conventional externalities. If economics alone determined penalties, we would anticipate larger penalties for larger crimes, and other things being equal, larger penalties for crimes that were difficult to solve. A voter's assessment of optimal penal-

[18] The *Historical Statistics of the United States* reports that total *internal* revenue collections amounted to $512 million in 1916, of which $247 million were collected from alcohol excise taxes (Series Y 358-373, p. 1107.) Total governments receipts, including external customs receipts, amounted to $761 million in 1916 (Series Y 352-357, p. 1106). Adoption in 1913 of the 16th amendment, which provided a legal basis for income taxes, reduced the importance of the excise tax on alcohol. By the time the Prohibition amendment was adopted in 1920, receipts from the excise tax on alcohol had fallen to $139 million dollars, while total tax revenues had increased tenfold. After the repeal of the 18th amendment in 1933, excise tax revenues from alcohol increased from $8 million to $411 million in 1935, which was comparable to the revenue generated by the corporate ($578 million) and personal ($527 million) income taxes.

ties may also vary for normative reasons as well. Many normative theories suggest that different methods of taking the property from a victim violate different norms regardless of the damages imposed on the victim. If the pivotal voter has internalized such a normative theory, the penalties imposed on property crimes will also vary according to the normative significance of the method(s) used to effect the involuntary transfer.

Table 1 lists recommended sanctions for four nonviolent crimes from the United States Sentencing Commission's guidelines and arrest rates for the property crimes listed. The sentencing guidelines specify a range of penalties (months in prison) associated with each offense level. The effects of economic damages and normative theories on definitions of crimes and on recommended criminal sanctions for those crimes are clearly evident. Recommended sanctions for all these crimes increase if guns are possessed or brandished, if a victim is harmed, and with the number of previous offenses by the criminal. The sanctions listed are those for property crimes in cases in which an unarmed individual is caught engaging in a property crime for the first time.

Column 1 of Table 1 characterizes six hypothetical criminal transactions of increasing economic magnitude. Column 2 reports the offense level and the (midpoint) of the recommended penalties for various forms of theft, embezzlement, and property destruction. Column 3 reports the offense level and the midpoint of recommended penalties associated with burglarizing a private residence. Column 4 reports the offense level and recommended penalties associated with robbery, extortion, and black mail. Column 5 reports the offense level and recommended penalties associated with sales of different (dollarized) amounts of cocaine.[19]

[19]Cocaine sales in dollar terms are calculated by multiplying the various critical weights of the sentencing guidelines by the *lowest* value of range of prices ($9,000/kg) reported in the Drug Enforcement Administration's August 1995 *Illegal Drug/Price Purity Report*. Offense level and penalties for drug sales in dollar terms would have been even higher had the average price been used. (Dealing in other drugs has the same rapidly accelerating schedule of sanctions for increases in sales.)

Table 1

Federal Sentencing Guidelines for Various Property Crimes

(max, min months in prison)

Criminal Revenues	Theft	Burglary	Robbery	Cocaine Sales
$1,000	3, 6 m.	17, 27 m.	20, 37 m.	18, 30 m.
$5,000	5, 8 m.	18, 30 m.	20, 37 m.	26, 70.5 m.
$25,000	9, 9 m.	19, 33.5 m.	21, 40.5 m.	28, 87.5 m.
$100,000	12, 13 m.	20, 37 m.	22, 46 m.	32, 136 m.
$250,000	14, 18 m.	21, 40.5 m.	23, 51.5 m.	34, 159.5 m.
$1,000,000	17, 27 m.	22, 46 m.	24, 57 m.	36, 411.5 m.
Probability of Arrest	0.182	0.134	0.257	*

Entries are offense level and range of recommended sentence in months from the U. S. Sentencing Commission Guidelines Manual's sentencing table. All sentences are calculated as first offenses, no weapons used, or brandished. Drug crimes receive penalties based on quantities of drugs sold.

The probability of arrest is the percent of known offenses cleared by arrest, taken from table 26 of section III of *Crime in the United States* - 2000, Federal Bureau of Investigation.

* The probability of arrest for cocaine and other drug sales cannot be computed, because these crimes tend not to be reported to the police. Drug-crime arrest rates per hundred thousand persons, 572.4, exceed those for theft, 429.5, burglary, 104.0, and robbery, 39.7. See table 40 from section IV of *Crime in the United States* - 2000 report.

Note that penalties rise with the extent of the external cost imposed on the victim but *also vary systematically among crimes with equal economic externalities.* The economics of discouraging financially rewarding crimes is clearly evidenced in the columns. Penalties increase as the dollar amounts stolen or sold are increased. Consistent with diminishing marginal utility of income, the recommended jail sentence increases at a decreasing rate as the amount of money at stake increases. (The value of additional profit becomes successively smaller at the margin, while the additional years served in prison become successively more and more valuable at the margin, other things being equal.)

Note that the variation in penalties across columns is not explainable in ordinary economic terms. Similar penalties would have had essentially the same deterrent effect on each criminal activity insofar as profit is the principal aim of these criminal activities. Instead, we find that quite *different* penalties are imposed on crimes that involve essentially the *same* economic loss. These differences do not correspond to differences in the direct effects of the crime, nor to differences in arrest rates, which generally imply even greater differences in expected penal-

ties.[20] Clearly, those responsible for developing the criminal guidelines (ultimately the electorate) are not indifferent between criminal activities that impose similar damages and are prepared to impose more costly penalties on some activities than others. [21]

The model of "sin taxes" developed above provides a possible explanation for the variation in criminal sanctions across rows. That analysis implied that activities with similar external economic costs may be subject to greater internalizing penalties if they differ with respect to *ethical* externalities at the margin. Consistent with the implication of norm-driven public policy, more severe penalties are imposed on property crimes that violate stronger norms. As one reads across each row, increasingly more important rights or behavioral norms are violated. Taking property by threatening a person (robbery) is worse behavior

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[20] Other economic explanations have difficulties. For example, it could be argued that the probability, if not the reality, of bodily harm might increases across the rows, however *actual* bodily harm is itself an offense characteristic that increases the penalties systematically. It might be argued that the expected personal *damages* become larger as one move across the table. However, in none of the cases listed is a person physically harmed by the criminal activity. If a person is threatened or harmed with a weapon, a *different* crime is deemed to have transpired, and additional penalties are applied. In a civil case covering the same behavior, the damages recovered tend to rise as the "takings" increase, but not as the method of taking changes.

[21] It bears noting that there are a variety of normative theories that can distinguish between these crimes. For example a somewhat indirect welfare economics (utilitarian) case for imposing different sanctions on these four activities can be developed as follows. In the first three cases, an involuntary transfer of resources takes place, which elementary welfare theory might represent as movements along the Pareto frontier. In the fourth case, a voluntary exchange takes place, which elementary welfare theory suggests would yield Pareto-superior moves and an increase in social welfare. A somewhat roundabout analysis can be used to develop a welfare economics rationale against these activities. The prospect of being robbed or burglarized reduces incentives for individuals to accumulate productive wealth and increases incentives to invest in defensive measures. Property crimes, thereby, impose costs on all potential victims in the form of reduced productivity and economic growth (Tullock 1967b). Illicit drug use increases the probability of industrial and automobile accidents by the drug purchasers themselves and for those who share jobs and highways with them. In addition to these externalities, the cost of medical and other insurance tends to increase for all insured parties insofar as personal drug use is not fully capitalized into user insurance premiums. Drug addiction also tends to reduce the extent to which self-restraint and judgment may be relied upon to internalize other externality-generating behaviors.

The private ethical arguments against these property crimes, however, are clearly quite ancient and direct. These activities are simply "wrong" from the vantage point of most private normative theories. A virtuous individual would not engage in any of these activities except in dire circumstances. Criminal motivation for these activities is similarly direct from a rational choice perspective. In each case, the criminal's direct aim is clearly economic gain in the form of money profits.

than invading a person's house to take property (burglary), which is worse than taking property left outside the house (theft or larceny). Indeed, it might be argued that the strongest of the penalties listed are reserved for a crime that does not involve coercion at all, but rather is widely believed in the United States to undermine private virtue directly. Drug sales are voluntarily undertaken, but the crime is evidently posing an "irresistible" temptation.[22] It is interesting to note that a large-scale robbery in which a gun was fired and a person seriously injured may have a recommended penalty below that of comparable drug sales. (The sentencing guidelines call for the offense level to be increased by ten if a gun is fired and a person is seriously injured. Consequently, the offense level for a violent million-dollar robbery, 24+10=34, is below that of million-dollar drug sales, 36.)

The relative influence of norms and economic damages on the level of recommended criminal sanctions can be quantified by estimating a penalty function:

$$F_i = a(1+M_i)^b V^c u_i \qquad (16)$$

where F_i is the penalty imposed on crime i with damages of approximately V, M_i is a measure of the extent to which a criminal activity departs from acceptable norms, *a* is a constant scalar, and *u* is a log-normally distributed random error.

Three estimates of maximum penalties are reported below in Table 2. The first assumes that there is no moral difference among the crimes, so $M_i = M_j = 0$, and $b_i = b_j = 0$. If only economic considerations matter, taking account of moral dimensions will not improve the fit of the regression. The second assumes that cocaine sales differ from property crimes, with $M_c = 0$, and $b_c = 0$ and $M_d = 1$, and $b_d > 0$. The third assumes that all four crimes have systematic moral differences and assigns M-values 1, 2, 3, and 4 to the four types of crimes listed in Table 1, with theft being 1 and cocaine sales being 4 .

[22] Some might argue that drug users are more likely to engage in property and other crimes. However, under the rule of law, penalties are meted out for crimes rather than propensities to engage in crime. Moreover, Benson et. al. (1992, 1998) find no evidence of a link between drug use and crime rates. They find that increases in drug law enforcement tend to increase, rather than diminish, other property crime rates. Moreover, it bears noting that penalties for drug crimes vary substantially about the world in a manner that appears to be in accord with local cultural norms.

Table 2 Determinants of Criminal Sanctions			
Variables	Log Recommended Penalty (ols)	Log Recommended Penalty (ols)	Log Recommended Penalty (ols)
constant	1.814 (2.198)**	1.460 (2.522)**	---
Log Value of Criminal Activity in Dollars	0.172 (2.25)**	0.172 (3.232)***	0.179 (12.481)***
Normative Difference (Binary, Drugs=1)		1.142 4.935)***	
Index of Deviation from Norms (1,2,3,4)			0.695 (12.285)***
R-square	0.187	0.624	0.873
F-statistic	5.067	17.402	152.42

** Denotes significance at the 0.05 level, *** denotes significance at the 0.001 level.

All three estimates provide statistically significant explanations of the pattern of criminal sanctions. The F-statistics are significant at conventional levels, as are the t-statistics indicating significant precision for the estimated coefficients. The results indicate that models that include economic incentives and normative considerations explain the pattern of penalties better than a model that focuses entirely on the direct economic damages. Indeed, normative considerations – noneconomic differences in the crimes – account for most of the variation in the recommended penalties. The R-square increases from 0.187 to 0.624 to 0.874 as normative differences among the crimes are accounted for, and one can easily reject the hypothesis that normative considerations do not significantly improve the fit of the estimates.[23]

C. Additional Evidence: Moral Capital, Public Policy and Private Behavior

In addition to suggesting that government regulations and fiscal policies be based partly on private normative theories, the moral voter model also suggests that government policies may subsidize the accumulation of moral capital. That is to say, in addition to direct support of widely held norms, policies may also attempt to strengthen or change the norms

[23] Similar results were also obtained for a linear specification, but the multiplicative effect of normative theories on penalties is more consistent with the model of sin taxes developed above.

applied in private decision making. (Recall that equation 5.2 indicates that, as the stock of moral capital increases, the time devoted to the disapproved activity, S, declines.[24]) Consistent with this hypothesis, we do observe a number of policies that directly affect moral capital formation.

Governments have historically often enacted policies and directly supported private institutions that advance widely held norms, as with the medieval churches of Europe and state-supported churches in the 19th and 20th centuries. In contemporary society, publicly financed and regulated schools are often charged with promoting the virtues of civic life – lawfulness, public service, civility, and rule-following behavior. Nongovernmental organizations that promote the norms favored by the median voter are often granted special tax preferences. Educational foundations and churches are subject to milder taxes than other organizations or not taxed at all (Holcombe, 2000). Perhaps even more striking is the current policy of many secular governments in Europe that continue to collect tithes for favored churches.

In the long run, the arrow of causation from moral capital to government policy is not unidirectional. Insofar as government policies affect the relative price of moral capital,

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[24] It bears noting that a private (voter) interest in subsidizing moral capital does not always arise in the model developed above.

If ethical externalities add marginal benefits without increasing marginal costs $U_V[\ V_{EB}\ (S^{o}_{\kappa} - S^{B}{}^{*}_{\kappa})] + U_{SB}\ S^{B*}_{\kappa} > 0$, voters may favor policies that subsidize moral capital formation. Ordinary externality aspects of social capital formation would increase the typical voter's inclination to support such policies. Recall from equation 5.2 that increased moral capital tends to reduce unethical behavior. In the case in which a negative externality is generated by the improper behavior, an increase in social capital increases self-restraint, which reduces the extent of the eternality-generating activity. The last term, $U_{SB}\ S^{B*}_{\kappa}$ is clearly greater than zero in this case. However, the effect of a general increase in moral capital on the subjective "virtue externality" depends on the relative size of the changes in the moral standard being applied and in the behavior of other individuals. If the behavior of the other(s) improves more slowly than the standard of conduct, S^{o}, becomes more rigorous, the virtue externality effect may reduce an individual's well-being, here $S^{o}_{\kappa} > S^{B}{}^{*}_{\kappa}$. Subsidizing social capital formation may be opposed if the standard of conduct becomes stringent more rapidly than the unethical behavior of others declines. (Of course, such effects may also restrain private investments in moral capital as well. If one became “too” virtuous, one might become “too” morally outraged at the behavior of others.)

government policies will also affect voter demands for regulation, redistribution, and other services affected by the distribution and extent of private holdings of moral capital. Insofar as voters, interest groups, or bureaucracies are motivated by normative theories of the sort modeled here, they will also encourage the state to subsidize or tax the acquisition of various kinds of moral capital; those policies in turn will subsequently affect other public policies.

There is some evidence that past subsidies of moral capital accumulation have affected contemporary public policy. Consider, for example, environmental policy. A purely economic analysis of environmental problems would predict that voter interest in additional regulation would diminish as external damages are reduced at the margin by successively more stringent environmental policies. That the demand for environmental regulation has systematically increased, as prior rounds of regulation have successfully ameliorated environmental health risks in most Western countries is counterintuitive to many economists. This is evidently not because of increased knowledge of health risks from environmental hazards. Cropper et. al. (1992) and many others note that expected economic damage reductions from more stringent environmental regulations tend to be small relative to many other risks addressed by public policy. However, if the motivation for environmental regulation is not only reduced economic damages, but also an attempt to advance "green" normative theories in a setting in which "green" moral capital is increasing, the current demand for more stringent regulations can be readily understood.

Consistent with this explanation, Western primary and secondary schools have in recent decades emphasized the *duty* that everyone should take account of environmental losses. To the extent that this duty becomes widely internalized, one would expect to see changes in both private behavior and public policy. Private behavioral changes are consistent with this hypothesis. For example, we observe many individuals who voluntarily invest a good deal of time in the unpleasant activity of sorting their garbage to be recycled, who purchase extremely fuel efficient and low emission automobiles, who rely on geothermal heat pumps to heat their homes, or take other steps to reduce their environmental impact. These efforts often go well beyond those required by local and national environmental laws and well beyond those that can be justified on the basis of ordinary economic returns.

Frey (1997, ch. 7) refers to the intrinsic value of such activities, but in this case, it seems clear that a new "intrinsic" value has clearly been created by promoting a *new* theory of proper behavior. Consistent with this moral capital hypothesis, Smith (1995) provides statistical evidence of a link between various green activities (petitioning, contributing, and recycling) and education levels.[25]

VI. Conclusion: Internalized Norms, Self-Interest, and Public Policy

The above analysis is based on the hypothesis that normative theories affect individual assessments of their own self-interest. If true, widely believed normative theories will cause individuals to behave differently in their private lives and to vote differently in their public lives. Consequently, we should observe a good deal of behavior that is not directed at income-generating activities nor at ordinary (hedonistic) consumption. If voters are concerned with broad normative issues, politicians will take policy positions in part to advance interests in virtue and the public interest as defined by (moderate) voter normative theories.

Policies and regulations will exist that neither internalize conventional economic externalities, nor redistribute wealth to well-organized interest groups. Moreover, efforts to regulate conventional economic externalities will be more or less stringent than can be justified by ordinary economic considerations whenever such policies affect behavior that is relevant for widely held normative theories. As supporting evidence, the paper has noted several policy areas in which the effects of normative theories seem to be evident.

Such norm-driven policy outcomes do not necessarily imply policy errors in the sense of the Brennan and Lomasky analysis. As far as a rational-choice-based analysis is concerned, such voter behavior can be fully rational and self-interested in the sense that voters consistently rank public policies and the median voter is completely pleased with the policy outcomes generated. The "moral voter hypothesis" suggests that many of the laws adopted

[25] The decline of moral capital is often lamented by social commentators who discern a downward trend in democratic civil society. They and others note a significant decline in behavior that many private moral theories address: increasing violent crime rates, drug use, and young single-parent households (see, for example, D'Souza 1995). However, it seems clear that other moral capital has increased insofar as many forms of externality-generating behavior have declined as "politically correct speech" and such "green" duties as recycling have become more widely internalized.

within a democracy advance the normative interests of pivotal members of majority coalitions. Such policies may or may not increase the incomes or provide tangible public services for voters, in the sense applied by most economists. To the extent that norms affect voting behavior, and policy outcomes, a "public interest" or "merit good" interpretation of *some* government policies is entirely consistent with the public choice approach to political decision making within a well-functioning democracy. On the other hand, not all policies have ethical implications, and marginal costs and marginal benefits still affect voter tradeoffs between narrow and broad self-interests; consequently public policies in democracies are not entirely determined by the normative theories of pivotal voters.

Although policy formation has been analyzed from the perspective of voters, similar conclusions would have followed from an interest group model, if at least some politically active groups are motivated by normative policy concerns, as seems to be the case. For example, interest groups that monitor civil liberties and policies concerning life and death do not have obvious pecuniary interests in those policies.[26] Norm-based agendas also appears to be present for such disparate groups as Alcoholics Anonymous, the Sierra Club, Planned Parenthood, and the Chamber of Commerce, which all support particular views of "the good life and the good society." That even groups with narrow economic interests recognize the importance of normative theories is evident in their public pronouncements and arguments that nearly always include ethical justifications for their proposed policies.

That individuals consider both private normative and economic interests when casting votes or in making their contributions to interest groups does not generally imply that political conflict will be greatly moderated or that minority interests are at less risk in polities inhabited by moral voters. Ethical interests often intensify an individual's interests in particular policy outcomes. Public-spirited politics tends to intensify political conflict whenever voters disagree about normative theories. The most intense international and intranational political controversies often appear to be over policies in which normative theories, such as

[26] Congleton (1991) analyzes policy formation in an environment where lobbying interests of both economic and ideological groups attempt to influence voters who may be more or less committed to their ideologies.

ideologies, conflict rather than over policies in which economic interests are the main concern.

All this suggests that, rather than diminish the role of rational-choice-based political analysis as some critics of public choice theory have argued, acknowledging that public policy is partly motivated by private assessments of the "public interest" increases the importance and scope of rational-choice-based analysis of public policy. The rational-choice political research agenda largely attempts to understand the implications of competition and conflict via political means. The existence of norm-based private and public behavior simply implies that the domain of policy conflict is larger than that generated by economic considerations alone.

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