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Rational Irrationality Across Institutional Contexts

Abstract: This paper considers how Bryan Caplan's concept of rational irrationality may manifest in various political institutional arrangements, building off the demand curve for irrationality. Mob democracy, anarchy, autocracy, and constitutionally constrained democracy are the governance structures addressed. While anarchy is strictly better than mob democracy, under certain conditions, democracy, anarchy, or constitutionally constrained democracy may yield the best outcomes depending on the circumstances.

1 Introduction

Rational irrationality supplements rational ignorance in the standard public choice perspective on government failure (Caplan 2001a). Rather than emphasizing the potential for self-interested actors to reach suboptimal outcomes in political markets, rationally irrational voters are systematically biased in several distinct ways. According to Caplan (2007a), these biases include Anti-Market Bias, Antiforeign Bias, Make Work Bias, and Pessimism Bias. These biases cause governments to make inappropriate interventions in the economy and society. Rational irrationality may thereby explain inefficiencies observed in policy today.[1]

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[1] The purpose of this paper is not to re-examine the relative importance of rational irrationality versus rational ignorance. The issue of the "miracle of aggregation" is a difficult one for scholars arguing that rational ignorance is an important cause of bad public policy. However, many still argue that it has a detrimental effect, e.g. Somin (2013).

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This paper seeks to construct a simple but fruitful model articulating how rational irrationality may manifest in democracy, autocracy, and anarchy.[2] It does so by building on Caplan's demand curve for irrationality. However, it departs from Caplan regarding the shape of the demand curve. It instead assumes that we should expect the demand curve to be shaped as economists expect demand curves to be shaped generally, as in Murphy (forthcoming). This leads to conditions wherein either anarchy or a constrained democracy minimizes the quantity supplied of irrationality in society.

One precursor to this approach can be found in Taylor and Crampton (2009), who find that meddlesome preferences (i.e., preferences over the behavior of others) may be more or less expressed in democracies or in an anarchy depending on how these preferences are concentrated. The theory of expressive voting (Brennan and Lomasky 1993), especially as it is thought of in terms of value-expressive consumption (see Johar and Sirgy 1991) also shares relevance; the desire to express beliefs (should it or should it not thought of as irrational) underpins the idea, whether the desire is actualized in politics or on the market.

To make this argument, I will first establish the rationale for a traditional demand curve in the market for irrationality. Then, I will compare how anarchy and a simple model of democracy will respond to the presence of rational irrationality. Finally, I will discuss the inherent tradeoffs between these forms in governance in light of rational irrationality.

2 The Demand for Irrationality

The median voter systematically departs from the opinions of experts on issues of policy. The departure is so great that the difference between the average opinions of those on the two extremes of the political spectrum in the United States is actually smaller than the difference between the average opinions of economists versus non-economists (Caplan 2008). This demands explanation and implies that, should economists understand the economy better than the public, the median voter chooses inappropriate policies given the outcomes they hope to achieve.

Caplan explains this in terms of a demand for irrationality. "Demand" for irrationality can be interpreted as preferences over beliefs. It is painful to change our minds, so individuals, whether voters or consumers, prefer not

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2 I assume for the purposes of this paper that an anarchy would function as described by Friedman (1989) or by Leeson (2014).

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The Near-Neoclassical
Demand Curve for
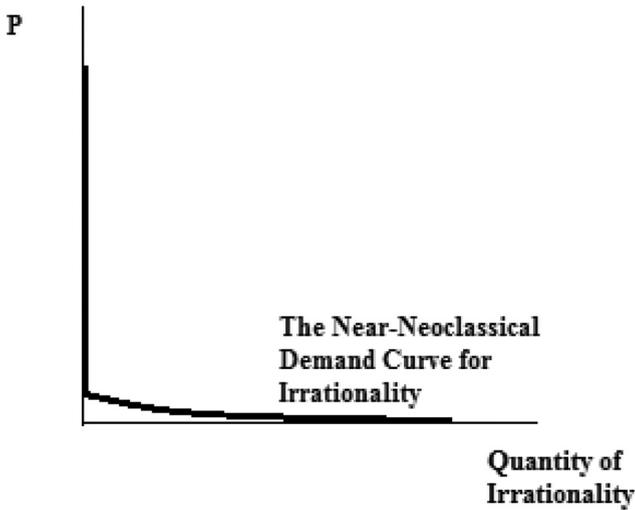Irrationality

Quantity of
Irrationality

Figure 1: The near_neoclassical demand curve for irrationality.

to. As costs to holding false beliefs rise, they may cease holding the belief. Caplan's focus is a simple model he refers to as the "near-neoclassical demand curve" for irrationality, as shown in Figure 1. Under this model, at prices slightly higher than zero, no irrationality is demanded. When the price approaches zero, however, it juts out significantly. This implies that, when confronted with the real costs of their irrationalities on the market, consumers behave rationally. But when voting, they satiate on their irrationalities because they may do so costlessly.

Meanwhile, the "supply" side of irrationality – perhaps more intuitively, the marginal cost of irrationality – changes interpretation in politics versus markets. In politics, it is interpreted as the expected value of voting for a policy with negative outcomes. In markets, the interpretation is the supply of goods and services which are means-ends irrational. That does not imply overt fraud on the part of the suppliers, but that the consumers have preferences for purchasing certain goods that are inefficient or counterproductive in achieving their ends.

Murphy (forthcoming) contests that the near-neoclassical demand curve is the best way of conceptualizing the demand for rational irrationality. He looks to the psychological bases of rational irrationality in order to identify possible examples of rational irrationality in the market, finding several. Some of these were substantially costly. For example, under one estimation, the failure to vaccinate children of three diseases – Whooping Cough, Invasive Pneumococcal Disease, and Chicken Pox – corresponds to a willingness-to-pay of around

$8,000.[3] Given these examples, it is more reasonable to posit a conventional demand curve than the near-neoclassical demand curve for irrationality.

Murphy's examples centered on those which expressed disapproval of markets, globalization, and science; in addition to failure to vaccinate were the usage of local currencies, buying local for the stated reason of reducing carbon emissions, and fair trade. However, in the absence of a government, these impulses could arise in other ways.[4] Private actions, especially (but not limited to) those not presently legal, such as forcibly stopping trade or the entrance of corporations to markets may be more pervasive and "effective" than in the sometimes cumbersome political options, such as zoning laws.

The demand for irrationality manifests itself in a variety of ways in both markets and politics. Under different institutional regimes, it will be supplied to various degrees by firms and governments. If we believe that international trade (for instance) is a net positive for society, and its rejection is due to both ignorance and bias, then we should hope to curtail the irrationality regardless of who is supplying it. While buying fair trade may be fundamentally less coercive than voting for tariffs, the rational irrationality research agenda should not be constrained to only economic examples in the public sphere.

3 Extending Caplan's Model

In this section, I will show the implications of relaxing the assumption of near-neoclassical demand for irrationality, and how that may play out within the framework of the demand and supply of irrationality. In Figure 2, under democracy, voters satiate at Q^* level of irrationality. Under anarchy there will be zero irrationality, as firms charge a positive price to consumers. This is shown at Q^{**}. Under this model, an autocrat too would see significant costs arising from irrationality and would abstain from any irrationality as well, which is perhaps a very strange result.

In Panel A of Figure 3, I present the level of irrationality under anarchy with a conventional demand curve. This is simply a supply and a demand curve, with the

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3 This estimate uses willingness-to-pay estimates to statistically avoid a one year illness, the ratio of willingness-to-pay for an adult's life versus that of their child's, and differentials in the chance one will get the disease between the vaccinated and unvaccinated in the United States.
4 The argument that whatever irrationalities that might occur in the absence of the government would already occur in the presence of a government ignores the possibility that the government may be currently crowding them out. If the government may crowd out "good" institutions (as in Klein 1998), the government may crowd out bad institutions as well.
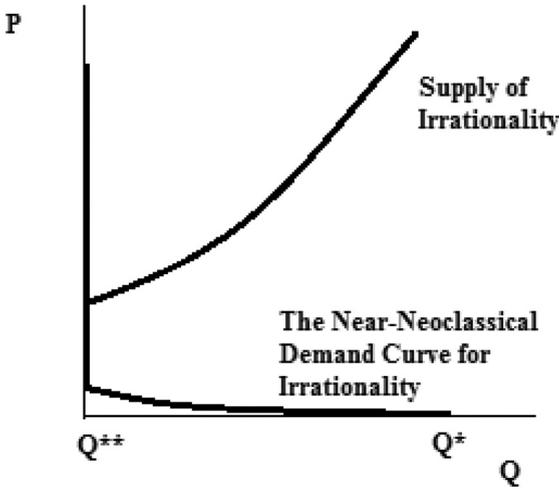
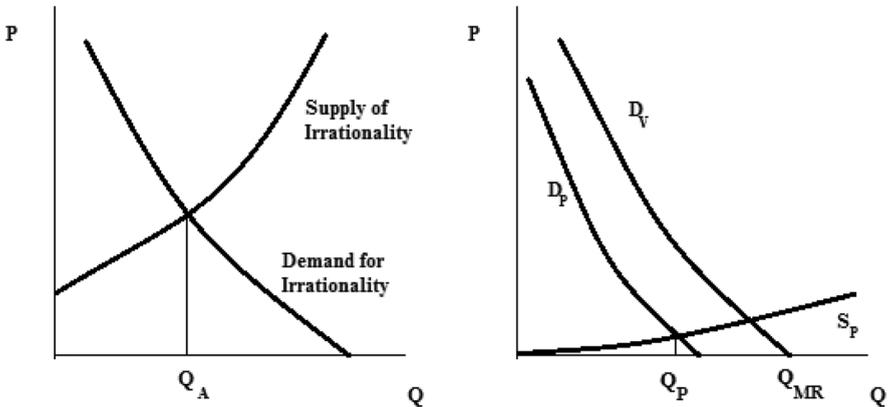Figure 2: The market for irrationality, with near-neoclassical demand.

Figure 3: The market for irrationality, conventional demand curve.

quantity in the marketplace observed to be Q_A. In Panel B of Figure 3, I present the level of irrationality under democracy. This requires significantly more explanation.

Caplan states that politicians, due to their education, may in fact be less systematically biased than voters (2007a, 181). Their demand for irrationality would therefore be less. Voters' demand for irrationality is denoted D_V and politicians' demand is denoted D_P. (D_V should be interpreted as being the same demand curve as found in the overall demand for irrationality under anarchy in Panel A.) Caplan's findings elsewhere (2001b) in a multivariate regression show that more education and gender correspond to beliefs close to

those of experts. Since Congress is more likely to be highly educated and more likely to be male, we should expect the opinions of Congress to conform to those of experts more than do the opinions of the voting public.

Under a strict theory of efficient democracy, politicians would be forced to vote in concordance with D_V. Though he argues its prevalence is small, Caplan admits that opportunities for "wiggle room" or "slack" for politicians are also opportunities for them to make the system more rational than voters would prefer (Caplan 2010). While this would not hold under an efficient democracy model, I assume that politicians get the policies collectively they want.

Secondly, we shouldn't expect politicians to fully satiate on their irrationality, which Caplan has also noted (2003, 233). Their voting may sometimes materially impact the outcome. A vote in the Senate chamber only occasionally holds sway, but when it does its impact is enormous, whereas the chance that a citizen's vote in a democracy holds sway can be rounded down to zero. Politicians therefore face a supply curve, denoted S_P. The corresponding equilibrium is Q_P. Additionally, the mob rule or direct democracy equilibrium is denoted as Q_{MR}.

It is ambiguous whether Q_A is superior to Q_P. It would depend on the costliness of supplying irrationality under anarchy and the differential between the opinions of the elite versus the opinions of the ordinary voter. Given that Caplan has argued forcefully that the elite have substantially better judgment than the masses (2007b, 2012), perhaps the best answer to minimize irrationality is to shield educated lawmakers from the excesses of the democratic process.

It should also be noted that there are also some real institutional restraints on modern democracies that help politicians commit to better policies. Among these are trade agreements, the rules governing the European Union, the dormant Commerce Clause of the United States, and legal standards like Rational Basis or Strict Scrutiny. In some sense these restraints allow politicians to collude to provide better policies than the public wants. They may also be viewed as shifting the supply curve of irrationality inward. Romanticism of the democratic process notwithstanding, these barriers do in fact stop the democratic ideal from taking place, and in doing so may prevent the median voter from choosing bad policies.

4 The Tradeoffs Between Anarchy, Democracy, and Autocracy

The previous section provided a basic model for conceptualizing the supply and demand of irrationality in government and in markets. To fully evaluate rational irrationality across political institutional arrangements, I give a unified, though

simple, model of the levels of irrationality and variance of outcomes within anarchy, democracy, and autocracy. This model does not directly connect with Caplan's model found in Section 3, but the interpretation of the supply and demand of irrationality in markets versus governments informs the formation of the model.

Systems of governments are viewed on a continuous scale in the limits they place on democracy, as shown in Figure 4 (this scale is in part inspired by the Polity IV index [Marshall and Cole 2011]) At one extreme is mob (direct) democracy; at the other is autocracy. Between them are constitutional democracy and anocracy, which each place limits on the mob.[5] All governments fall somewhere on this scale, with anarchy completely off of it. United States and Singapore are listed for illustrative purposes.
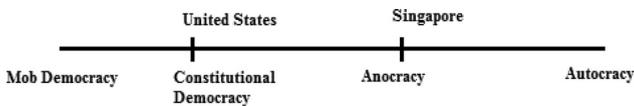

Figure 4: The spectrum of governments.

Autocracies, on average, may reduce irrationality at the expense of higher variation in outcomes. Higher variance among autocracies is a widespread finding (e.g. Rodrick 2000; Almeida and Ferreira 2002; Easterly 2011). Modeling the primary problem with autocracy as variance of outcomes also corresponds clearly to what Francis Fukuyama calls the "bad emperor problem" (2011): even upon making every effort to choose and groom a new autocrat, a bad one can be disastrous. This tradeoff is made explicit in Figure 5. As this tradeoff is between two bads, Figure 5 should be interpreted as an inverted production possibilities frontier. Any point on the outside of the "PPF" is attainable for a government, and any point on the inside is unattainable.

It may seem odd to assume that autocracies will perform better than democracies on average. But while democracy is generally linked to growth (as in, among many others, Acemoglu and Robinson 2012), others have argued at times it works to the contrary (Zakaria 2003; Collier 2010). Moreover, what is meant here by limiting democracy is not what is meant in the standard measures of democracy, for instance the Freedom House and Polity IV indexes (Freedom House 2014; Marshall and Cole 2011). These indexes do not meaningfully draw distinctions between mob democracy and constitutional democracy. The United States government, for instance, scores as extremely democratic. As defined herein, the United States has numerous restrictions on democracy to prevent mob rule. As long as there is some correlation between the checks on democracy and the policies favored by the elite, this assumption holds.

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5 Although this is clearly not the case generally, anocracy will be treated as simply a more extreme constitutional democracy.
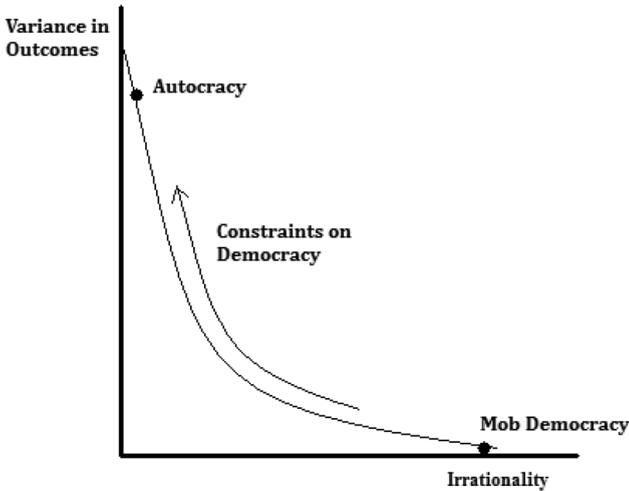
Figure 5: The constitutional trade-off.

To motivate this further, consider the following. The median voter in the democracy may have biased beliefs, but the median still typically wants economic growth and to avoid famines. Autocrats are chosen somewhere on the distribution of beliefs, but subsequently feel the costs and benefits of their policy decisions. Since the person can be anywhere on the distribution, a Hitler is free to pursue very bad policies. However, someone with a more orthodox worldview may make better decisions than the mob decisions. Autocratic characteristics thereby yield more variance but higher expected value.

I also wish to emphasize that this model is not intended to capture all avenues by which political institutions may impact the variance of outcomes, only on the margin of rational irrationality. The pure direct democracy acts in accordance to the median voter, whatever that may mean and however capricious the median voter may be. The voters may be arbitrary and I am not arguing that the literal variance of outcomes over time for mob democracies would be zero. What I intend is that, within the scope of the model, the source of variance is the departure of policy from the choices of the median voter. Constitutional limits on democracy or autocratic elements introduce these departures.

Checks on democracy through other mechanisms may reduce variance in other senses, e.g. by forming a check on median voter caprice. But if that check relies on specific actors within the government, it introduces variance in the sense the model intends to address. Placing the decision in the hands of a small group instead of the voting public gives greater incentive for the decision to be made rationally, but also introduces the risk that the group holds an unorthodox, dangerous worldview.

Let the representative individual have a mean-variance utility function of the form $U = x - a\sigma$, where x represents wealth and σ is the standard deviation of outcomes. The parameter a is strictly positive weighting variable. Assume that all variance in political outcomes is the result of restraining democracy.

Mob democracy is assumed to have zero variance of outcomes and a set (non-optimal) level of wealth, x_M.

Mob Democracy

$$x = x_M$$

$$\sigma = \sigma_M = 0$$

Autocracies, at the other extreme, may confer a higher or lower level of wealth. These are represented by x_H and x_L, respectively. The autocratic government will confer x_H with probability ρ and will confer x_L with probability $(1-\rho)$. These levels of wealth relate to each other and mob democracy such that

$$x_H > x_M > x_L$$

Autocracies confer, in the expected sense, a level of wealth x_A.

Autocracy

$$x = x_A = \rho x_H + (1-\rho)x_L$$

This standard deviation in outcomes is denoted σ_A

$$\sigma = \sigma_A = \sqrt{\rho(x_H - (\rho x_H + (1-\rho)x_L))^2 + (1-\rho)(x_L - (\rho x_H + (1-\rho)x_L))^2}$$

Finally, between mob rule and autocracy are constrained democracies, modeled as weighted averages of the two outcomes. Governments are constrained institutionally by the choice variable $\gamma:[0,1]$. This allows societies to move along the constitutional tradeoff in Figure 5. To capture the diminishing returns to relinquishing democratic power to politicians, there are also weighting functions $w_H(\gamma)$ and $w_L(\gamma)$. This is to reflect that the best checks on democratic power, such as trade agreements or the dormant Commerce Clause, may be put in place with little totalitarian threat. Let wealth conferred by constrained constitutional democracy be denoted by x_C and its dispersion in outcomes as σ_C.

Constrained Democracy

$$x = x_C = (1-\gamma)x_M + \gamma(w_H(\gamma)\rho x_H + w_L(\gamma)(1-\rho)x_L)$$

$$\sigma = \sigma_C = \sqrt{\rho((1-\gamma)x_M + \gamma(w_H(\gamma)x_H) - x_C)^2 + (1-\rho)((1-\gamma)x_M + \gamma(w_L(\gamma)x_L) - x_C)^2}$$

The optimal level of political restraint is determined maximizing the representative agent's utility.

$$\max_{\{\gamma\}} U = x_C(\gamma) - a\sigma_C(\gamma)$$

The γ corresponding to the maximal point offers the best possible variance/irrationality mix for a government.

The last form of governance is anarchy. Assume that its variance in outcomes is zero on this particular margin. Let it be denoted as x_{AC} and its standard deviation of outcomes as σ_{AC}. Analytically we can assume that irrationality under anarchy is less prevalent than under mob democracy, as in the former, consumers feel the costs of their irrationality.

Anarchy

$$x = x_{AC} > x_M$$

$$\sigma = \sigma_{AC} = 0$$

Therefore, the optimal constrained democracy is superior to anarchy if,

$$x_C^* - a\sigma_C^* > x_{AC}$$

Figure 6 illustrates one possible outcome. The constitutional tradeoff outlines what is analogous to an inverted production possibilities frontier, as both variance and irrationality are bads. Indifference curves are also inverted; what is optimal is zero variance and irrationality, so the best point on the constitutional tradeoff is on the inmost indifference curve (i.e., the origin if
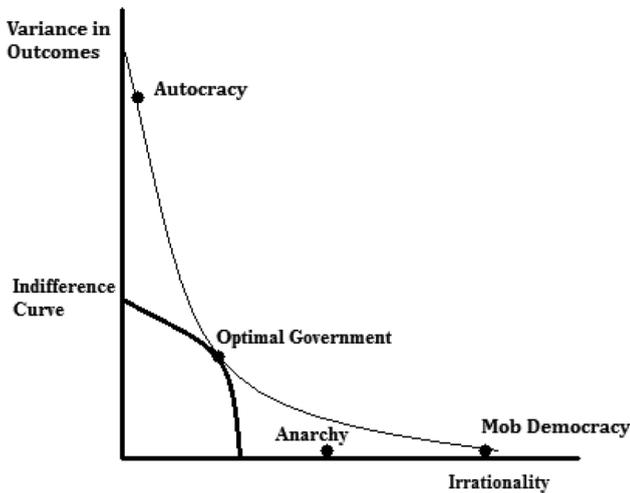

Figure 6: Trade-offs among institutional arrangements.

feasible). In this example, the best government is a roughly equal mix of democracy and autocracy. Anarchy is superior to some forms of democracy, but not all. However, it is also possible that anarchy is superior to the optimal government.

I should note that I do not object to concerns regarding the conceptual legitimacy of aspects of Figure 6. For instance, the indifference curve does not represent the indifference curve of any individual, even the "representative" individual in society. It instead is in reference to an idealized social planner who paternalistically wishes to minimize some function of the irrationality of the citizens and the variance in outcomes resulting from the movement away from the democratic process. However, all of this is implicit in the concept of rational irrationality if we treat it symmetrically in markets and politics. Something like this model is necessary should we want to maintain that symmetry. Rational irrationality cannot be generalized without conceiving of these issues from the viewpoint of the idealized paternalistic social planner.

5 Conclusion

Rational irrationality may lead to poor policy outcomes in democracies, and they will be the poorest in mob democracies. In practice, democracies are constrained, whether constitutionally or by taking on elements of autocracy. These constraints may on average reduce irrationality, but at the expense of increasing the variance of outcomes. The mix of irrationality and variance that these governments produce may be better or worse than what would be achieved under a functioning anarchy. In the United States, there is good reason to believe that politicians are more rational than the voting public. The presence of rational irrationality has quite ambiguous effects on the ways in which we should view the relative efficacy of different institutional arrangements, though perhaps it gives yet another reason to be skeptical of the workability of arrangements like direct democracy.

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