What We Deserve:
The Moral Origins of Economic Inequality and Our Policy Responses to It

Jacob S. Bower-Bir

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Edward Carmines, Ph.D.

William Bianco, Ph.D.

Doctoral Committee

David Reingold, Ph.D.

October 1, 2014

Bradley Heim, Ph.D.

Stephen Benard, Ph.D.

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To Judith and Elinor:
One taught me what it justice is,
the other how to study it.

Acknowledgements

This will be inadequate, but ...

I was fortunate to enter graduate school when I did. My colleagues were inquisitive, able to better one another's work, and enjoy themselves. I am grateful to all of them, especially those with whom I lived and spent the most time: Nico, Nick, Josef, David, and Jean-Bertrand. Indiana University was a wonderful place to be an undergraduate and graduate student, and I was honored to have taught, learned from, and worked alongside Indiana students.

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Two people set me on the path toward finishing this dissertation but did not live to see its completion: My grandmother Judith Bower and my mentor Elinor Ostrom. I will not waste ink trying to explain what they did for me and meant to me.

Abstract

This dissertation is about economic inequality and why it thrives in a country with professedly egalitarian values. I propose that people's economic behavior and policy preferences are largely driven by their understanding of deservingness. So long as a person believes that their compatriots are generally served their economic due, economic outcomes require no tampering, at least on moral grounds. People may tolerate grave inequalities—inequalities that trouble them, even—if they think those inequalities are deserved. Indeed, if outcomes appear deserved, altering them constitutes an unjust act. Resources meted to the undeserving, conversely, require correction.

To begin, I show how desert unifies behavioral research into the otherwise disparate notions of justice that social scientists usually cite. Desert I treat as a social institution, one that helps resolve a common multiple-equilibria problem: the allocation of wealth and socioeconomic station. As a natural phenomenon emerging from repeated human interaction, individuals are motivated to ensure desert's reward. The precise definition of desert, however, will vary across cultures and individuals. I use surveys, survey experiments, and economic experiments to determine how different segments of the American population define economic desert. I then use those surveys and experiments to measure the extent to which different sub-populations believe that economic desert is actually rewarded. Finally, I show that these two variables—definition of economic desert and faith in its reward—shape an individual's willingness to redistribute wealth, both in the laboratory and through national policy, and often at a detriment to personal financial wellbeing.

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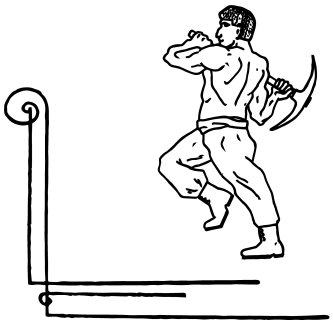
What We Deserve:
the Moral Origins of Economic Inequality and Our Policy Responses to It

A dissertation in the contemporary style, though owing debts to antiquity's learned minds; which begins with an allusion to Psalms; ends with a meditation on the public's tendency toward mysticism; and furnishs the usual statistical and experimental analyses, figures, charts, and tables; here presented in Latin Modern font, serif and size eleven, for your review.



Jacob S. Bower-Bir

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1 | Introduction

God, Psalms assures us, "has not dealt with us as our sins merit, nor requited us as our wrongs deserve" (*New American Bible* 2011, Psalms 103:10). Meanwhile, Jeremiah promises that God will search our hearts and test our inner motivations "in order to give everyone what his actions and conduct deserve" (*Complete Jewish Bible* 2007, Jeremiah 17:10).[1] God can embody such paradoxes, but we humans have neither the luxury of absolute mercy nor the responsibility of infallible judgement. Our pursuit for a peaceable, productive coexistence with one another leads us down a middle road when it comes to justice. We have, over repeated interactions, fashioned our own definitions of desert, evolving social institutions by which we allocate various goods, treatments, and duties. And despite our drive to treat people justly—giving them the rewards and punishments we think they deserve—we do so with questionable accuracy. In no area of community life is this tension more apparent than in the distribution of economic resources, where the haves may be separated from the have-nots to an unsettling, but not necessarily unjust, degree.

Of all the disparities with which Americans have dabbled, economic inequality has received the most attention of late. The rich are becoming richer at a rate that far outpaces the economic growth enjoyed by the average citizen. The extremely rich, in turn, are far outperforming the merely wealthy (Bartels 2008; Piketty and Saez 2003). These trends are reaching historic levels with important ramifications for our political and commercial health. Elected officials are "utterly unresponsive" to the policy preferences of the financial underclass (Bartels 2008, 2; Enns and Wlezien 2011), and three-quarters of Americans insist that large differences in income are unnecessary for or harmful to American prosperity (Smith et al. 2013). Great scholastic effort has

[1] I chose these specific renditions because of their use of the word "deserve", and because of the care the respective translators take in explaining their methods and philosophies. There are many other translations of The Old Testament, many of which also use the word "deserve", and those that do not nonetheless capture the spirit of the concept. Please note that you can find these same verses in the Hebrew Bible (*Tanakh*): Psalms (*Tehillim*) within the Scriptures (*K'tuvim*) and Jeremiah (*Yirmiyahu*) within the writings of the Prophets (*Nevi'im*).

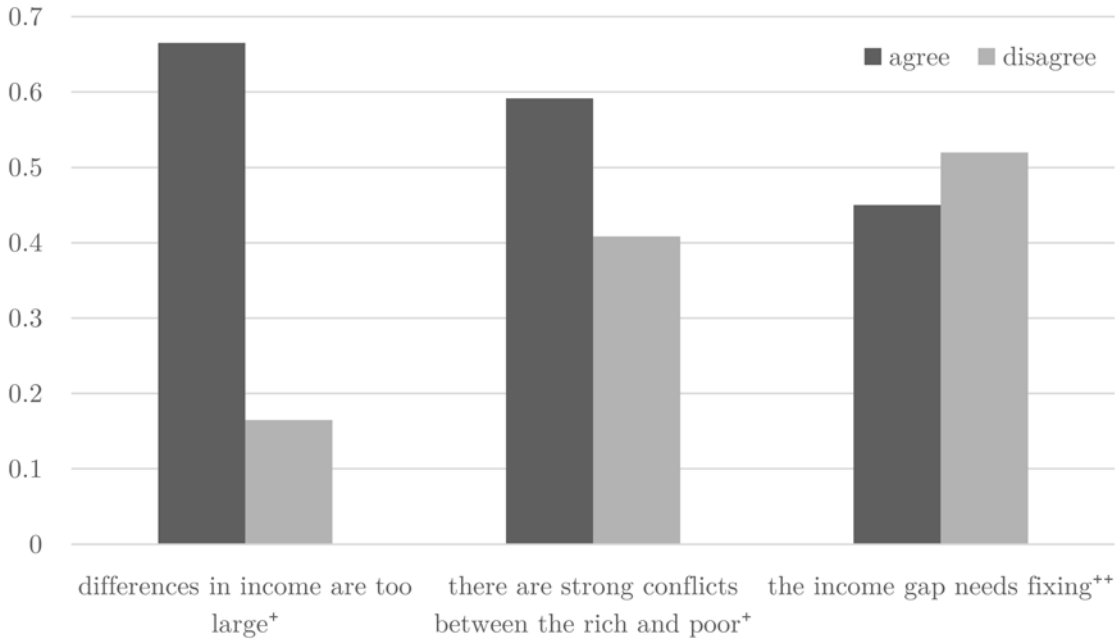
been expended to better understand the origins of and opinions toward economic disparities, and researchers have been careful to note its influence and its perceived influence on political representation and economic efficiency.[2] But inequality is also a moral question; a question of principles and right (Frankfurt 1987; Rawls 1971).

As America enters a "new gilded age," we are confronted with a basic question: What does it mean to deserve wealth and poverty? Appreciating how different people answer that question is critical to understanding the origins of myriad social policies and ills. People have in their heads notions of economic justice, notions of what kinds of people deserve what positions along the socio-economic ladder. So long as a person believes that their compatriots are generally served their economic due, economic outcomes require no tampering. People may tolerate grave inequalities—inequalities that trouble them, even—if they think those inequalities are deserved. Indeed if outcomes appear deserved, altering them would constitute an immoral act. Conversely, economic standing meted unjustly requires correction.

Majorities simultaneously despair at economic inequality and refuse to address it, as Figure 1.1 shows. Scholars have puzzled at and argued over this apparently contradictory worldview, over the bizarre American combinations of egalitarian values and worsening class division, of glaring economic disparities and a weak welfare state. How can the self-proclaimed "land of opportunity" so routinely leave so many behind? My argument is simple: Many Americans cannot shake the belief that people get what they deserve; that however unattractive inequality may be, it is justly derived. For others, their specific definitions of economic desert prohibit most avenues to address inequality. Put simply, the practical and aesthetic motivations to ignore or address economic inequality are to some degree trumped by moral considerations. However useful an individual believes the gulf between rich and poor is for encouraging productivity, that does not mean she believes such separation is fair. And an individual who sees wealth imbalances as hurtful to the democratic functioning of government may not view those imbalances as unjust. It is not enough to know about and be alarmed by inequality—inequality must be perceived as undeserved to motivate a behavioral response.

[2]For studies on the genesis and growth of contemporary economic inequality, see: Bartels (2008); Danziger and Gottschalk (1995); Frank and Cook (1996); Gottschalk (1997); Jencks (2002); McCarty, Poole and Rosenthal (2006). For studies on public opinion toward inequality, see: Bartels (2008); Hochschild (1981); Page and Jacobs (2009); Page and Shapiro (1992).

Figure 1.1: Incongruent public opinion?



Sources: $^{+}$ Calculations based 2010 General Social Survey data (N = 1,512).
$^{++}$ Calculations based Nov. 28–Dec. 1, 2011 Gallup poll data (N = 1,012)

All this talk about desert and justice may seem a bit out of place in a social science dissertation. Social scientists, after all, have spent much brainpower and ink showing humans to be strategic and fundamentally self-serving. Why expect such creatures to worry themselves with the moral underpinnings of inequality? Because doing so benefits them. Neuroscientists and social psychologists have convincingly shown that morality is at once innate—built in to the human mind—and learned (e.g., Haidt and Joseph 2004; Tabibnia, Satpute and Lieberman 2008). Not only is there an intuitive, deeply-rooted drive for people to evaluate the justness of a given behavior, but recent syntheses of anthropological, psychological, and economic research suggest that justice can be conceived of and modeled as an institution (Binmore 1994, 1998, 2009*b*, 2011). There is not an ideal profile of inequality, as some argue (Alesina and Giuliano 2011). Nor is there is some absolute conception of fairness for which people have varying tastes, as many experimental economists used to contend (Binmore and Shaked 2010). Rather, repeated interactions between people result in norms, many of which are construed as moral precepts, and deviations from those norms elicit personal costs (Crawford and Ostrom 1995; Ostrom 2005). As such, justice and similar moral considerations can be expected to help constitute the "rules of the game in a society" (North 1990, 1), generating

a "regularity of social behavior" (Greif 2006, 30).

In the course of "organizing repeated human interactions" (Ostrom 2005, 3), norms and institutions help to solve multiple equilibria problems (Binmore 2009*b*). One such problem is the distribution of wealth. Wealth can be distributed in all sorts of ways that could constitute a stable equilibrium. It can be held by a class favored on account of ancestry, religion, race, gender, sex, birth order, or place of origin. It can be divided evenly among a population, or directed toward those who derive the most utility from it. It can be taken by the cleverest, or earned by the assiduous. To adjudicate between these and numerous other options, we appeal to our definition of *desert*. A bargain or social arrangement is "just" if it rewards desert. Compared to someone else, you may be more, less, or equally deserving of some outcome. A person who believes the very wealthy and the very poor *deserve* their economic positions has no immediate moral difficulty with economic inequality. Not so for a person who thinks that wealth tends to be kept from the deserving or held by the undeserving.

According to this account, desert is an emergent phenomenon. More generally, the moral rules that govern our behavior are shaped by and subject to evolutionary forces, biological and social (Binmore 2011; Mackie 1977; Skyrms 1996). There is nothing novel in this assertion. The notion was ably formulated by David Hume in 1739, and the theoretical lineage of justice as a natural phenomenon can be traced through Thomas Hobbes to as far back as Aristotle in the 3rd century BCE.[3] An equally illustrious tradition treats morality as a metaphysical matter, our duties (sometimes literally) set in stone for us to discover and abide. Many of history's great thinkers have tackled moral questions with such *a priori* reasoning. Plato's (2000) Forms, Kant's (1997) practical reason, Rousseau's (1968) general will, Moore's (1993) moral intuition—each requires a wave of the metaphysical wand to function. Even hardnosed logicians and economists have acquiesced to ipsedixist thinking. Both John Rawls (1971) and John Harsanyi (1977) appeal to supernatural enforcers—natural duty and moral commitment, respectively—in their seminal defenses of egalitarian and utilitarian fairness norms (Binmore 2009*b*). Metaphysicians offer useful insights into morality and related concepts, but those insights sit atop unsure theoretical foundations (Binmore

[3]See Hume (2011), Hobbes (2008), and Aristotle (1999). Mathematician-turned-economist Ken Binmore (1994; 1998; 2011) is perhaps the most vocal contemporary champion of natural justice, at least in the social sciences. He provides an accessible if one-sided ancestry to his scientific, naturalistic approach to moral philosophy in chapter three of his 2011 volume.

2009*a*).

If we are agreed on this point and willing to approach justice on scientific grounds, we can proceed with the task at hand, namely: Figuring out whether and to what degree our understandings of economic deservingness influence American inequality and our policy responses to it. Toward that end, I will take the following steps. First, I finish this introductory chapter with a note on data collection. Then in Chapter 2 I review the existing literature on economic justice and propose an expanded role for desert. Desert, I argue, serves as a bridge between the many different kinds of justice social scientists have contrived, and its everyday use in conversation hides its position as a critical part of our formal and informal social institutions. In Chapters 3 and 4 I place some parameters on economic desert as various American sub-populations define it. Specifically, I determine the importance of personal responsibility and proportionality to definitions of economic desert, and see how the presence or absence of these characteristics influence redistributive behaviors. In Chapter 5 I determine who in our country actually believes that economic desert is rewarded, and I uncover our hidden assumptions about who we think deserves what. Then in Chapter 6 I show that individuals' economic policy preferences are largely shaped by (i) their definition of economic desert and (ii) their belief in the reward thereof. If you want to skip ahead and see a summary of what my empirical analyses yield, turn to Chapter 7, my conclusion, wherein I also offer some ideas for future research on the topic of economic justice. With that, we may begin.

1.1 Data collection.

Chapters 3–6 constitute the empirical potion of my dissertation. The analyses in those chapters rely on a large-N survey, survey experiments, and economic experiments. Instances of experiments are chapter-specific. The large-N survey, however, is referenced throughout the dissertation. I present an overview of this survey, its strengths and weaknesses, here rather than reintroduce it every chapter.

I hired SocialSci to administer a survey of my design to 1,000 adult American respondents. SocialSci maintains a participant pool in several countries, and these pools are specifically intended for academic survey research. Their vetting system tracks participant responses over time and across studies, removing from the pool participants whose demographics inexplicably fluctuate.

For completing my survey, which took around 18 minutes on average, respondents were awarded 50 "points" (about $0.83). SocialSci participants can accumulate and then redeem points for Amazon gift cards, or they can donate their earnings to scientific organizations such as the Public Library of Science. Of the 1,000 respondents surveyed, 992 completed the survey within a reasonable timeframe and their responses constitute the primary dataset used in the empirical analyses within this dissertation.

Table 1.1: Demogaphic breakdown of survey sample.

	Sample N	Sample %	US pop %	Sample% − US pop%
Gender				
Female	586	0.59	0.51	0.08
Male	406	0.41	0.49	−0.08
	992	*1.00*	*1.00*	*0.00*
Race				
White	701	0.71	0.64	0.07
Black	93	0.09	0.12	−0.03
Latino	52	0.05	0.16	−0.11
Asian	111	0.11	0.05	0.06
Other	35	0.04	0.03	0.01
	992	*1.00*	*1.00*	*0.00*
Education				
High school or less	118	0.12	0.43	−0.31
Associate's or some college	330	0.33	0.29	0.04
Bachelor's degree	351	0.35	0.17	0.18
Graduate degree	193	0.19	0.11	0.08
	992	*1.00*	*1.00*	*0.00*
Household income				
<$25k	192	0.19	0.25	−0.06
$25k–$49k	247	0.25	0.25	0.00
$50k–$74k	210	0.21	0.18	0.03
$75k–$99k	141	0.14	0.12	0.02
$100k–$149k	137	0.14	0.12	0.02
$150k+	65	0.07	0.08	−0.01
	992	*1.00*	*1.00*	*0.00*
Political party				
Republican	68	0.07	0.24	−0.17
Lean Republican	79	0.08	0.16	−0.08
Independent	264	0.27	0.12	0.15
Lean Democrat	284	0.29	0.16	0.13
Democrat	297	0.30	0.32	−0.02
	992	*1.00*	*1.00*	*0.00*

Initially, SocialSci sampling specialists attempted to recruit respondents such that the 1,000 participants would meet census quotas for gender, education, race, and household income. This proved a cumbersome process, which I abandoned in favor of recruitment from the general pool. The demographic breakdown for the final 992 respondents is shown in Table 1.1. Population totals are also shown to provide a sense of the survey's external validity. The distribution of household income in my sample is remarkably close to the national distribution, a fortuitous outcome given the substantive focus of this dissertation. Females, college graduates, whites, Asians, and political independents are overrepresented. Males, people with only a high school diploma or less, Latinos, and Republicans are underrepresented.

So that the standard errors in my subsequent analyses account for under- and over-recruitment from various sub-populations, I calculate sampling weights using a "raking" weight-calibration process (alternatively known as "iterative proportional fitting" and "sample-balancing").[4] My final weights are based on five stratification dimensions: gender, education, race, household income, and political party identification. The marginal distributions of each dimension in the U.S. population serve as "control totals", toward which sample margins converge over the stepwise process. I show national control totals in the leftmost column of Table 1.1. Estimates of the gender, educational, racial, and income breakdowns in the U.S. population come from the Census Bureau's 2012 projections. Estimates of partisan breakdowns come from the Pew Research Center for the People and the Press (2012).

Embedded in my survey were several survey experiments, to be discussed in the appropriate chapters. Survey respondents were randomly assigned to one conditions within a given experiment, so Table 1.1 shows the pool from which survey experiment participants were drawn. For a more detailed demographic breakdown by experimental condition, please see Appendix C. There, you will also find the demographic makeup of subjects from my economic experiments, which were conducted independently of my survey and are detailed in later chapters.

Funding for this survey, the experiments within, and the economic experiments conducted separately was provided by two generous donors: The Vincent and Elinor Ostrom Workshop in Political Theory and Policy Analysis and the Indiana University Social Science Research Commons. I am indebted to the leaders and employees of these organizations and am grateful for their willingness

[4]Specifically, I used STATA 12's `survwgt rake` command.

to support graduate student research.

2 | Desert, Institutions, and the Many Justices

Desert is the quality of meriting some reward or punishment. To call someone deserving identifies the subject as being worthy of a particular treatment. For conceptual ease, I distinguish between two broad categories of economic desert. A person can be targeted for special—although not necessarily enviable—economic consideration as a matter of (i) reward and punishment, or (ii) compensation and reparation (Feldman 1995*b*).[1] Examples of the former: Being royalty in medieval England entitled you to a portion of your subjects' agricultural yields, and being the longer serving employee at the Bureau of Motor Vehicles makes you, in some eyes, deserving of a larger paycheck than your junior colleague. Royalty and seniority are being rewarded. For an example of the latter, imagine two employees identical in every way except sex. Corporate policy may dictate that the employee of the traditionally marginalized sex—the female—be considered for a promotion over her otherwise equal male coworker. Desert in this case is not a celebration of females. Rather, desert here is meant as restitution for a now outmoded norm that celebrated males in the workplace.

From the rather commonplace notion of desert grows the comparatively lofty idea of justice. Justice, many moral philosophers contend, is getting what one deserves (e.g., Feldman 1992, 1995*a*,*c*; Rescher 1966; Sidgwick 1962). John Stuart Mill (1957, 55) formulates the position forcefully: "[I]t is universally considered just that each person should obtain that (whether good or evil) which he *deserves* [...]." "What could be simpler?" queries Hospers (1961, 433). Not much, apparently, for many thinkers reject the view as too simple, although these philosophers also acknowledge the

[1] Compensation and reparation are often treated as interchangeable, but there exists a crucial difference. "[W]hereas the latter is due only after injustice the former may be due when no one has acted unjustly to anyone else" (Boxill 1979, 257–258; Khatchadourian 2006). Consider two people unable to walk, the first as a result of congenital illness, the second a result of collision with a drunk driver. Members of the community agree that both people are due financial amelioration. But where fall the duties of repair? Congenital illness and other acts of God cannot be attributed to any earthy actor, and since He is unlikely to write a check, disability compensation will probably be paid by a sympathetic community. The drunk driver, conversely, can be reasonably identified as owing reparations to the victim of her negligence.

patent link between desert and justice (Feinberg 1963; Lucas 1980; Sher 1987; Slote 1973).

Moral notions like desert and justice are as potent as they are because they derive not from formal contemplation, but from actual human interaction, as I explain in length later in this chapter. We must learn what it means to different people to be deserving of different goods and treatments in different situations. Most of the language surrounding topics like social, economic, and organizational justice, however, is heavy with semantic baggage. This is true not only in normative treatments of justice common in philosophy and economics, but also in descriptive treatments from sociology, psychology, and organizational theory. Some terms are unnecessarily stringent, failing to account for their everyday use. For example, several academics implicitly equate deservingness with personal control and causation (e.g., Jost and Kay 2010; Nisbett and Ross 1980), but these properties are by no means mandatory components of desert. Other terms are used too loosely. Organizational and social psychologists, for example, tend to use "fairness" and "justice" interchangeably (Greenberg 2011), whereas other thinkers posit fairness as a component of justice (e.g., Feinberg 1974).

Before getting to the empirical core of this dissertation, we must first settle on basic constructions of desert and its attending concepts. To do that we must review select areas of past research into justice, which I do in the following section of this chapter. After that, I show that many of the otherwise disparate conceptualizations of justice can be more accurately and parsimoniously restated in terms of desert. To conclude, I translate my argument into the grammar of social institutions, which ties my research directly to the institutional economics literature and provides a theoretical account for why definitions and assessments of economic desert will influence people's behavior and policy preferences.

2.1 Justice as distribution and procedure.

The literature on justice, were such a body to exist in any formal sense, is immense. It spans centuries and disciplines, has been tackled from consequential (e.g., Bentham 1843; Mill 1957) and deontological perspectives (e.g., Kant 1993; Rawls 1971). Attempts to engender justice can be proactive or reactive (Greenberg and Wiethoff 2001), and they play out daily in settings formal and informal (Frankena 1962), over goods tangible and intangible (Foa and Foa 1974).

To help make sense of so broad a field, scholars have taken to classifying types of justice. "Retributive justice" deals with the punishment of intentional moral transgressions (e.g., Carlsmith and Darley 2008), whereas "restorative justice" looks specifically at the process of punishment as carried out by victims as opposed to a third party (e.g., Wenzel et al. 2008). "Interpersonal justice" involves the degree to which we treat others with dignity, "informational justice" deals with our explanations to one another regarding procedures and outcomes, and both of these justices are classed under the more general "interactional justice" (e.g., Greenberg 1993; Loi, Yang and Diefendorff 2009). The list goes on.[2]

Desert as I use it accounts for the gamut of justice types. Given my focus on large-scale social machinations and the apportionment of economic resources, two conceptions of justice warrant extended analysis. "Distributive justice" is concerned with the allocation of resources, and "procedural justice" is concerned with the rules that lead to those allocations. In the course of introducing these two varieties of justice, we will become familiar with the basic terms and concepts needed to fully understand desert and the promise it holds for explaining contemporary economic inequality and our responses to it.

2.1.1 Distributive justice.

Among whom and on what grounds might a good be allocated? Three general distribution schemes, each ancient in their pedigree, have received the bulk of academic attention: need, equality, and equity. The first is perhaps best exemplified in the writings of Karl Marx (2008, 27), who identified "to each according to their needs" an appropriate principle of distribution. A just distribution under a *need*-based scheme requires that individuals be guaranteed some minimum allocation of a given resource.[3]

Whereas the need principle necessitates establishing a floor below which an individual's allot-

[2]Greenberg (2011) and Jost and Kay (2010) provide comprehensive yet approachable reviews of research into organizational and social justice, in there many forms, and both were invaluable in composing this literature review.

[3]That Marx is so closely associated with the need-based conception of distributive justice is something of a historical irony. Marx, although genuinely outraged at the exploitation of workers, saw little practical value in appealing to people's sense of justice (Campbell 2001; Husami 1978; Tucker 1970; Wood 1972). Moreover, he was fearful that competing notions of justice might be used to further entrench the status quo, and was consequently cautious in his normative appeals. He instead advanced overthrow of the capitalist system as a matter of collective self-interest (e.g., "The proletarians have nothing to lose but their chains. They have a world to win. Working Men of All Countries, Unite!" (Marx and Engles 2012, 102)) and largely confined his work to historical analysis (Jost and Kay 2010).

ment of a resource may not fall, the *equality* principle is preoccupied with both resource ceilings and floors. Marx's call for a classless society was interpreted by many as a call for strict egalitarianism with regard to economic outcomes (Campbell 2001). A just distribution of a specified resource under an equality-based scheme is one in which every individual has an equal amount of that resource, no more or less.

The *equity* principle grounds distributional justice in a different sort of equality. Rather than ensuring an equality of outcomes across individuals, equity-based schemes insist on—as Aristotle (1999, 71) put it—"treating equals as equals" (Feinberg 1973; Frankena 1962; Mansbridge 2005). The goal here is "proportionality" (Vlastos 1997) between an individual's inputs and outcomes, her merit and reward. A distribution is just when individual inputs are balanced by the outcomes they yield such that the more meritorious the individual, the greater her reward.

From Aristotle's (1999, 71) call for an "equality of ratios", psychologists developed the modern *equity theory* (e.g., Adams 1963, 1965; Austin and Walster 1974; Blau 1968; Homans 1961; Walster, Walster and Berscheid 1978). People want, the theory holds, to maintain a proportional relationship between the inputs they invest (say, hours of study or effort at work) and the outcomes they receive (say, test score or salary). Comparisons to one's prior experiences (Adams 1965) or actors in similar situations (Festinger 1954) enable people to assess the degree to which proportionality is achieved. Failure to maintain proportionality produces psychological distress, motivating the afflicted to restore equity (Walster, Berscheid and William 1973).[4] Crucially, this distress is predicted to occur whether an individual's disproportionate return is personally favorable or unfavorable.[5] And inequity need not be directed at the self to induce distress; observing it in other relationships can yield the same effects. On the whole, empirical evaluations have "supported the basic tenets of equity theory to an impressive degree" (Jost and Kay 2010, 1130; Ambrose and Kulik 1999).

Each of the three general distribution schemes suffers from ambiguity in their prescriptions.

[4]The means by which equity is restored is not always as wholesome or demonstrable as might be desired. Sometimes the offended individual will decrease or increase her input so as to match her outcome (Sturman and Thibodeau 2001). Sometimes she will endeavor to make her outcome match her input, taking additional payoffs to which she feels entitled (e.g., stealing office supplies) or voluntarily donating excess payoffs (Greenberg 1990). Other times, the repair is a purely psychological affair, with the subject of inequity working to rationalize the situation, convincing herself that equity has in fact been realized (Hatfield and Sprecher 1984).

[5]A person being overpaid for a task, for example, is not expected to construe her situation as super-extra-just. According to equity theory she will recognize the discrepancy between her inputs and their outcome. Emotionally, this would manifest as guilt. Receiving fewer benefits than one's inputs warrant, conversely, produces ire (Hegtvedt 1990; Homans 1961; Jost, Wakslak and Tyler 2008; Schmitt et al. 2000).

What exactly constitutes "need" will vary according to the resource in question and across time and cultures. Similarly, the equality principle does not specify what resources should be distributed equally and which might be defensibly stratified in their apportionment. And what characteristics, attributes, or inputs actually constitute merit has been a source of contention since before Aristotle codified it as a principle of justice.[6]

In spite of this ambiguity, there exists ample evidence that people demand distributive justice, though which kind is a complicated matter. People seem to value each of the three distribution principles (Cohen and Greenberg 1982; Mikula 1984; Reis 1984), understanding that they vary in their suitability with situation and disposition (Barrett-Howard and Tyler 1986; Bolino and Turnley 2008; Clark and Mills 1979; Deutsch 1975, 1985; Lerner and Whitehead 1980; Lerner 1974; Reis 1984; Tornblom and Foa 1983). For example, people tend to prefer equal and need-based distributions when dealing with close relations and those they perceive as similar to themselves (Greenberg 1978, 1983; Jasso and Rossi 1977; Lamm and Schwinger 1980; Lerner 1974; Sondak, Neale and Pinkley 1995, 1999), whereas equity is usually the favorite distribution principle in formal interactions (Deutsch 1975, 1985; Greenberg and Cohen 1982). Indeed, the manner in which resources are distributed is often interpreted by involved parties as revealing the nature of their relationship (Greenberg 1983).

It is not entirely clear, however, the extent to which instrumental concerns dictate a person's preference for one or another principle (Montada 2003). For example, family members' consistent predilection for divvying resources according to the equality and need principles may be as much a matter of morality as a desire to ensure cordial dealings among people who can expect frequent future interactions (Deutsch 1975; Konow 2003; Shapiro 1975; Wenzel 2000). Moreover, peoples' *ex ante* distributional preferences do not always accord with their *post hoc* rationalizations of actual distributions (Diekmann et al. 1997). To illustrate: When asked to assign applicants to jobs, experimental subjects redefined merit so as to align with the idiosyncratic credentials of their favored applicants (Uhlmann and Cohen 2005). In sum, the resource allocation for which people lobby reveals some amalgam of their concerns for justice and self-interest (Jost and Azzi 1996;

[6] Aristotle (2002, 162) was keenly aware of the difficulties in achieving consensus on the definition of merit: "[E]verybody agrees that what is just in distributions must accord with some kind of merit, but everybody is not talking about the same kind of merit: for democrats merit lies in being born a free person, for oligarchs in wealth or, for some of them, in noble descent, for aristocrats in excellence."

Konow 2003; Mikula 1984).

2.1.2 Procedural justice.

Outcomes are but one clue by which people ascertain a situation's justness. The distribution of a resource, after all, is the result of some process, and that process is as open to scrutiny as the product it bears. Over the past quarter century, investigations into procedural justice have outpaced research into the many other expressions of justice (Jost and Kay 2010). In spite of this upsurge in thinking on the topic, two conceptualizations of procedural justice continue to dominate the academic literature: process control (Thibaut and Walker 1975) and procedural rules (Leventhal 1980).

Affected parties might hope to exercise control over a decision-making process either before a decision is made or as a decision is rendered (Ambrose and Arnaud 2005; Brockner and Wiesenfeld 1996; Walker, Lind and Thibaut 1979). The former is called "process control" and exists to some degree if affected parties are allowed to present their cases to a third-party arbiter. The latter is called "decision control" and exists when the affected parties have some say in the final adjudication. In their comparison of adversarial and inquisitorial judicial systems, Thibaut and Walker (1975) proposed that litigants would trust the legal process to be fair when they perceived themselves to wield both types of control. Surprising, then, to find that people often labeled as fairest those procedures in which they had no hand in decision-making but ample opportunity to express their concerns. The importance of "voice"—the capacity to influence outcomes, but not determine them—extends beyond the realm of jurisprudence, and subsequent research has lent special support to the role of process control in justice appraisals generally (e.g., van den Bos 2005; Dipboye and de Pontbriand 1981; Folger 1977; Houlden et al. 1978; Landy, Barnes-Farrell and Cleveland 1980; Lind and Kulik 2009; Lind and Tyler 1988).

While recognizing the importance of voice, Leventhal (1980) sought to extend the applicability of procedural justice beyond dispute resolution by proposing six rules that together make a process fair. According to Leventhal, procedures should: be applied consistently across people and time ("consistency"); disregard personal interests and preconceptions ("bias suppression"); operate on valid information ("accuracy"); allow for the modification or reversal of previous decisions ("correctability"); reflect the values of the people whom they affect ("representativeness"); and align

with the moral tenets of the people involved ("ethicality"). As was true of distributional principles, the importance of these procedural rules to justice appraisals varies with situation (Barrett-Howard and Tyler 1986). Of the six, however, people appear to stress three—consistency, accuracy, and ethicality—in in a range of circumstances (Barrett-Howard and Tyler 1986; Lind and Tyler 1988).

The fact that people are often preoccupied with the *fairness* of an outcome over the *favorability* of that outcome to their personal circumstance suggests to some researchers that procedural justice is not a matter of simple self-interest (van den Bos 2005). Others believe that calls for fair procedures may be subtle demonstrations of self-interest (e.g., Folger et al. 1979; Shapiro and Brett 2005; Tyler 1994), given people's inclination to read their position in a debate as reasonable and counter-positions as misguided (Ross and Ward 1996). Beyond material gain, people may care about procedural justice because of what procedures imply about their position within a group (Lind and Tyler 1988; Tyler and Lind 1992; Tyler 1994), which in turn affects their feelings of self-worth (Tajfel and Turner 2004). From their procedural treatment, people infer the respect superiors have for them and the trust superiors have in them, and they gauge their standing among and value to group members (Heuer et al. 1999; Huo 2002; Smith et al. 1998; Tyler, Degoey and Smith 1996; Tyler 1994). Unjust treatment—failing to afford someone voice and the range of rules that together make a procedure fair—communicates a lack of full belonging (Baumeister and Leary 1995).

People may be less attentive to, or outright ignore, procedural concerns when they hold "moral mandates": strongly held feelings about specific issues, commonly coupled with hostility towards apparent transgressors (Mullen and Skitka 2006; Skitka, Bauman and Sargis 2005). Researchers disagree as to the extent moral mandates influence procedural concerns. One line of inquiry finds that, given a sufficiently ingrained mandate, people are undisturbed by unfair processes so long as outcomes accord with moral conviction; and processes that are otherwise on the up-and-up do not diminish the perceived wrong engendered by a mandate's violation (Skitka and Houston 2001; Skitka and Mullen 2002; Skitka 2002). Others, however, find that unsavory outcomes can be made more palatable when people—even those with robust moral convictions regarding disputatious issues—are convinced the outcome was generated justly (Gibson 2008; Napier and Tyler 2008; Tyler and Mitchell 1994).

2.2 Unifying the different justices.

Justice appraisals appear to be driven by perceptions of distributive and procedural fairness (Tyler and Smith 1998), and the two interact to shape a person's response to outcomes both favorable and unfavorable (Brockner and Wiesenfeld 1996; Brockner et al. 2003). Still, researchers have endeavored to measure the independent influence of distributive and procedural justice (and a host of other notions of justice, such as interpersonal and informational justice) on a variety of dependent variables, including job performance (e.g., Donnerstein 1991; Gilliland 1994; Greenberg 1986), job and pay satisfaction (e.g., Folger and Konovsky 1989; Greenberg 1982; Mowday and Colwell 2003), trust in leaders (e.g., Alexander and Ruderman 1987; Tyler and Caine 1981), and organizational commitment (e.g., Folger and Konovsky 1989; Sweeney and McFarlin 1993), among many others. For the most part, researchers have been successful in gauging the relative importance of the different forms of justice to their outcome of interest.[7]

But I argue that the two predominant notions of justice are more intimately related than researchers usually acknowledge. This entanglement, which I describe below, is especially problematic for the kind of broad justice appraisals with which this study is concerned. A handful of scholars question the conceptual distinctions commonly drawn by their colleagues, wondering if we might be better served by focusing on perceptions of "overall justice" (e.g., Ambrose and Arnaud 2005). Their efforts to do so, however, continue to rely on assessing the types of justice independently. I propose unifying distributional and procedural (and most other kinds of) justice by introducing the concept of desert.

2.2.1 The elements of desert.

Recipes for desert have three basic ingredients: (i) a deserving *subject*, (ii) a deserved *object*, and (iii) a desert *basis* (McLeod 2013).[8] The first two elements are apparent in their meaning, and translate

[7] See Colquitt et al. (2001) for a meta-analytic review of the relative importance of different forms of justice to different dependent variables.

[8] Kleinig (1971) proposes a fourth ingredient: a source from which the subject deserves the object. McLeod (2013), however, raises two objections to this addition. The first is that valid instances of desert may contain so overly-general, indefinite a source as to render its inclusion purposeless. I say that the pitiable Gregor Samsa, by virtue of his streak of rotten luck, deserves some good luck. Whence is this good luck to originate? Second, other instances of desert embed a source within the deserved object (that being the second of the three standard desert ingredients). For their hard-rocking and technically-proficient performance, Def Leppard deserves applause—applause, we can safely assume, from the audience.

into everyday language as "S deserves O". A desert basis, the third element, communicates why the subject deserves the object. It is a fact about the people who are or are not deserving of a given treatment or good (Feinberg 1970). Including it in our formula, we have "S deserves O because of B." Two examples, one from the Royal Swedish Academy of Sciences and the other from Dante's *Divine Comedy*:

- Elinor Ostrom (S) deserves the Nobel Prize (O) for her pioneering analysis of economic governance (B);
- As punishment for using treachery to win the Trojan War (B), Ulysses (S) deserves to be engulfed in eternal flame (O).

Elinor is not alone in deserving economics' highest accolade, nor is Ulysses the only soul fit to burn. Future scholars will be deemed worthy of the Nobel, and fire awaits other counselors of fraud in Dante's hell. For more general desert expressions, deserving subjects may be implied by the stated desert basis or bases, negating the need to identify them specifically. To illustrate: Anybody who is B_1 and B_2 deserves O. The subject (S) here would be all people who meet both bases (B_1 and B_2).

Although I have not earlier used the traditional language of desert, we have already seen its constituent parts nascent in earlier sections. Distributional principles establish a desert formulary, indicating what bases warrant what objects. And procedural justice rules are meant to accurately ration deserved objects, getting them to the appropriate subjects. The relationship between desert and these different justices will be address in turn.

2.2.2 Desert and distributive justice.

Distributional principles hint at who ought to get however much of whatever good (or treatment or punishment), and why. In short, they allude to desert. Even in their most general specification the three distributional principles speak to our three ingredients, suggesting why someone deserves the good under consideration, and indicating roughly how much of that good they should be given. Under the need principle, an individual is entitled to a share of good x by virtue of possessing an insufficient amount of that good, and she is to receive x at least until her need of that good is

satisfied. Under equality, an individual is entitled to a share of good x by virtue of being a member of some group—a group defined by possessing some specified constellation of attributes—and she is to receive or donate good x until she has as much as, and no more than, other members of her group. Under equity, an individual is entitled to receive a share of good x by virtue of her input to some endeavor, and she is to receive about as much x as others who contributed equally to that endeavor, more x than others who contributed less, and less x than others who contributed more.

Operationalizing a distributional principle—actually putting it into practice—requires a great deal more specificity than the three distribution schemes offer in their general forms. It requires articulating deserved objects and desert bases. For example, in line with the need principle, you may equate desert of sustenance with a current lack of it. Not having enough food is what makes a person deserving of more. But a lack of food relative to what purpose or criteria? Having sufficient caloric intake to prevent starvation is different than having the quantity and diversity of foodstuffs to meet medical dietary standards. Managers of a food stamp program will find that a great many more people are deserving of assistance if they adopt the latter understanding of food needs, and a fully developed desert basis would mention a particular medical authority's benchmarks.

Subjects, objects, and bases of desert can be specified for the other distribution principles. For equality, think of the suffrage call for "one person one vote" in democratic elections. Promoters of universal suffrage would argue that a nation's adult citizens, by virtue of their citizenship and adulthood, deserve a say in national elections equal to that enjoyed by their fellow adult citizens. Universal male suffrage, conversely, endorses a more limited basis of desert—one *man* one vote—but stipulates the same equal dispersion of the good among qualifiers (namely adult, male citizens). An example in the opposite direction: Proponents of the Universal Declaration of Human Rights believe that all people are undeserving of torture (i.e., deserve an equal amount of torture, that amount being none) by virtue of being human beings (UN General Assembly 1948, Article V). Some people believe the basis of desert for this equal distribution lies not in being human but in an organism's self-awareness or capacity to feel pain. Members of this club include great apes, who would therefore also deserve freedom from torture (e.g., Singer 1986). Both versions follow the equality principle, but differ in their desert bases.

For equity, remember back to your school days. There are better and worse outcomes, marks ranging from 'A' to 'F', and those marks are assigned according to various inputs. Bases for desert

in this scenario—the inputs that map onto academic outcomes—could be the number of hours a student spent studying, or the number of questions correctly answered on an exam. Dedicated but academically-challenged students have an interest in the former basis, just as lethargic but gifted students would prefer to see the latter. Desert for educators, however, may lie in a student's effort and scholastic performance, such that grades will incorporate both bases. As with preferences for one or another distributional principle, the exact bases of desert in the aforementioned scenarios will shift with individual incentives as well as with personal and cultural understandings of the good being distributed.

As illustrated in the above examples, distributional principles—while a useful shorthand—can be more accurately rephrased in the language of desert. Doing so is not difficult, and it stands to eliminate illusory divisions between the major distributional principles. I initially used universal suffrage as an example of the equality principle, but it could just as easily illustrate the equity principle. The bases for a vote are adulthood and citizenship. People who are adults and citizens to an equal degree get an equal vote. It just so happens that both adulthood and citizenship are binary categories, so the equitable distribution among adult nationals is also an equal distribution among adult nationals. Indeed, Reis (1984, 39) points out that what may appear an inclination towards the equality principle may actually be an exercise of equity wherein "the scrutineer perceive[s] the relevant inputs to be equal." Equality and need can also be easily conflated. You can distribute 2000 calories of food to all adult males every day as a matter of equality, or as a matter of need, 2000 calories being about what an adult male human needs to function. Specifying deserved objects, deserving subjects, and desert bases communicates the same information *and more* as specifying the distributional principle, at little cost to the researcher.

I go further, though. Not only does desert allow us to collapse the three distributional principles into a single concept; it also allows us to combine distributive and procedural notions of justice.

2.2.3 Desert and procedural justice.

Establishing who deserves what—defining the subject, object, and bases of desert—is an essential first step in achieving justice, but at some point we are concerned with whether people actually get what they deserve. Enter procedure. Procedures have some end, possibly myriad ends, toward which they are functioning. If we are interested in justice, then the goal against which we judge

the success of a procedure is whether or not it delivers to people under its jurisdiction that which they deserve. In the traditional terminology of desert, procedures are meant to convey a deserved object to a deserving subject by virtue of that subject meeting desert bases. A person may claim to be in need of good x, and others who equate need of x with desert of x will want a procedure that delivers sufficient x to the claimant only if she is truly in need of it. Whatever other ends that procedure might be satisfying, it is failing from our perspective if it allocates x to someone not in need of it, or withholds x from someone in need of it.

Procedures, in this view, lend credence to or discredit a person's claim to desert. But there are two opportunities for procedural error: (i) identification and (ii) delivery. A procedure may incorrectly identify someone as deserving or undeserving, and/or it may deliver more or less of a good than is deserved. In the first scenario, a procedure has erroneously associated a subject and a desert basis. In the second, a procedure has imperfectly conferred to a subject the proper object. Lacking a God's-eye view, we cannot hope to truly know whether desert bases are satisfied. We rely on our procedures, imperfect as they are, to ensure that people get the share of the good they deserve. Employees at a small firm may be confident appraising whether co-workers get the salaries they deserve, but at larger scales we are increasingly dependent on our knowledge of procedure to judge a distribution's justness. Fair procedures, we hope, lead to just distributions. In this way, our knowledge of procedures may serve as heuristics (van den Bos and Lind 2002; van den Bos et al. 1997; Van den Bos et al. 1998); mental shortcuts that help us answer the more demanding question of whether we believe desert has been rewarded.

As an example of potential difficulties that await procedures meant to identify and reward desert, consider the following desert formula: Loyal employees (B, S) deserve higher salaries than employees with less loyalty (O). Deserving subjects in this instance are relatively loyal employees, and they are deserving by virtue of their loyalty. Acting on such statements can be tricky. It is no easy thing to determine an employee's allegiance to a firm let alone gauge it against the fidelity of their co-workers. As such, a manager might try to approximate loyalty with some metric: Because of their loyalty (B), longer-serving employees (S) deserve higher salaries than employees with fewer years of service (O). Although more easily implemented than the initial formula, this new prescription conflates years of service with company loyalty. The two may be synonymous in some cases, but not all.

Failing to meet a desert basis *negates* your deservingness; failing to follow proper procedures in determining distributional criteria *calls into question* your deservingness. Disentangling the two is a precarious business for we are rarely if ever privy to full information about an individual's deservingness, the functioning of a procedure meant to determine that deservingness, or the success of a procedure in delivering the entitled distribution. People can argue over the appropriate desert bases and over the outcomes to which the deserving are entitled, and they can dispute proper functioning of the procedures meant to ensure deserved outcomes. Leventhal's (1980) rules give us a manageable catalogue of factors that make a procedure palatable. Desert bases and the distribution schemes to which they are linked, however, stand to vary across individuals and cultures. Determining what an individual construes as desert in any given context is no small task.

2.3 What is deserved?

Proceeding under the naturalist interpretation—the premise that the moral rules governing our behavior are largely shaped by evolutionary forces, biological and social (Aristotle 1999; Binmore 1994, 1998, 2011; Hobbes 2008; Hume 2011; Mackie 1977; Skyrms 1996)—desert becomes damnably complex. If repeated human interactions shape an individual's and society's definition of justice, then what counts as deserved should vary widely with context and culture (Binmore 2011; Skyrms 1996). And that is exactly what we see (Elster 1992; Westermarck 1906; Young 1995). Add to this already intricate arrangement the psychological dimension of moral concepts (e.g., Graham, Haidt and Nosek 2009; Haidt and Joseph 2004), and the host of factors political and biographical that lead people to hold different avenues to economic success or failure in varying levels of esteem (e.g., Schneider and Ingram 1993), and we can reasonably expect a fair amount of variation in the definition of economic desert among individuals.

People travel in multiple, overlapping social groups. Definitions of justice may have evolved differently in each, and desert, as an emergent property, will similarly vary. For example, Calvinism and modern offshoots label all economic outcomes as God-ordained and therefore deserved, whereas other Protestant camps demand an incredible work ethic of believers. Adherents to the so-called Protestant work ethic tend to express little sympathy for the less well-to-do (Furnham 1982, 1983; MacDonald 1972), essentially equating desert with industriousness. And then there are professions,

which could conceivably have their own norms. Computer programmers may see less value in logging long hours writing hundreds of lines of code and instead extol strokes of brilliance that lead to code that is simple, elegant. Desert for them would lie more in cunning than labor. What is a Protestant programmer to do? And then there are individual incentives that can influence people's notions of economic justice. People with large families and many dependents could reasonably want economic desert to accord with need. And people who fall into traditionally disadvantaged groups, such as women and non-whites, might want to vastly expand the definition of economic desert and equate economic justice with equal distribution of wealth. The possibilities are legion.

There are a few large-N surveys from which we can begin to determine the effects different ideological and demographic variables have on the likelihood that an individual will subscribe to any of a handful of the possible definitions of economic desert. The most useful surveys include the 2009 General Social Survey (GSS), the 2011 Pew Economic Mobility Survey, and the multi-year, multi-nation International Social Survey Programme's (ISSP) social inequality modules. Questions from these surveys allow us to measure how deserving certain people consider others of specific economic treatment based on their educational background, intelligence, ambition, social and professional connections, willingness to work hard, and their parent's connections and wealth. While an interesting foray into the concept, analysis of popular support for specific desert criteria may lull us into believing that we have accounted for all possible manifestations.

A more fruitful approach to understanding economic desert as it is understood by Americans is to investigate key dimensions underlying the notion. I propose to look at two such dimensions. The first is agency: Must people exercise control over—must they be personally responsible for—meeting or failing to meet desert bases, whatever those bases may be? The second is proportionality: Is it enough to guarantee some minimum reward or punishment for meeting a deservingness threshold, or must payoffs be proportional to desert, differentiating between increasingly fine degrees of merit?

These two concepts are fundamental to philosophical treatments of desert. Though the topic of much philosophical debate, both have been used rather definitively by social scientists, who seem inclined to assume that desert is (i) intimately tied to bases over which people exhibit control rather than those for which we are not (or do not appear) responsible, and (ii) confined to distributions based on equity rather than need or equality. As a matter of both philosophy and empirics, neither need be the case. I touch on both assumptions here, but I will return to them at length in Chapters

3 and 4, wherein I use a large-N survey and a series of survey and economic experiments to measure the importance of each to American conceptions of economic desert.

2.3.1 Desert and agency.

For many thinkers, deservingness presupposes responsibility, lying only in those attributes and behaviors for which a person can claim credit (Pojman 1997; Rachels 1978; Rawls 1971). Divvying a resource along desert bases outside an individual's control would, accordingly, be unjust. This conflation of desert and personal responsibility has carried over into the social sciences with important empirical results: People are relatively comfortable discriminating against others when the grounds for that discrimination are qualities supposedly within our personal jurisdiction (Crandall and Martinez 1996; Puhl and Brownell 2003; Quinn and Crocker 1999); and people tend to view as more just those social, economic, and political systems that distribute resources on similar grounds (Jost, Blount, Pfeffer and Hunyady 2003). But by tacitly associating deservingness with personal causation, as social psychologists often do (see Jost and Kay 2010), we lose sight of a great many desert bases over which people hold no sway.

People can reasonably debate whether a person exercises control over a given quality, but some folks will endorse an economic desert base knowing full well that we have no control over it. There are plenty of situations wherein desert and responsibility have little overlap (Cupit 1996, 1999; Feldman 1995*a*, 1996). Showing that myriad factors external to the student drive the extent and quality of her schooling will convince some that formal education is not a sound moral basis for distributing economic standing. Others will be unmoved. For them, individual agency over a trait is irrelevant to its standing as a basis for desert. Race, sex, parentage: We need not get overly creative in our search for bases of economic desert that leave no room for responsibility, nor need we look too far in history to see their effects. Moreover, not all desert bases outside our control are opportunistic in their relations with justice. A bystander unwittingly caught in and injured during a calamity might be recognized as due financial compensation for her suffering. Indeed, it is in part her lack of responsibility—her innocence—that makes her deserving of compensation.

2.3.2 Desert and proportionality.

This dissertation focuses on the distribution of wealth and economic standing and, as mentioned earlier, Deutsch (1975) and Lerner (1974) make a compelling case that, when people feel "both dependent on and nonequivalent to other social actors, as in marketplace environments" (Jost and Kay 2010, 1132), they are disposed to prefer distributions based on the equity principle rather than the need or equality principles. The desert bases according to which economic reward is proportionally distributed under equity schemes are often utilitarian in nature; merit, that is, lies in productive activities or qualities by which society as a whole might benefit (Frankena 1962; Hayek 2012; Nozick 2013).

Just as I am reluctant to limit possible economic desert bases to those over which individuals enjoy agency, so am I hesitant to assume that people demand proportional distribution of economic goods, or want that proportional distribution confined to market-relevant definitions of desert. For some people—often called "egalitarians"—equality of economic *opportunity* is insufficient. They are "concerned with people's *being equally well off*" (Parfit 1997, 204; Williams 2000). Need, too, is a perfectly defensible quality on which to seat economic desert. People of this persuasion are not so bothered that some have more than others, but by the fact that some do not have enough to meet their needs (Frankfurt 1987). This suggests that proportional distribution of economic standing and wealth might be tolerable to some egalitarians so long as stratification occurs above a minimum threshold.

2.4 Desert and the grammar of institutions.

Fair procedures and distribution principles, equity and proportionality, desert bases, objects, and subjects: It is all getting a bit complicated. To conclude this chapter, I will attempt to restate my argument in a way that clarifies my theory and unites the many concepts relevant to it. To do so, I must invoke the grammar of institutions.

Social institutions have been studied from three dominant perspectives: institutions as equilibria (or, with slight refocusing, as shared strategies), institutions as norms, and institutions as rules. Rather than loose themselves in this debate, Crawford and Ostrom (1995, 583) note that these approaches are not mutually exclusive and permit all three conceptualizations under their notion

of an *institutional statement*: "a shared linguistic constraint or opportunity that prescribes, permits, or advises actions or outcomes for actors." Desert statements, I contend, can be meaningfully read as institutional statements, and as institutional statements notions of desert come with behavioral obligations. Individual understandings of economic desert, that is, will have real implications for the growth and persistence of economic inequality.

Institutional statements may have up to five components, although the most basic—*shared strategies*—have only three: attributes, aims, and conditions. Attributes detail the subset of a given group for whom the statement applies. Aims are the particular actions or outcomes for which the statement is advocating.[9] Conditions define when, where, and how the statement applies.[10] An example of a shared strategy: "The person who places a phone call calls back when the call gets disconnected" (Crawford and Ostrom 1995, 584; Ostrom 2005). People at large constitute the group and callers the subgroup, as identified by the statement's attributes section. The aim is calling back, and the conditions under which to do so are when a call is dropped. The statement generates an expectation on the part of caller and called that may lead to a behavioral pattern (Ghorbani et al. 2012), but here is no obligation for the caller to reattempt a dropped call, nor is the party initially called prohibited from reattempting the call.

People adhere to shared strategies out of prudence, but desert statements are moral in nature and suggest normative obligations. An element is missing from our institutional translation! We need a *deontic*. Deontics specify an actor's duty, establishing whether the statement is prescriptive or non-prescriptive through use of deontic operators. The actions or outcomes in an institutional statement (i.e., the "aim") can be permitted, obliged, or forbidden. Appending this fourth component of an institutional statement to the first three moves us from the realm of shared strategies to *norms*. Norms do not direct us toward prudent aims, but toward proper aims.

[9] There are two stipulations on what makes for an acceptable aim in an institutional statement: It and its negation must be psychically possible (Crawford and Ostrom 1995; von Wright 1963). People operating under the statement must be able to take the specified action or secure the specified outcome, and they must be able to avoid those actions or outcomes.

[10] If attributes and conditions are not explicitly stated, then the statement applies to all members of a group in all situations.

2.4.1 Translating desert statements into norms.

Let us return to some desert statements and see how they might be translated into the institutional language of norms. Desert statements (DS_i) will be presented first, followed by corresponding institutional statements (IS_i). For ease of interpretation we will limit ourselves to three common-language deontic operators—*may*, *must*, *must not*—and all institutional statements will follow this syntax: "group [attributes] [deontic] [aim] [conditions]." Desert bases and subjects will be apparent in the group and attribute sections of the institutional statement, and deserved objects in the aim. To start:

- ▸ **DS_1** People (B, S) deserve enough money to cover basic needs (O).
- ▹ **IS_1** People [ ] [must] [possess enough money to cover basic needs] [ ].

These statements hold that all people, by virtue of being human, are entitled to an income able to afford their daily necessities, regardless of context. If any person anywhere is unable to meet their basic needs, desert is unrewarded and an injustice exists. Many will find this sentiment overly generous and will stipulate additional desert bases, which present themselves as attributes. For example:

- ▸ **DS_2** People who labor (B_1, B_2, S) deserve at least enough money to cover basic needs (O).
- ▹ **IS_{2a}** People [labor] [must] [possess enough money to cover basic needs] [ ].
- ▹ **IS_{2b}** People [labor] [may] [possess more than enough money to cover basic needs] [in peacetime].

According to DS_2, income entitlements exist only for people who exert themselves in productive activity. IS_{2a} secures that guarantee. DS_2 also enables laborers, by virtue of their toil, to acquire more money than they strictly need, which we signify in IS_{2b} with the deontic "may". Note that I have added to IS_{2b} a condition not included in the initial statement of desert, one that prohibits surplus resources from accruing to laborers during wartime. Such conditions are not counted among

the three classic ingredients of desert. Desert statements, it is presumed, are uttered only in contexts to which they apply. In times of war, then, DS_2 would not contain the words "at least". Or you could take the commonsense step of adding the words "during peacetime" to the beginning or end of DS_2. Conversely, individuals who subscribe to DS_2 universally, without regard for contextual factors, will leave the [conditions] section of IS_{2b} empty.

Small but vital discrepancies in desert statements become much more apparent when translated into institutional statements. Consider:

- ▸ **DS_3** People who labor exceptionally hard (B_1, B_2, S) deserve fantastic wealth (O).
- ▹ **IS_{3a}** People [labor exceptionally hard] [must] [possess fantastic wealth] [ ].
- ▹ **IS_{3b}** People [do not labor exceptionally hard] [may] [possess fantastic wealth] [ ].

- ▸ **DS_4** Only people who labor exceptionally hard (B_1, B_2, S) deserve fantastic wealth (O).
- ▹ **IS_{4a}** People [labor exceptionally hard] [must] [possess fantastic wealth] [ ].
- ▹ **IS_{4b}** People [do not labor exceptionally hard] [must not] [possess fantastic wealth] [ ].

One word differentiates DS_3 from DS_4, but with important moral and behavioral consequences. Both hold that hard work should be rewarded with correspondingly substantial wealth. IS_{3a} and IS_{4a} echo this guarantee and are exactly the same. But where DS_3 is silent on other potential avenues to fantastic wealth, DS_4 permits but a single route. IS_{3b} and IS_{4b}, accordingly, are incompatible. Under the latter, people might achieve fortune through hard work alone.[11]

2.4.2 Behavioral implications.

People operating under the guidance of desert and institutional statements may not be able to fully or easily articulate them; indeed, these statements are likely developed through habituation, a part of the "tacit knowledge of a community" (Crawford and Ostrom 1995, 583). But that desert statements can be translated into the institutional language of norms has important behavioral

[11] Please see Appendix A for additional information on how to translate desert statements into institutional statements.

implications. When a deontic exists—when certain conduct or outcomes are prescribed as normatively proper or improper—repercussions exist. Motivations to adhere to a norm have gone by many names over the years (e.g., Coleman 1987; Kerr et al. 1997), but they are now referred to as "delta parameters" (Crawford and Ostrom 1995; Ostrom 2005). Delta parameters denote the importance of a norm to an individual and her community; they represent the benefits to heeding and the costs to violating a deontic. These benefits and costs originate from sources both internal and external to the person experiencing them.

Internal delta parameters are essentially our emotional reactions to obeying or disobeying a norm (Crawford and Ostrom 1995; Ostrom 2005). By including a deontic, norms do more than classify a given aim as well or poorly suited to a given situation: They classify aims as right or wrong. It is one thing to act foolishly, quite another to act immorally. Violating a norm can produce feelings of shame that weigh heavily on the offending individual, even if no one else is aware of the violation (Harbaugh, Mayr and Burghart 2007; Mazar, Amir and Ariely 2008; De Quervain et al. 2004; Schlüter and Vollan 2011). The more thoroughly ingrained a norm, the higher the self-imposed cost of defiance. Conformance to a norm, conversely, produces pleasant emotions such as self-satisfaction and a "warm glow." Positive emotional response will be especially pronounced when norm compliance is otherwise costly to the aspiring do-gooder (Andreoni 1989; Frank 1988; Ledyard 1995).[12] We saw a concept similar to internal delta parameters in the section on equity theory, where inequitable outcomes produce feeling of guilt or anger and equitable outcomes produce contentment.[13]

In charging individual actions and outcomes with moral sentiment, norms also assume a public importance. External delta parameters are the costs and benefits imposed or bestowed on an actor by other actors following rejection or acceptance of a norm. Community members can expect punishment after engaging in some prohibited behavior. Avoid such behavior, however, and you avoid punishment; maybe you even net compensation. The exact nature of your penance or compensation will depend on a host of factors. They may come in physical form, though they are just as

[12] In keeping with our understanding of justice as a natural phenomenon, "do-gooder" in this context refers to someone who follows her community's norm in a given situation. Different communities will prescribe different responses to the same situations, leading observers outside the actor's community to disagree as to the propriety of her actions. And actors who belong to multiple communities may find themselves having multiple, potentially conflicting norms to follow or ignore.

[13] See footnote 5 from this chapter.

likely to manifest as dirty looks or soft-spoken gratitude. In game-theoretic terms, external delta parameters "represent the costs and benefits of establishing a reputation" (Crawford and Ostrom 1995, 587; see Kreps 1996).

Once established, norms provide readymade responses to a variety of situations. It is not so much that we decide whether or not to observe a norm. More likely, the behavior prescribed by a norm becomes routine. From childhood we are subjected to external deltas, which we steadily internalize (Ostrom 2005). There will be occasions, however, when the benefits of a communally banned course of action outweigh its costs, when the internal and external costs to norm violation are not sufficiently steep. Moreover, the actor conforming to or rebelling against a deontic is not alone in experiencing delta parameters. When a norm permits an aim, cost parameters fall on others who treat that aim as forbidden. These others may, depending on the magnitude of the costs and benefits, attempt to disrupt actions and outcomes that are communally accepted.[14] It is not always possible to measure or even observe the various delta parameters that together influence norm adherence. Further complicating matters: Not everyone in a community will experience the same delta parameters for a given deontic, not all communities will have the same norms, and people can belong to several overlapping communities.

As norms, our definitions of economic desert will come with their own delta parameters and will influence our behavior regarding the distribution of economic resources. We will impose costs on ourselves should we feel some economic reward or our socioeconomic position undeserved. These costs may accrue as emotional baggage and, if severe, may prompt us to act—say, forcibly taking what we believe to be rightfully ours or giving away what we believe ill-gotten. The treatment we receive from others, too, will depend in part on their perception of our worthiness vis-à-vis our lifestyle and the economic station we inhabit. Similarly, seeing others in undeserved socioeconomic positions will cause mental anguish and may incite us to corrective action. The maintenance of economic justice—the balancing of economic outcomes with personal deservingness—is an important component of our personal wellbeing and of the interpersonal relationships that make a community.

[14] For example, the legalization of gay marriage personally offended people in no way directly effected by homosexual unions, and some of them are willing to risk the broader population's ire to protest gay marriages. The cost of that ire is outweighed by the benefit they derive from self satisfaction or the praise of their smaller, homophobic community.

2.4.3 Policy implications.

You know that engaging in unjust behavior, enjoying an undeserved outcome, violating some community norm will cost you. It will provoke a response in you and in others aware of your violation. But the range of possible responses—the magnitude of delta parameters—is not always clear. There are times, however, when sanctions are made explicit. The most ready examples come from criminal justice. Consider these twin desert statements: People (B, S) deserve freedom from robbery (O); Robbers (B, S) deserve imprisonment (O). Knowing that she will be incarcerated if caught, a would-be robber can make a more informed decision as to the expected payoff of an upcoming heist. Her calculation will contain, among other parameters, the probability of being caught multiplied by her valuation of internment.

As this simple example shows, not only is justice articulated in desert statements, but the penalties for injustice can themselves be framed in terms of desert. There is a final class of institution—*rules*—that follows this pattern. Rules specify penalties for their violation, and the penalties threatened are backed by additional rules or norms meant to ensure monitoring and enforcement of the first rule. Community members share a moral conviction that people do not deserve to be robbed; they have a norm that people not take the possessions of others by threat of force. That norm becomes a rule when community members, gathered in a deliberative arena, (i) agree on and advertise a sanction for noncompliance and (ii) devise additional rules or norms that enable specific actors to look for noncompliance and discharge the advertised sanction (Crawford and Ostrom 1995). State legislators decree that burglary is punishable by up to z years of incarceration, they charge police officers to look for and detain suspected burglars, they direct prosecutors to convince jurors of suspected burglars' guilt, they instruct judges to sentence convicted burglars to z years in prison, and so forth.

Rules apply as much to economic justice as they do to criminal justice, and peoples' definitions of economic desert will influence their support for those rules. Tax policy, for instance, can be wielded as an instrument of governance *and* morality. Sure, taxes enable provision of public infrastructure, education, defense, etc., but taxes can also act as a sanction, levied against people who accrue wealth improperly. When directed at individuals amassing undeserved wealth, the tax may itself be considered deserved. If, however, you perceive the sanctioned persons to hold a moral claim to the

taxed wealth—if they deserved the wealth that was taken from them—then that taxation is unjust. More broadly, if a rule penalizes desert bases that you consider worthy, or fails to sanction bases that you consider unworthy, you will have some moral quandary with that rule. This proposition becomes especially important in democratic societies where public policy is devised in part by public opinion.

Let us say we have two people, each a caricature of a moral-economic position. The first is a strict egalitarian, believing all people deserve an equal share of economic goods and an equal socioeconomic position. The second is a devout protestant, not in theological outlook but in commitment to the proportional balancing of personal industry and economic reward. Our imaginary egalitarian keeps to the first couplet of desert statements, our imaginary protestant to the second:

- **DS_{E1}** People (B, S) deserve exactly as much wealth as everyone else (O).
- **DS_{E2}** People with more wealth than others (B_1, B_2, S) deserve to have their excess wealth taxed disproportionately (O).

- **DS_{P1}** People who labor (B_1, B_2, S) deserve wealth proportional to their labors (O).
- **DS_{P2}** People with wealth beyond the value of their labors (B_1, B_2, S) deserve to have their excess wealth taxed disproportionately (O).

Under DS_{E1} all people merit an equal share of wealth, and DS_{E2} identifies taxation as fitting punishment for noncompliance with DS_{E1}. Were a rulemaking body—say Congress—convinced of the egalitarian position, its members might produce a rule codifying it. Rules expressed as institutional statements have the same syntax as norms but with an additional component appended to the end: "group [attributes] [deontic] [aim] [conditions] [or else]." Read the contents of the final component as if they begin with the phrase "or else". In Congress's egalitarian legislation, DS_{E1} would essentially comprise the first four elements of the institutional statement and DS_{E2} the "or else" element, as shown in IS_{E1}. Congress would buttress the noncompliance sanction (i.e., the "or else" component of IS_{E1}) with additional rules and norms meant to ensure monitoring and sanctioning by the appropriate government agencies, probably the Internal Revenue Service (IRS) and the Department of Justice's Tax Division.

- ▹ **IS_{E1}** People [ ] [must not] [accrue more wealth than other people] [ ] [pay high taxes].
- ▹ **DS_{E2}** IRS agents [ ] [must] [seek out and audit people suspected of accruing more wealth than others] [within their jurisdiction] [face reprimand].
- ▹ **DS_{E2}** IRS agents [division heads] [may] [reprimand their subordinates] [ ] [ ].

Now think back to our protestant, whose moral notions concerning wealth acquisition are represented above as DS_{P1} and DS_{P2}. Economic justice for her is an equitable distribution of economic goods and status according to individual effort. She, like the egalitarian, is happy to see undeserved wealth taxed at a healthy rate, but the two fundamentally disagree as to what it means to deserve wealth in the first place. Were IS_{E1} merely a norm, its adherents might get quizzical looks from our protestant, who would think many of them self-deprived of deserved wealth. But as a rule, IS_{E1} and its corollary rules add an entirely new source of economic injustice, an entirely new means by which to misalign (from the protestant perspective) desert bases and deserved outcomes. Congress and the IRS are, according to the protestant, actively depriving certain people of wealth they deserve.

When a rule contradicts your moral economic position, its "or else" conditions are liable to generate (from your perspective) novel wellsprings of economic injustice. Under Congress's direction in IS_{E1}, the IRS taxes individuals with more wealth than their compatriots, regardless of whether those individuals worked for their "excess" wealth. Before this rule was enacted, our protestant would have perceived economic injustice when (i) an indolent individual achieved some level of wealth or (ii) an industrious individual failed to achieve an appropriate level of wealth. Following legislative adoption of the rule, our protestant will also experience moral outrage when (iii) the IRS takes from the industrious wealth she thinks they deserve.

In this manner, our moral-economic position—our understandings of economic desert and the institutions associated with it—takes on a political importance that transcends our daily-interactions with others. It influences not just our willingness to act charitably or uncharitably in our immediate interactions; it influences our support for parties and candidates and policies that concern people we will never meet.

2.4.4 Keeping sight of self and practical interests.

It is easy to overstate the importance of economic desert to our economic behavior, easy to retroactively frame personal or political decisions in terms of justice. In truth, people will do good things for ignoble reasons, bad things for noble reasons, and some things for no particular reason at all.

Think back to our hypothetical egalitarian, for whom all wealth above that which can be equally dispersed is undeserved and ripe for the taking. For instrumental reasons, egalitarians may not actually try to extract all that surplus wealth. An egalitarian politician, for example, may think it just to tax or even appropriate all wealth beyond an equal distribution, but that politician enjoys campaign donations from wealthy benefactors whom she does not want to upset. In this instance the benefits from *not* pursuing economic justice outweigh their costs (i.e., the relevant internal and external delta parameters). Welfare policy similarly blurs practical and moral interests. A fiscal conservative may fear that free delivery of basic services to the indigent dampens their incentives to find employment. That fiscal conservative may simultaneously believe that all people deserve access to such services. Her support for welfare policy will not be decided by her moral convictions alone.

2.5 Conclusions.

Before moving on to the empirical chapters of my dissertation, I will briefly summarize the arguments I put forward in this chapter.

Desert has all the hallmarks of a social institution. Communities face multiple multiple-equilibria problems, there being innumerable ways to divvy responsibilities and resources, punishments and niceties. Rather than rehash interpersonal boundaries anew at every meeting, community members erect social institutions that prescribe, demand, or forbid certain actions, with built-in incentives to conform. In so doing they generate a regularity of behavior enabling community members to go about their business with relative ease and greater efficiency. Although sometimes codified in legalese, I argue that people regularly translate institutions into a moral vernacular. Morals instruct us on right and prudent action, constraining our behavior and telling us what we might expect in the behavior of others. They are social institutions, variable and evolved like any other. By treating morals as institutions, we have theoretical grounds for why

people might act in accordance with their morals—their assessments of justice and their definitions of desert—even if those actions appear to come at personal cost.

Moreover, desert is conceptually parsimonious, joining concepts that social scientists traditionally treat as distinct. First, it unifies the three major principles of distributive justice. The need, equality, and equity principles are not discrete values that people pick from some menu of morality. Underlying each is a desert basis suited to a particular context. An egalitarian, for example, is someone who thinks that good x should be allotted according to personhood. She is, at first glance, operating under the equality principle. But she is simultaneously acting on the equity principle: Every person receives x in proportion to their personhood, a scale that does not allow for much differentiation unless additional qualifications are specified.[15] Second, desert unifies distributive and procedural justice, the latter being the means by which the former is achieved. Distributive justice is concerned with determining desert bases, and procedural justice is concerned with the actual delivery of deserved objects to deserving subjects. Distinguishing between procedural and distributive justice, and between the three distributive principles, is fine as a shorthand when expediency is required. But generally better, I think, to drive right to the desert bases, objects, and subjects in question rather than erecting what are often illusory boundaries.

[15]Indeed, we could conceivably break "personhood" into its core components—rationality, autonomy, self-consciousness, for example—and rate potential deserving subjects on those, although this leads to some uncomfortable questions (e.g., Singer 2011). Binary, categorical, or continuous, we are nevertheless confronted with the question Hofstadter (2008, 18) and so many others have posed: "Where to draw that fateful, fatal line?"

3 | Agency and Economic Desert

The myriad conceivable desert bases can be aligned along a single dimension measuring an individual's control over the criteria's presence or absence from her character or situation. You may think that a person deserves financial success on account of her charming demeanor and superior interpersonal skills, which led to her healthy rolodex of professional and political contacts. But to what degree can she be held personally responsible for that pleasant manner and those lucrative acquaintances? A person cannot logically be applauded for her accomplishments or panned for her disappointments if she played only a minor part in their production. There are many ways to get ahead and fall behind, some of which can be pinned on the player and some of which cannot. The relevant difference between these paths is the degree of choice an individual has in walking them.

The notion that our livelihoods may depend upon factors outside our individual control is unsettling to many, but vital to our understanding of economic justice. President Obama underscored the importance of personal responsibility to economic desert during the 2012 presidential campaign in his now infamous "you didn't build that" comment (Gardner 2012; Rosenthal 2012). Profitable businesses, the president contended, rely on transportation, communication, and education infrastructures built and maintained by people unassociated with the benefiting organization. The Romney campaign and conservative media outlets attacked the President's insinuation that economic elites cannot claim credit for their accomplishments. To admit otherwise would be to suggest that America's wealthy do not deserve the full accounting of their riches. This, in turn, might mean the economic lot of Americans generally are subject to capricious outside forces.

Before exploring American attitudes toward agency and its effect on their economic preferences and behavior, I briefly outline the conceptual relationship between agency, personal responsibility,

and deservingness. I then use survey[1] and experimental data to show the following: Americans want economic standing to be primarily determined by factors over which individuals exercise control; this desire is strong and uniform across Americans of all backgrounds; and an apparent lack of agency over economic payoffs leads to voluntary and generous redistribution. In short, personal responsibility is of critical importance to American definitions of economic desert, and its presence or absence has behavioral consequences.

3.1 What is agency, and what is its relationship with desert?

"Agency" is a recurring concept in philosophy and the social sciences, and its use varies subtly across disciplines and sub-disciplines. In its most general form, agency describes an agent's ability to act independently and of her own will. If an economic system affords agency to the agents within, those agents are in some measure personally responsible for their economic outcomes. Personal responsibility is a tricky concept, especially in a complex, modern economy wherein multiple actors and circumstances align to produce something as simple as a pencil (see Hayek 1945; Leonard 1958). For the type of responsibility we discuss here, it is not enough that your actions directly produce some outcome. Rather, (i) the outcome you produce must to some degree be expected, and (ii) the means by which you produced that outcome must to some degree be under your control.

To the first proviso, you may be acting in a situation characterized by uncertainty: Your behavior directly influences outcomes, but the relationship between the two is not fully understood. Outcomes, desirable and undesirable, cannot always be anticipated and are often unintended. That uncertainty undermines responsibility (and therefore desert) is codified in the legal standards for proving negligence. A defendant is only culpable for damages if the harm she wrought was "reasonably foreseeable" (e.g., *Caparo Industries v Dickman* 1990; *Foster v Preston Mill Company* 1954; *Helen Palsgraf v The Long Island Railroad Company* 1928; *Overseas Tankship Ltd v Morts Dock & Engineering Company Ltd* 1961). Extending the logic in the opposite direction: An individual is not entirely responsible for, and potentially not deserving of, spoils accrued through her actions if the rewards are unexpected.[2] Stock investors and venture capitalists traverse especially unpredictable

[1] All survey data in this chapter comes from my 992 respondent survey described in Chapter 1 of this dissertation. All analysis of that data was done with sample weights so as to have robust standard errors and be generalizable to the American public.

[2] Experienced billiards players, for example, will require one another to identify which balls they intend to place

terrain (Gigerenzer 2008). Fluctuations in commodity and share prices depend on a vastly complex web of relationships and stochastic influences. When the final accounting is done, investors cannot entirely explain their success or failure.[3] Does an investor deserve the returns from a profitable venture or ruin following a disastrous one?

As for the second caveat, your ability to act may be dependent on factors not fully under your control, or bequeathed to you as a matter of chance. Producing a desired outcome may require skills, knowledge, or traits you possess through no fault, or perhaps only partial fault, of your own. Depending on the arena, we may ground desert in intelligence, speed, strength, tenacity, etc. We can work to improve our capacity for each, but genetics, upbringing, and environment will have their say: Every arena will have its Natural Aristocracy.[4] No amount of training will make me an Olympic medalist or a chess grandmaster, which is not to say that medalists and grandmasters do not need to train and are not in some measure responsible for their skills.

For many thinkers, deservingness presupposes responsibility, lying only in those attributes and behaviors for which a person can claim credit (Pojman 1997; Rachels 1978; Rawls 1971). Divvying a resource along desert bases outside an individual's control would, accordingly, be unjust. This conflation of desert and personal responsibility has carried over into the social sciences with important empirical results: People are relatively comfortable discriminating against others when the grounds for that discrimination are qualities supposedly within our personal jurisdiction (Crandall and Martinez 1996; Puhl and Brownell 2003; Quinn and Crocker 1999); and people tend to view as more just those social, economic, and political systems that distribute resources on similar grounds (Jost, Blount, Pfeffer and Hunyady 2003). But by tacitly associating deservingness with personal causation, as social psychologists often do (see Jost and Kay 2010; Wagstaff 1994), we lose sight of a great many desert bases over which people hold no sway.

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in which pockets. Sinking a ball in the wrong pocket nets you no points. Play billiards with me for a sufficiently long stretch and you may see me sink three balls in a single shot. Can I claim responsibility for this feat? I alone hit the cue, and the cue hit those balls into their pockets, but the look on my face will convince you that this outcome, although welcome, was wholly unexpected.

[3] Contrast this realm of *uncertainty* with the gambler's world of *risk*. Cards may be capricious, but there are only so many cards in a hand of poker, with only so many combinations and knowable odds. Alternatives, consequences, and probabilities are intelligible in situations characterized by risk. Key information, however, is unknown or unknowable in environments plagued by uncertainty, and ours is a predominantly uncertain world (Volz and Gigerenzer 2012). Continuing with our investment example, Gigerenzer (2008) shows that we need 500+ years of data to consistently produce models of stock performance that outperform basic, often ineffectual investment heuristics, such as dividing an outlay equally across a portfolio.

[4] John Adams and Thomas Jefferson engaged in a lively correspondence on the differences between the "Natural" and "Artificial" aristocracies. See Cappon (1988) for a collection of their letters on the topic.

People can reasonably debate whether a person exercises control over a given quality, but some folks will endorse an economic desert base knowing full well that we have no control over it. There are plenty of situations wherein desert and responsibility have little overlap (Cupit 1996, 1999; Feldman 1995*a*, 1996). Showing that myriad factors external to the student drive the extent and quality of her schooling will convince some that formal education is not a sound moral base for distributing economic standing. Others will be unmoved. For them, individual agency over a trait is irrelevant to its standing as a basis for desert. Race, sex, parentage: We need not get overly creative in our search for bases of economic desert that leave no room for responsibility, nor need we look too far in history to see their effects. Moreover, not all desert bases outside our control are opportunistic in their relations with justice. A bystander unwittingly caught in and injured during a calamity might be recognized as due financial compensation for her suffering. Indeed, it is in part her innocence—her lack or responsibility—that makes her deserving of compensation.

With these caveats in mind, the question before us is whether and to what extent different people associate personal responsibility with economic desert. And does that association, if uncovered, influence people's economic behavior?

3.2 Is agency critical to American definitions of economic desert?

As mentioned in the previous chapter, any number of characteristics may serve as desert bases, varying with situation and judge. We are not interested in the specific bases themselves, but in how closely they correspond to personal responsibility. If agency is a critical ingredient of economic desert, then people's preferred desert bases should be qualities over which we have control, or at least qualities over which we think we have control. I find that this is the case for most Americans.

Respondents to my large-N survey saw fifteen factors, each of which might have some bearing on an individual's economic standing. They answered two questions about each factor: "How much control do you think people have over this factor?" and "How important should this factor be in determining whether people get ahead or fall behind economically?"[5] The mean responses to these questions are shown in Figure 3.1 and have been standardized on a $[-1, 1]$ scale. Depending on whether you are looking at a darker or lighter bar in the figure, a value of 1 means respondents

[5]When answering this second question, respondents were further prompted: "How important would each factor be to economic standing in your ideal society?"

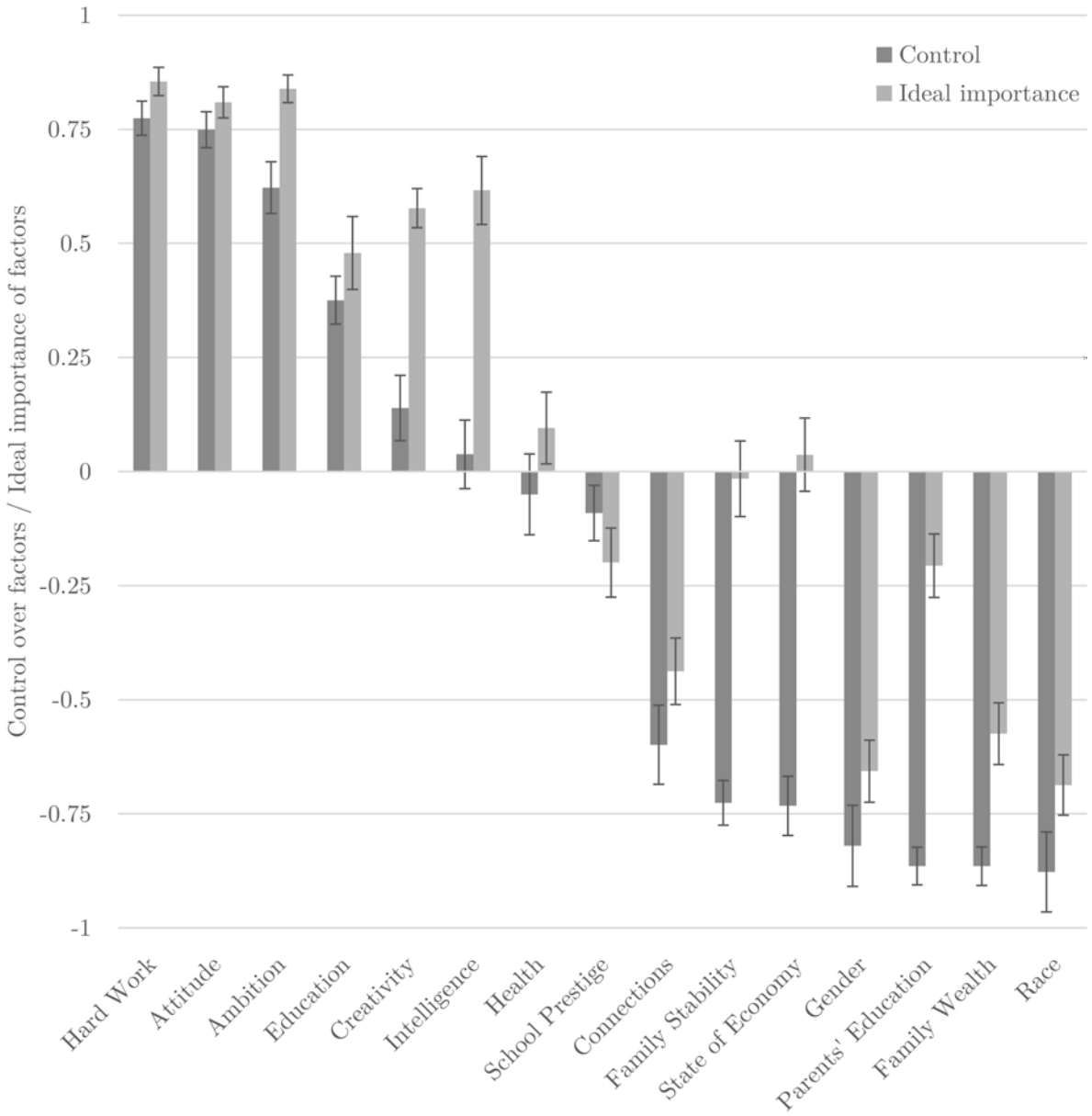
believe the factor in question is totally within our control (dark bars) or should be very important in determining economic standing (light bars). A value of -1 means respondents believe the given factor is wholly beyond our control (dark bars) or should be very unimportant in determining economic standing (light bars). Scores are symmetric about zero, a value of which indicates that we exercise a middling amount of control over the factor (dark bar), or the factor should be neither important nor unimportant to our economic wellbeing (light bar). The fifteen factors have been arrayed left to right in descending order of our mean perceived control over them.

With few exceptions, factors for which we believe ourselves personally responsible are also those factors we want to dictate our economic wellbeing. Factors identified as within our control (dark bars above the zero line) are also identified as the most normatively appealing determinants of economic standing (light bars above the zero line), whereas factors beyond our control (dark bars below the zero line) are identified as ideally being economically inconsequential (light bars at or below the zero line). Americans perceive hard work, attitude, and ambition as the factors most within our control. Those three factors are, by a wide margin, the most appealing determinants of a person's economic fate. Americans also see a role for an individual's level of education, over which we seem to have a fair amount of control.

The difference between varying levels of "unimportance" has little practical meaning. Factors that rate anywhere between "neither important nor unimportant" and "very unimportant" are meant to have no bearing on peoples' livelihoods. The magnitude of these negative ratings, however, signals the level of distaste Americans have on average for these economic determinants. Race, family wealth, gender, and social connections appear outside our personal jurisdiction and are especially repugnant criteria by which to adjudicate wealth. Americans are slightly more relaxed about the role of family stability and the prevailing state of the economy in our economic fates: Although well beyond our control and of ideally no economic importance, Americans are not outraged at the prospect of these factors influencing our livelihoods.

Then there are the factors over which Americans believe, on average, they exercise a middling amount of jurisdiction. An individual's health and the prestige of their schooling fall into this category, and Americans want both to be more or less inconsequential to an individual's economic position. Americans also see intelligence and creativity as somewhat within their control, falling about the zero mark in the figure. But in terms of ideal importance to economic standing, these

Figure 3.1: Perceived control over economic factors and their ideal importance to economic standing.



two factors score relatively high marks. Americans are torn on how much agency they wield over intelligence and creativity, which seems to dampen the normative value they place on those factors; neither achieves the ideal importance assigned to hard work, attitude, and ambition. Intelligence and creativity, however, possess market value, possibly offsetting American qualms regarding our agency over these qualities.

For a more nuanced picture of these findings, look at Figure 3.2. These graphs are density curves,[6] wherein the space under a curve and above the horizontal axis defines an area of 1. The percentage of this area between any two points along the curve coincides with the probability that the outcome of an observation falls within those bounds. The horizontal axes in Figure 3.2's graphs are the same as the vertical axis in Figure 3.1—depending on which line you are evaluating, the $[-1, 1]$ scale indicates either the perceived amount of control we have over the factor (solid lines) or the ideal importance of the factor to economic standing (dotted lines). Seeing the two curves plotted simultaneously gives an appreciation for how closely American assessments of agency and ideal importance travel together. The graphs in Figure 3.2 have been arrayed so that factors are displayed in descending order of correlation between agency and ideal importance measures, and the correlation coefficient r for the two curves is given in parentheses above each graph.

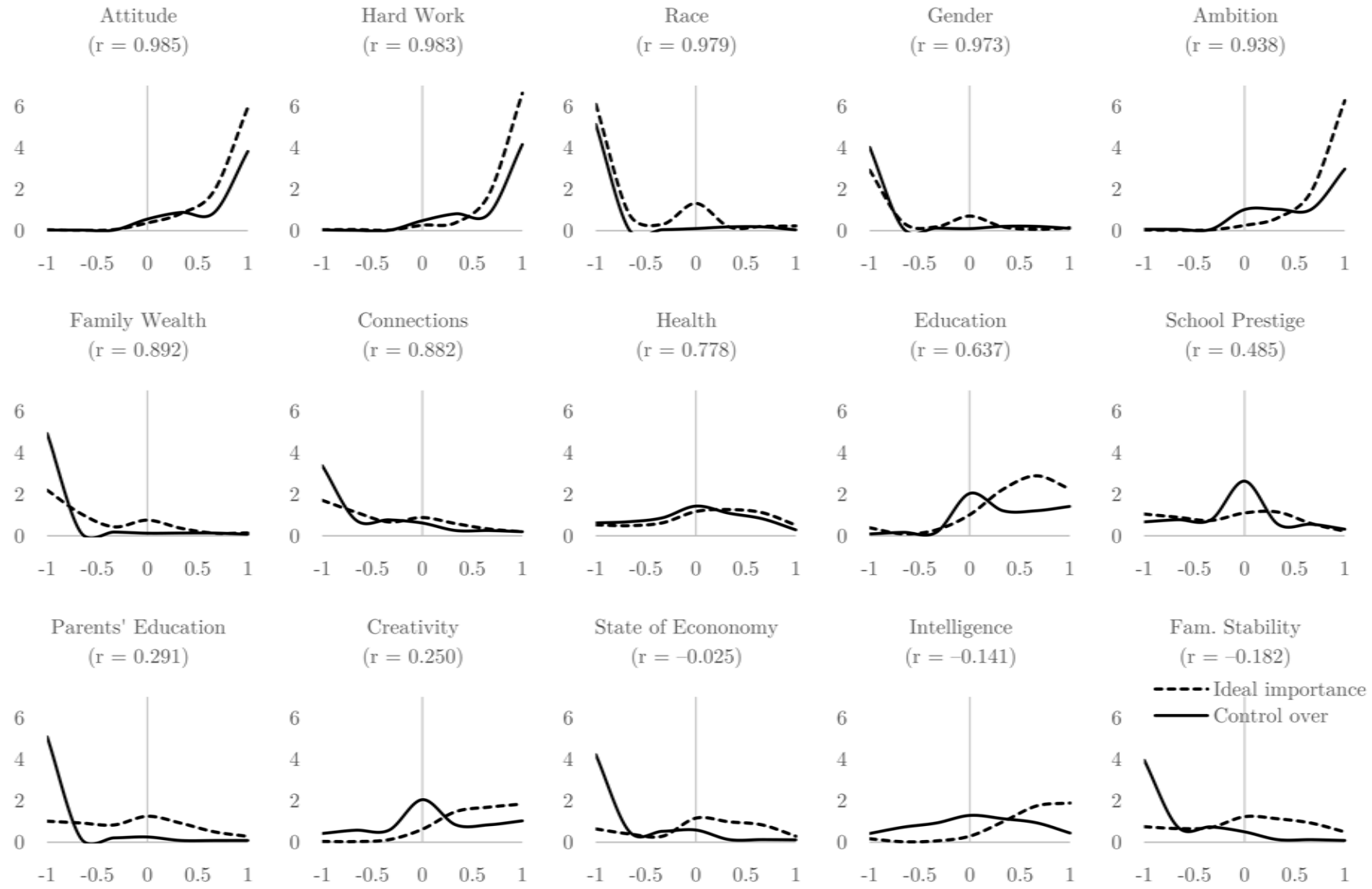
Americans are overwhelmingly prone to say that attitude and hard work are under an individual's control (i.e., the majority of the area under the solid curves for attitude and hard work are to the far right of the zero line). So too are Americans overwhelmingly apt to say that an individual's economic wellbeing should be determined by her attitude and willingness to work hard (i.e., the majority of the area under the dotted curves for attitude and hard work are to the far right of the zero line). Survey responses for race and gender are also highly correlated, but in the opposite substantive direction. Americans consider race and gender to be well outside their control and want these factors to have nothing to do with economic wellbeing.[7]

Unlike those four factors, for which agency and ideal importance are strongly correlated, there is almost no correlation between the control Americans believe themselves to wield over intelligence or creativity and the value of those factors in regulating wealth. The areas under the solid curves fall evenly about the zero line, whereas almost all the areas under the dotted curves fall to the right of the zero line. Americans are as likely as not to say that an individual's intelligence and creativity lie within her control. In spite of this widespread disagreement, Americans are uniformly inclined to want intelligence and creativity to help determine economic standing. Again, I suspect

[6] Specifically, the graphs show univariate density estimates for the given variables as produced by the Epanechnikov kernel function.

[7] Because most Americans refrain from overt expressions of racist and sexist sentiments (e.g., Sniderman and Carmines 1999), my measures probably underestimate support (conscious and unconscious) for basing economic reward of skin-color and gender. Still, respondents recognize people's lack of influence over such qualities, and a more accurate measure of their ideal performance will show it to be highly unpopular, in the aggregate.

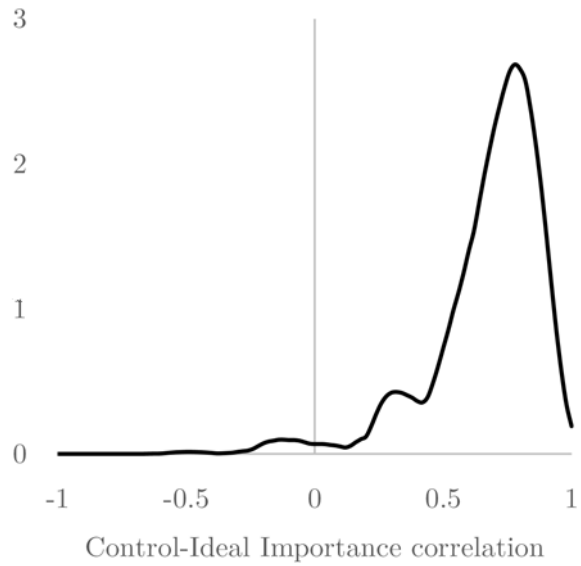
Figure 3.2: Density plots of perceived control over economic factors and their ideal importance to economic standing.



that this phenomenon is a result of the obvious market value intelligence and creativity have in a modern service economy.

Health and prestige of schooling are also interesting in that respondents are near equally divided as to both our control over and the ideal importance of those factors. In Figure 3.1 it looked as though respondents might be taking noncommittal positions on questions related to these factors, but Figure 3.2 shows that there is actually a fair amount of disagreement on these questions. As for why some people think these factors should matter to economic position: A person's health is obviously tied to their economic potential; a sick worker cannot work. For prestige of one's schooling, you would have to believe that prestigious schools actually bestow a superior education or some other productive advantage than their less eminent peers. Such schools may bestow an edge to their students in terms of business contacts and the like, but this advantage accrues private dividends to the lucky student and does not necessarily result in any public gain.

Figure 3.3: Density plot of the correlation between perceived control over economic factors and their ideal importance to economic standing.



While they may debate the level of control they exercise over certain factors like intelligence, creativity, and the prestige of their schooling, individual Americans are fairly consistent in demanding that their economic standing be adjudicated by factors they perceive to be within their control. For each respondent, I measured the correlation between (i) the factors a respondent thinks should

influence peoples' economic standing and (ii) the level of control a respondent believes people have over those factors. The correlation will be positive if a respondent believes that people have a great deal of control over her ideal desert criteria, and negative if she believes people generally do not have control over her ideal desert criteria. The density plot of this correlation for the respondents is shown in Figure 3.3. With its high, narrow peak, a median of 0.74, and a full 90% of the observations falling between [0.44,0.98], individual Americans consistently associate agency and economic desert.

3.3 For whom is agency critical to economic desert?

Individual Americans want those factors over which we apparently have control to be the primary determinants of our economic standing. But is there any predictable variation in the degree to which different Americans make this demand? We can measure the importance different demographics attach to personal responsibility through simple linear regression. The dependent variable is the correlation between (i) the factors a respondent thinks should influence peoples' economic standing and (ii) the level of control a respondent believes people have over those factors. This is the same correlation graphed in Figure 3.3. Values approaching 1 indicate that control over an economic determinant and ideal importance of that determinant track closely for a respondent. Independent variables include: the respondent's ideological and religious outlook; the respondent's current economic standing; whether or not the respondent belongs to a demographic group that has traditionally been subject to economic discrimination; generational and regional effects; and the importance the respondent places on economic growth. Of these explanatory variables, only the last—an individual's preoccupation with growth—consistently achieves substantive and statistical significance.

I treat each independent variable in turn, giving the theoretical motivation for including it in my models and the empirical results of those models. Of the myriad models I ran, Table 3.1 shows the most and least complex Ordinary Least Squares models that produced robust predictions. A few items to note when interpreting the results: First, the dependent variable remains on a $[-1,1]$ scale, while all explanatory variables save *age* have been standardized to a [0,1] scale for easier interpretation of regression coefficients. Second, all analyses using my survey data have been

Table 3.1: Regression on the correlation between perceived control over economic factors and their ideal importance to economic standing.

	OLS coefficients		
Variable	Model 1	Model 2	Model 3
Ideology	−0.162*	−0.037	
	(0.092)	(0.061)	
Political party	0.019		
	(0.071)		
Religiosity	−0.073*	−0.039	
	(0.043)	(0.042)	
Theology	0.020		
	(0.060)		
Nonwhite	−0.096***	−0.065**	−0.069**
	(0.032)	(0.028)	(0.030)
Female	0.002		
	(0.030)		
Gay	0.048		
	(0.030)		
Income	0.107*	0.122**	0.118**
	(0.055)	(0.050)	(0.049)
Education	0.034		
	(0.057)		
Age	−0.002*	−0.003***	−0.003**
	(0.001)	(0.001)	(0.001)
Urban	0.020		
	(0.040)		
Southern	0.071**	0.038	
	(0.028)	(0.027)	
Neoliberal	−0.265***	−0.200***	−0.185***
	(0.091)	(0.077)	(0.058)
Constant	0.628***	0.630***	0.620***
	(0.071)	(0.057)	(0.058)
N	679	962	962
adj-R^2	0.1907	0.1251	0.1158

Robust SEs in parentheses. Dependant variable on [−1,1] scale. All others save *age* standardized [0,1].
* significant at 10%; ** 5%; *** 1%

run using raking weights so as to be more generalizable and more statistically conservative (i.e., standard errors are robust). Third, although I ran several models where appropriate variables were allowed to be nonlinear, I only show results from when I model a linear relationship between the dependent variable and household income, the reasons for which I explain below.

3.3.1 Philosophical outlook.

Predictions. First, I predict that certain philosophical considerations—especially ideological and religious viewpoints—will explain an individual's association of economic desert with personal responsibility. As for partisanship and ideology, however, it is unclear whether Democrats and liberals or their Republican and conservative counterparts will be more likely to restrict their ideal factors of economic desert to factors over which they believe people exert control. Republicans and conservatives certainly value agency in their definitions of desert. Indeed, the Horatio Alger, pull-yourself-up-by-your-bootstraps mentality seems to be particularly strong among denizens of America's right. But so are long-standing biases of the kind described in the preceding paragraph. Members of America's left, while certainly not immune to economic and social prejudices, are the traditional promoters of policy safeguards for people whom fate has placed at the unpleasant end of economic bigotry. Democrats and liberals, then, might be specifically looking for desert criteria that allow for individual agency, whereas Republicans and conservatives may be happy to support status quo and even outdated desert criteria (Jost, Glaser, Kruglanski and Sulloway 2003).

As for religion, I expect regular churchgoers and those who identify with a fundamentalist theology will be less attached to the notion of economic agency. Compared to their counterparts who subscribe to a liberal doctrine, religious fundamentalists and the highly devout are content to judge others based on characteristics beyond personal control, such as gender and sexual preference (Antoun and Antoun 2008; Bendroth 1999; Emerson and Hartman 2006; Fulton, Gorsuch and Maynard 1999). These people care less about their personal actions and desires and more about the interventions and dictates of a Higher Power (Pargament et al. 1988).

Findings. Political and religious outlooks have statistically indiscernible influences on the degree to which respondents correlate agency and economic desert. Ideology and party remain statistically insignificant even when potentially related variables such as *neoliberal* are removed.

3.3.2 Economic outgroup membership.

Predictions. I expect that members of social and economic out-groups will be more likely to include agency as an integral part of economic desert. I specifically control for whether a respondent is female, non-white, and homosexual. Individual female, non-white, and homosexual respondents may not consider themselves the subject of personal discrimination, but "indeterminate classes of persons" can also be the victims or perpetrators of injustice (Blackstone 1975, 255; Khatchadourian 2006), and each aforementioned demographic has long been the target of economic discrimination. There was a time when woman and African Americans did not enjoy basic property rights, and blacks in slave states were themselves considered property. Sexual, racial, and gender prejudices continue to plague the workplace, and gay couples were only recently afforded the same economic guarantees—such as inheritance rights, social security survivor benefits, and joint tax filings—that have long been promised to heterosexual couples. In each of these cases, broad classes of people face economic hurdles because of demographic characteristics over which they have no control. Having been so-long deprived the ability to dictate their own economic fortunes, I predict their definition of economic desert will place special emphasis on factors that people can control.

Findings. Among the three economic outgroups considered, only racial minorities display a statistically differentiable correlation compared to their ingroup counterparts. Contrary to my prediction, African Americans and Latinos are less disposed to associate agency and economic desert, compared to whites. All else equal, were a white respondent to suddenly become a racial minority, her correlation coefficient would drop between 0.07 and 0.10 units.

3.3.3 Motivated reasoning (of sorts).

Predictions. I expect that the correlation between agency and economic desert will be strongest among respondents who are currently facing either very favorable or very unfavorable economic conditions. Such an association, if uncovered, is likely an internal face-saving measure, an instance of a sort of motivated reasoning,[8] whereby the brain converges on judgments that minimize negative and maximize positive affect states (e.g. Westen et al. 2006). The well-to-do want to claim

[8] I say that this is a "sort of" motivated reasoning because our dependent variable is measuring how important respondent's think agency *ought* to be, not how important it is.

credit—or at least believe themselves responsible—for their high status, and thus see agency as an important factor of economic desert. Believing themselves personally responsible for their success, their ideal economic factors will be those over which people exercise control. The economically worst-off, wanting consciously or unconsciously to eschew responsibility for their destitution, will figure themselves to be the playthings of a cruel and arbitrary universe. Believing that they have been denied economic agency and suffered for it, their ideal measure of desert will also feature a prominent role for personal responsibility. Respondents of middling incomes have less to justify—whether they earned their middle status or lucked into it, their economic position is unremarkable, albeit comfortable.[9]

The relationship I posit between a respondent's income and correlation coefficient is nonlinear. Specifically, I expect a 'U' shape to characterize the relationship, with demand for agency highest at extreme incomes (although not necessarily reaching equally high at the ends). I am able to test for this nonlinearity two ways: first, in one class of models I treat income as a polynomial; second, in another class of models I fold the variable for income about the median value, so that high and low incomes are of the same sign. It is possible, however, that rather than exhibiting a quadratic relationship, income has a simple linear relationship such that moving up economic echelons makes you think differently about agency's ideal relationship with economic desert. A positive linear relationship between desire for agency and income is still suggestive of motivated reasoning, whereby respondents feel the need to justify only what they have, as opposed to the nonlinear scenario where they must also justify what they do not have. Rather than comparing their income to a median value, respondents may be thinking about their income relative to a floor. If so, they would want to attribute any increase in income to themselves, which in turn inclines them to assign a healthy role to agency in their definition of economic desert.

[9]If at work, I hypothesized that this psychological mechanism will be especially evident in respondents whose current economic standing is notably better or worse than it was in a prior time. Someone who has ascended the economic ladder will frame her journey as one of will, determination, and personal triumph. Someone who has plummeted in economic standing, the professed victim of misfortune, will be all the more desirous of an economic system that differentiates desert from stochastic factors. Accordingly, I included a variable that measures a respondent's change in social status from childhood to the present, expecting respondents who climbed or fell several socio-economic rungs over their life to be particularly attuned to agency's role in economic desert. In the end, this measure offered little in the way of explanatory power, never achieved statistical significance, and standard tests indicated that its removal from my various models did not result in omitted variable bias.

Findings. Financial comfort moderately increases an individual's desire to equate economic desert with personal responsibility. All else constant, going from earning less than $5,000/year to more than $175,000/year increases a respondent's correlation coefficient about 0.11 units; a paltry change for such a tremendous leap in income. Still, income appears to have a positive linear influence on a respondent's association between agency and economic desert. I ran separate models wherein income was treated as a polynomial and another set of models wherein the variable was folded about the median value to test for the nonlinear relationship I posited above, but to no avail. Incremental Wald and F tests failed to provide support for my prediction of nonlinearity. Regression coefficients and p-values for the other independent variables were largely unchanged regardless of how I modeled and measured income. As such, I have opted to show only the more easily interpretable linear models.

3.3.4 Demographic controls.

Predictions. I account for the potential effect of education, generation, and place on an individual's association of economic desert with agency. As an individual advances in her schooling she is exposed to diverse ideas and people and is socialized to be inquisitive and tolerant. Such characteristics are essential to a fruitful course of study in organizations of higher learning. The higher the degree sought, the more internal these qualities become, and the more likely the respondent is judge others on merits they can control rather than those they cannot. Conversely, older Americans, and Americans from rural communities and southern states may subscribe to outdated economic norms that emphasize the role of gender and race (and thus de-emphasized the role of agency) in economic desert.

Findings. Age is the only demographic control to exhibit a consistent, statistically significant influence on a respondent's correlation of agency and economic desert. All else constant, every year a respondent ages her correlation coefficient drops about 0.003 units. Rather than old-timey prejudices, this mellowing on the importance of agency may be in part a coming to terms with stochasticity—an acceptance that much in this life is random (see also Chapters 5 and 7).

3.3.5 Controlling for economic zeal.

Predictions. Most importantly, I control for the importance individuals place on economic growth and production. It is possible that there is a heretofore unmeasured variable confounding my findings. Factors over which we seemingly exercise control may be Americans' ideal determinants of economic status not because of our control over them, but because those factors happen to be especially valuable to the productive enterprise.[10] If this is the case, the correlation between control and ideal importance is potentially spurious.

I include in the regression an index variable that measures how closely respondents subscribe to the neoliberal economic agenda. Individuals who score highly on this measure want unfettered economic growth and reduced government intervention, believe people should look out for their own economic interests foremost, and think business profits—however unevenly distributed—benefit everyone. The more sympathetic a person is to the neoliberal agenda, the less concerned she will be with matters of justice and agency when rating her preferred economic factors. Even if we are not personally responsible for our intelligence, creativity, social connections, health, and so forth, the productive benefits of these factors makes them nonetheless appealing to neoliberals as determinants of economic standing.

Findings. Zeal for economic growth is the most substantively and statistically significant predictor of our dependent variable. As expected, respondents who are ardent in their commitment to unfettered economic growth and business profits are relatively less concerned with the amount of control individuals exercise over their financial wellbeing. Whatever moral weight neoliberals attach to personal responsibility is at least partially offset by their desire for economic productivity. The quality and duration of an individual's level of education, for example, may be largely beyond her control, but because education is important to economic yield, neoliberals are content with it influencing peoples' economic standing. Holding all else constant, moving a respondent from a steadfast anti-neoliberal position to a staunch neoliberal position will produce a decrease of between 0.19 and 0.27 units in their correlation coefficient. That is a sizable change in coefficient, but the shift in ideological outlook motivating it would be the political equivalent of the Saul's conversion.

[10] Recall creativity and intelligence: Although Americans are suspicious that we are responsible for either factor, they overwhelmingly agreed that both ought to be important to determining an individual's economic wellbeing.

Still, even a moderate change in neoliberal outlook produces a marked change in a respondent's correlation of agency and economic desert.

3.3.6 Conclusions.

We see in the high, narrow, positive peak of Figure 3.3 that Americans are largely uniform in associating agency with legitimate bases of economic desert. At baseline, Americans of all philosophies, backgrounds, and experiences want economic fate tied to qualities over which a person is personally responsible. Note, for example, the relatively high and statistically significant constant coefficient in Table 3.3. Still, some folks are more attuned to the absence or presence of economic agency, and the magnitude of the control-ideal importance correlation varies predictably across certain characteristics. Compared to their non-white, poorer, and older compatriots, white, wealthy, and young respondents are more desirous that our economic well-being be shaped by factors over which they think we have control. This difference, though statistically robust, is substantively meager. More influential is a respondent's preoccupation with economic growth and productivity. The less enamored an individual is of laissez-faire economic liberalism, the more she values agency in determining peoples' financial situations.

3.4 Agency's effect on voluntary redistribution.

We have evidence that Americans associate economic deservingness with personal responsibility, and we know that devotion to this ideal is subject to minimal influence. Still unclear, however, is whether people act on their definitions of economic desert. If agency is critical to desert, and desert influences behavior, manipulating peoples' perceptions of the control they and others have over economic payoffs will alter their willingness to part with those payoffs. The more responsibility people apparently bear for their payoffs, the more they deserve those payoffs; and the more they deserve those payoffs, the more unjust any attempts at redistribution.

I test these twin conjectures with an online experiment programmed with the help of Indiana University computer science undergraduates.[11] I piloted my experimental game on samples recruited through Indiana University's Department of Political Science experimental subjects pool

[11] I am indebted to Tim Downey and Ben Calvin, both of whom continued to advance this project long after their graduations.

and Amazon's Mechanical Turk. Data from these trial runs were encouraging, but such samples suffer from well-documented biases (Berinsky, Huber and Lenz 2012; Druckman and Kam 2011; Sears 1986). Although moral notions like justice and desert seem to be standard features of human cognition, understandings of and adherence to moral norms are likely to vary with an individual's demographic characteristics.

Internet-based panels provide the best balance between cost and sample representativeness (Clifford and Jerit forthcoming). Online survey company Qualtrics recruited 192 subjects, who were randomly assigned to one of three conditions. Table 3.2 shows how the sample compares to the U.S. population.[12] The sample is bit light on low wage earners, Republicans, and people with minimal schooling, and a bit heavy on whites, Independents, and those with some college experience. See Appendix C for a demographic breakdown of individual experimental conditions. I took care to ensure that the game was playable on contemporary and outdated Internet browsers as well as new and old computers, and subjects were made aware of the time and computational requirements of the game in advance so as to reduce dropout. Overall, the Qualtrics sample provides a representative cross section of the American public.

The explanatory power of these experiments derives from their ability to inspire subjects to accurately reveal their preferences rather than whatever thoughts are readily available. This requires that subjects' potential payoffs be non-trivial (Smith and Walker 1993; Smith 1994). Players can earn a maximum payoff of $10.00, on top of a $4.00 guaranteed payoff from Qualtrics. Although this payoff is a fair bit lower than many offered in experimental economics, a review of current literature indicates that a $10.00 cap is sufficiently generous to foster genuine incentives, yet small enough to allow for an adequate sample size (e.g., Chetan et al. 2010; Lau and Redlawsk 2006; Wilson and Eckel 2006).

In the following sections, I will lay out my experimental design and hypotheses. But first, a preview of my experimental findings: Compared to subjects who operate with greater economic agency (and thus believe that they and others are more responsible for their payoffs), subjects who operate with less economic agency (i) feel less deserving of their payoffs and (ii) are more generous in voluntarily redistributing their payoffs. Instances of voluntary redistribution are remarkable

[12] Estimates of the demographic breakdowns of the U.S. population come from the Census Bureau's 2012 projections. Estimates of partisan breakdowns come from the Pew Research Center for the People and the Press (2012).

Table 3.2: Demogaphic breakdown of experiment sample.

	Sample N	Sample %	US pop %	Sample% − US pop%
Gender				
Female	105	0.54	0.51	0.03
Male	89	0.46	0.49	−0.03
	194	*1.00*	*1.00*	*0.00*
Race				
White	148	0.76	0.64	0.12
Black	19	0.10	0.12	−0.02
Latino	14	0.07	0.16	−0.09
Asian	11	0.06	0.05	0.01
Other	2	0.01	0.03	−0.02
	194	*1.00*	*1.00*	*0.00*
Education				
High school or less	48	0.25	0.43	−0.18
Associate's or some college	81	0.42	0.29	0.13
Bachelor's degree	49	0.25	0.17	0.08
Graduate degree	16	0.08	0.11	−0.03
	194	*1.00*	*1.00*	*0.00*
Household income				
<$25k	31	0.16	0.25	−0.09
$25k–$49k	49	0.25	0.25	0.00
$50k–$74k	53	0.27	0.18	0.09
$75k–$99k	31	0.16	0.12	0.04
$100k–$149k	19	0.10	0.12	−0.02
$150k+	11	0.06	0.08	−0.02
	194	*1.00*	*1.00*	*0.00*
Political party				
Republican	32	0.16	0.24	−0.08
Lean Republican	19	0.10	0.16	−0.06
Independent	57	0.29	0.12	0.17
Lean Democrat	24	0.12	0.16	−0.04
Democrat	62	0.32	0.32	0.00
	194	*1.00*	*1.00*	*0.00*

because they come at a direct cost to the experimental subject.

3.4.1 Basic game mechanics.

In my experimental game, three players spend four round buying cells from a 15-by-15 grid for real money. All players start with $2.00, and each cell costs $0.20. The worth of individual cells is unknown, but players learn in the instructions that the majority of cells have neutral payouts,

some cells have negative payouts, and a few cells have positive payouts. Players see $0.20 deducted from their account as they buy cells, and they may buy as many cells as they can afford. Players must purchase at least one cell per round. Whatever of her funds a player does not spend on cells stays in her account. At the conclusion of a round, when all players have indicated which cells they would like to purchase, payouts are calculated and players see how much money they gained or lost from their purchases.[13] This amount is added to or deducted from their account and the next round begins. At the end of each round, players see which cells the different players purchased and the amount of money the different players have in their accounts, ranked from highest to lowest and displayed in graphical form.

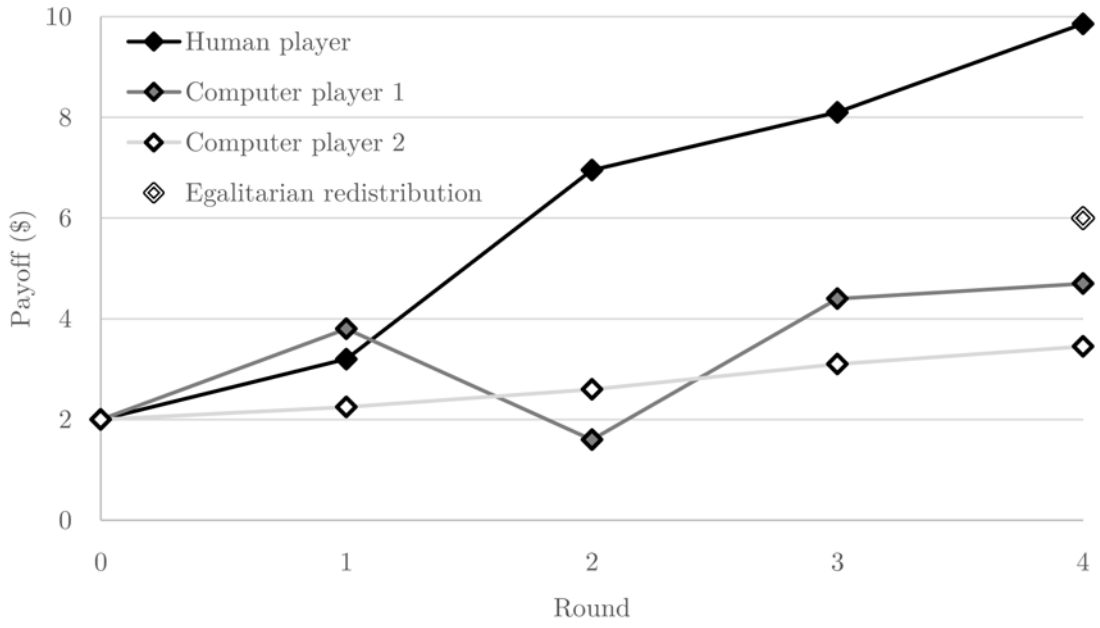
Following the fourth and final round, players answer a few questions about their thoughts on the game, after which the highest-earning player may redistribute her winnings among the lesser-performing players as she wishes. The interface shows in realtime how proposed redistributions effect everyone's final payoffs so the subject can tweak her donations as much as she likes before finalizing them. Improving other players' payoffs necessarily lessens her own. However much money is in a player's account following redistribution is the amount that player takes home. Players also receive a $4.00 participation fee on top of their winnings. Subjects do not know at the start of the game that the highest-earning player will have the option to redistribute.

In truth, each subject plays with two scripted computer players. The game is designed to simulate a multiplayer experience, and in that regard the game was successful. When debriefed on the deception, all subjects report that they believe they had been playing with human participants. In addition to load screens and animations that make the scripted players seem human, the structure of the rules and grid made it so that whatever combination of cells a subject purchases, the resulting, predetermined payoffs make sense. Running the experiment in this fashion allowed for a larger and more representative sample than running it as a true multiplayer experiment in a laboratory. Additionally, the scripted design of the game means that all subjects face the same experimental environment. Except for the location and number of cells purchased, the only relevant difference between subjects' experiences are my experimental manipulations.

The amount that subjects believe themselves and their fellow (computer) players earn at the end of each round is shown in Figure 3.4. Human players buy whatever cells they like (within

[13] If more than one player tries to buy the same cell, one player is randomly chosen with equal probability.

Figure 3.4: Experimental game payoffs.



their budget) and always finish the game with the highest payoff, $9.85. Computer players always finish the game with $4.70 and $3.45, and the number of cells they purchase is proportional to the number of cells the human player buys. Because the experimental subject always finished on top, she always has the option—although never the financial incentive—to redistribute her winnings. But some subjects do redistribute their winnings, and they do so in a predictable manner, according to the experimental manipulations and hypotheses I outline below.

3.4.2 Experimental manipulations.

By manipulating the degree to which subjects believe themselves and fellow players personally responsible for their payoffs, I am able to influence the generosity subjects exhibit in redistributing payoffs. When players arrive at the grid to buy cells each round, some cells display a pattern indicating a neutral, negative, or positive payoff. The number of cells displaying these patterns, subjects are told, is determined by their performance on a short quiz that all players take at the start of each round; the more correct answers, the more cells revealed. Subjects are never explicitly told how they or the other players performed on the quizzes. Depending on the condition to which a subject has been randomly assigned, her ability to answer the questions correctly will be more or

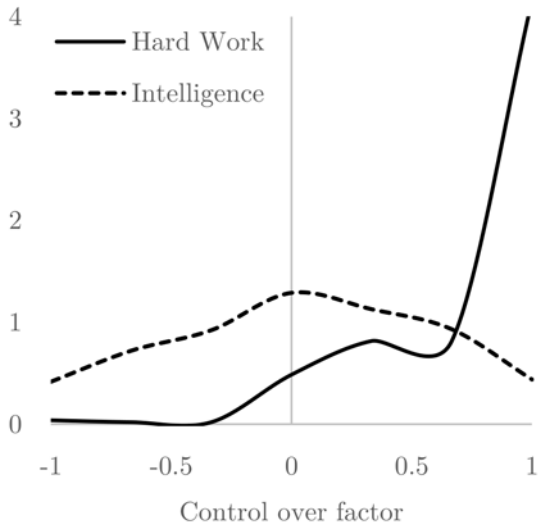
less within her control. In this way I manipulate a subject's sense that she and her fellow players are more or less responsible for game outcomes. There are three conditions: A high-agency condition, a medium-agency condition, and a low-agency condition.

High agency. In the high-agency manipulation, players believe they can gain information about cell payoffs by answering increasingly tedious, albeit easily solved questions. Correctly answer these questions requires no special abilities; the player need only be willing to invest time and effort. An example of such a question: "What is the seventeenth letter in this sentence: o, e, h, t?" The more questions a player answers, relative to the other players, the more cells are revealed. Players may answer as many or as few questions each round as they desire. To simultaneously allow for acceptable mistakes while discourage guessing, a player may incorrectly answer two questions before automatically ending the quiz for a given round.

Correctly answering questions in the high-agency manipulation requires qualities largely within our control. Although I do not use the term anywhere in the experiment, subjects often associate these questions with "hard work" in the free response section of the survey following the game. As you can see from the density plot in Figure 3.5, Americans overwhelmingly believe that individuals have a high degree of control over their ability to work hard; same with ambition and attitude. Achieving this enlightened state, however, is probably not so securely under our jurisdiction. Clinical depression, anxiety, chronic pain, and a host of commonplace mental and physical impairments can rob us of our motivation. Family emergencies and unforeseen pressures may similarly take us away from our desired pursuits. Nevertheless, the decision to answer additional questions in the high-agency condition, and to answer them correctly, is more attributable to personal autonomy than is correctly answering questions in the remaining experimental conditions.

Medium agency. In the medium-agency manipulation, subjects believe they can gain information about cell payoffs by answering questions commonly used to measure verbal acuity. Some players will have a natural facility with such tasks, some will have developed such a facility through its exercise in real life, and some will be utterly lost. An example: "Select the word that does not belong: period, age, epoch, cosmos, era." The more questions a player answers correctly, relative to the other players, the more cells are revealed (or so subjects are told). Players answer eight such

Figure 3.5: Density plots of perceived control over hard work and intelligence.



Data to produce this figure comes from my large-N survey, and the same information can be seen in Figure 3.2.

questions every round.

Questions in the medium-agency manipulation require qualities partially under our control. Although I do not use the term anywhere in the experiment, subjects often associate these questions with "intelligence" in the free response section of the survey following the game. As you can see from the density plot in Figure 3.5, Americans are evenly divided on whether intelligence is within or beyond an individual's control, and the most probable response was the median one (the zero line), indicating people have "some control" over their intelligence. Be it a by-product of genetics, parental nurturing, or a myriad other factors over which we have no direct control, some people possess aptitude for certain activities.[14] But talents can be directed and honed. It may be a matter of chance that you possess a special ability, but that ability is sharpened as a matter of will. Moreover, talent is often in itself insufficient to master a given pursuit. A God-given skill, while conferring considerable advantage to its holder, usually needs cultivation (Ericsson et al. 2006), which requires effort and perseverance for which we may be responsible.

Low agency. In the low-agency manipulation, players believe they can gain information about cell payoffs by answering questions that require guessing among equally attractive alternatives.

[14]Try as they might, my financial planner will never invest so wisely as Warren Buffett and Garfunkel will never out-compose Simon.

An example: "A computer has randomly generated a number between 0 and 100. Which of the following is that number: 81, 10, 72, 22?" Subjects are hard-pressed to assert responsibility for good or poor performance on this quiz. Answering such questions correctly is a matter of chance, and individual agency plays little to no role in matters of chance. True, you will never win the lottery if you do not buy a lottery ticket, but the act of gambling at a gas station hardly captures the spirit of personal responsibility and due recompense. Most peoples' livelihoods require a fair amount of sweat, but stochastic processes are omnipresent and have an undeniable, unavoidable influence on what choices we can make. Being born to this or that family, with many or few resources, is the first in a lifetime of flukes that affect our economic welfare (Bowles, Gintis and Groves 2005).

3.4.3 Experimental hypotheses.

The thrust of my theory as outlined in Chapter 2 is that notions of economic desert—as social institutions—will influence economic behavior, such that people want economic outcomes to be deserved (i.e., "just"). And earlier in this chapter I showed that personal responsibility is central to most Americans' conceptions of economic desert. I combine these conjectures in this experiment and hypothesize that: (i) A subject's sense of deservingness will increase with her belief that players are personally responsible for their payoffs, and (ii) a subject's generosity in the redistribution phase will decrease with her sense that players deserve their payoffs. Specifically, I hypothesize that:

H_1 On average, subjects in the high-agency manipulation will believe that players are more deserving of their winnings than will subjects in the medium-agency manipulation, than will subjects in the low-agency manipulation.

H_2 One average, subjects in the high-agency manipulation will voluntarily redistribute less of their winnings than will subjects in the medium-agency manipulation, than will subjects in the low-agency manipulation.

If I successfully manipulate the personal responsibility subjects feel they and their fellow players have over their payoffs, then I expect subject generosity to vary with the experimental condition to which she is assigned. A subject's belief that she and her fellow players deserve their payoffs mediates this relationship, and I expect that it too will vary according to experimental condition.

If H_1 holds, we have evidence that personal responsibility is generally important to Americans' definitions of economic desert. To account for H_1, I measure on a Likert scale the degree to which subjects feel they and the two other players deserve their payoffs. If H_2 holds, we have evidence that American act on their definitions of economic desert. To account for H_2, I measure the amount of winnings each subject gives to worse-performing players, taken as a percent of their total payoff. In standard mathematical notion, my hypotheses are:

if

$$\bar{x}_{\text{high-agency}} > \bar{x}_{\text{medium-agency}} > \bar{x}_{\text{low-agency}}$$

then

$$\bar{z}_{\text{high-agency}} > \bar{z}_{\text{medium-agency}} > \bar{z}_{\text{low-agency}}$$

then

$$\bar{y}_{\text{high-agency}} < \bar{y}_{\text{medium-agency}} < \bar{y}_{\text{low-agency}}$$

where $x = \{$subject's sense that players are responsible for their payoffs$\}$, $z = \{$subject's sense that players deserve their payoffs$\}$, and $y = \{$percent of payoff subject donates to other players$\}$.

In three ways, I have designed this experiment to be a conservative test of my hypotheses. First, although my experimental treatments manipulate a subject's sense of responsibility over payoffs, she and the other players enjoy a fair amount of agency in their economic decision-making regardless of condition. Subjects believe that player performance on quizzes reduces the uncertainty they confront when buying cells, increasing their ability make profitable purchases and avoid costly ones. But even after this reduction in uncertainty, subjects can devise and implement unique investment strategies. In the free response questionnaire following the game, some subjects attributed their success to taking risks and buying cells about whose payoffs they knew nothing. Others attributed their success to being risk averse and limiting purchases to patterned cells. Just as in real life, my game allows subjects to imagine themselves more or less responsible for their economic victories than may be accurate. If my experimental manipulations do elicit behavioral changes, they are apt to be smaller in magnitude than if I had based payoffs on quiz scores alone and not had players perform an additional cell-buying task.

Second, that subjects play only one experimental condition adds to the conservative nature

of test. Binmore (2011), in his review of behavioral economic experiments, notes that subjects are quick to embrace game rules as fair so long as all players know the rules. Preferable rules probably exist, but without ready examples, subjects are content with game rules as they are.[15] A subject assigned to my low-agency condition, for example, has no idea that medium- and high-agency conditions exist, and cannot use knowledge of these alternative conditions to inform her assessment of her actual condition. Were she to know about the high-agency condition, payoffs in the low-agency conditions might seem especially undeserved. Similarly, a subject in the high-agency condition who knows of the low-agency condition might be more inclined to see payoffs as deserved than a subject who had no knowledge of the low-agency alternative.

Finally, redistribution is necessarily costly to the subject. To improve the payoffs of other players, the subject must reduce her own winnings. Although subjects have the power to redistribute their payoffs, they have no financial incentive to do so. Indeed, an economically rational player would keep all her winnings. Any instance of redistribution is against the subject's self-interest and therefore unexpected according to classical economic predictions.

3.4.4 Experimental findings.

Even with my conservative design, H_1 and H_2 pass statistical muster. To ease interpretation, experimental results are presented graphically in Figures 3.6–3.8 and numerically in Table 3.3. Table 3.4 summarizes the statistical confidence with which we can compare results across experimental conditions.

Table 3.3: Experimental results.

		Assessment of deservingness		*% payoff redistributed (all subjects)*		*% payoff redistributed (donating subjects)*	
Condition	N	Mean	St. dev.	Mean	St. dev.	Mean	St. dev.
Low	52	0.654	0.490	0.132	0.196	0.286	0.199
Medium	73	0.797	0.377	0.128	0.165	0.222	0.162
High	69	0.892	0.292	0.075	0.102	0.140	0.102

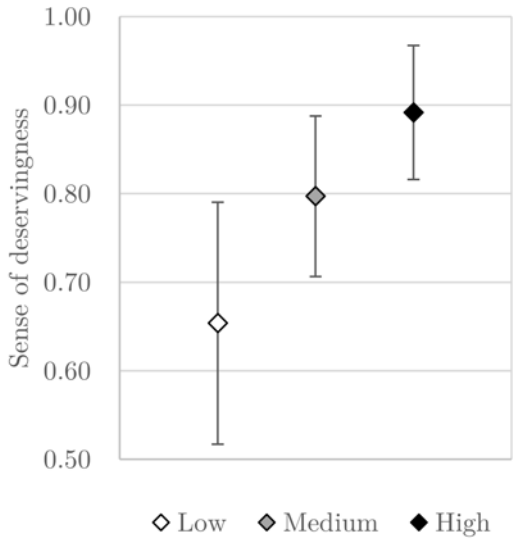
Results portrayed in Figure 3.6 support H_1. On the vertical axis, a value of 1 means the subject

[15] Think of someone who eats a common dish—say, meatloaf—at one restaurant only. How informed an appraisal of that meatloaf can she offer? Having never tasted it elsewhere, she probably rates it as fine. Were she to try it at other restaurants, tasting a range of qualities, her rating of her usual restaurant's meatloaf would probably change.

feels she and her fellow players "definitely deserve" their payoffs, and a value of −1 means the subject feels she and her fellow players "definitely do not deserve" their payoffs. Intermediate levels of certainty make up the remainder of the five-point scale. Few subjects say they and fellow players are undeserving of their payoffs in any condition, but the certainty with which they claim to deserve their payoffs increases with agency across conditions. Personal responsibility is an important component of economic desert

The mean score for high-agency subjects (M=0.892, SD=0.292) indicates a high degree of confidence that players deserve their payoffs. The mean score for low-agency subjects (M=0.654, SD=0.490)—while still squarely in the deserving half of the scale—reveals a relative lack of conviction in player deservingness. The difference between these scores is statistically significant; t(110)=3.164, p=0.001. And as hypothesized, medium-agency subjects' mean score (M=0.797, SD=0.377) falls between that of subjects in the other conditions. The difference between low- and medium-agency means easily meets traditional levels of significance; t(119)=1.817, p=0.036. The difference between medium- and high-agency means is also impressively robust, although it falls just short of the traditional 0.05 level of statistical significance; t(127)=1.574, p=0.059. Given the conservative nature of the test, these results are nevertheless supportive of H_1.

Figure 3.6: Subject assessment of player deservingness.



Figures 3.7 and 3.8 offer tentative support for H_2. Values on these vertical axes show the average percent of winnings subjects donated to worse-performing players, across conditions. Figure 3.8

Figure 3.7: Mean percent of payoffs that all subjects voluntarily redistributed.

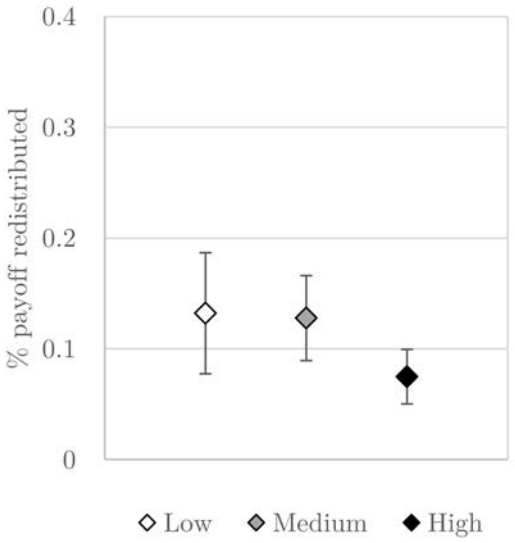
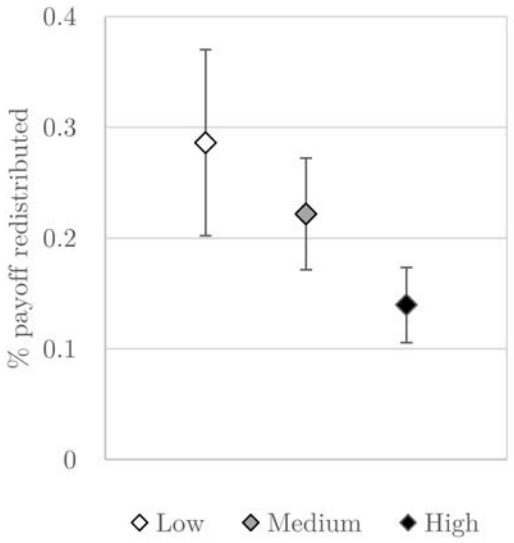


Figure 3.8: Mean percent of payoffs that donating subjects voluntarily redistributed.



displays the donations made by a select population within the larger sample—subjects who actually redistributed some of their winnings. Figure 3.7, conversely, includes all subject redistributions in its calculations, including donations of $0.00, and so the values displayed are lower than those in Figure 3.8.

For an idea of what the percentages in these figures mean for the subjects, consider the following: A subject could, if she so desired, make it so that all three players ended the game with $6.00, a perfectly egalitarian solution. To do so, she would have to give $1.30 to the second-best performing player and $2.55 to the worst-performing player, for a total donation of $3.85, all from her personal winnings. That amounts to 39.09% of her payoffs, so 0.3909 on the y-axis may serve as useful referent when looking at Figures 3.7 and 3.8.

Looking first at Figure 3.7, which shows the unrestricted sample means: On average, subjects in the medium- and low-agency conditions–subjects who believe themselves and fellow players to have less control over and be less deserving of their payoffs—redistribute about 5–6% more of their winnings than do players in the high-agency condition. The smaller magnitude of high-agency donations (M=0.075, SD=0.102) compared to medium-agency (M=0.128, SD=0.165) and low-agency donations (M=0.132, SD=0.196) is statistically significant; $t(140)=2.284$, $p=0.01$, and $t(119)=2.080$, $p=0.020$, respectively. We cannot, however, distinguish between the average donations of medium-

and low-agency subjects; t(123)=0.136, p=0.446.

From the vantage offered in Figure 3.7, it appears that there is a threshold at which sense of deservingness motivates behavioral change. We are fairly confident (p=0.059) that medium- and low-agency subjects experience different levels of deservingness, but this difference translates into similar levels of redistribution. A substantial sense of deservingness, as expressed by high-agency subjects, however, leads to a statistically identifiable decrease in charity. While not strictly advancing H_2, these findings do support a slight reformulation of my hypothesis, whereby $\bar{y}_{\text{high-agency}} \leq \bar{y}_{\text{medium-agency}} < \bar{y}_{\text{low-agency}}$.

Table 3.4: Comparisons of experimental results.

Assessment of player deservingness				
Comparison	N	Diff. of means	t-score	p-value (diff.<0)
Low-Medium	121	−0.143	−1.817	0.036
Medium-High	129	−0.095	−1.574	0.059
Low-High	112	−0.238	−3.164	0.001
% payoff redistributed (all subjects)				
Comparison	N	Diff. of means	t-score	p-value (diff.>0)
Low-Medium	125	0.004	0.136	0.446
Medium-High	142	0.053	2.284	0.012
Low-High	121	0.057	2.080	0.020
% payoff redistributed (donating subjects)				
Comparison	N	Diff. of means	t-score	p-value (diff.>0)
Low-Medium	66	0.064	1.429	0.079
Medium-High	79	0.082	2.666	0.005
Low-High	61	0.147	3.796	0.000

This threshold effect disappears in Figure 3.8, where we see a direct relationship between agency, deservingness, and redistributive generosity. And H_2 correctly specifies that relationship: The less agency subjects have, the less certain subjects are of their deservingness, and the more generous there are in their redistribution.

In this restricted sample, which includes only subjects who voluntarily redistributed their winnings, high-agency subjects donated about 8.2% less of their payoffs than did medium-agency subjects, who donated about 6.5% less of their payoffs than did low-agency players. As in the previous

analysis, we can be statistically confident that high-agency donations (M=0.140, SD=0.102) are less than both medium- (M=0.222, SD=0.162) and low-agency donations (M=0.286, SD=0.199); t(77)=2.666, p=0.005, and t(59)=3.796, p=0.000, respectively. The difference between mean medium- and low-agency donations here is more statistically defensible than in the previous analysis; t(64)=1.429, p=0.079. In these finding we find support for the strict formulation of H_2, where an increased sense of deservingness yields decreased redistributive generosity.

3.5 Conclusions.

Personal responsibility is intimately tied to desert in philosophers' minds, and as it turns out, in the minds of most Americans. When it comes to economic standing, Americans want control over the factors on which their fates rest. And they express this desire with impressive uniformity. A longing for and commitment to personal responsibility fits nicely with the American dream, where economic advancement is open for anyone willing to work for it, invest the necessary time and effort (Feldman 1983). But the connection between personal responsibility and desert is not a simple parroting of the standard American refrain. It extends to American pocketbooks, such that experimental subjects are more generous in their redistributive behavior the less agency they and others appear to exercise.

That agency and desert influence people's *voluntary* redistributive efforts is especially important given the mounting evidence that American policies are dictated by economic elites (Bartels 2008; Enns and Wlezien 2011; Gilens and Page forthcoming). Redistribution can be achieved by fiat, through progressive tax schemes and government programs, but if policies serve the wealthy then the wealthy have to be willing to part with their riches. As a matter of justice, such voluntary redistribution will occur in two scenarios. The first is when the possessors of wealth know themselves to be undeserving of their riches, and know others to be deserving. For reasons discussed in Chapter 5, it is doubtful that elites will deem themselves unworthy of their status or others more worthy. The second and more likely scenario is the one I test experimentally in this chapter. That is, when there exists some ambiguity as to whether people deserve their payoffs—when those who hold wealth cannot say with confidence that either they or their compatriots deserve (in this case, are responsible for) their payoffs.

The difference between these two scenarios is this: Inaction, in the first—failing to redistribute from the undeserving to the deserving—is knowingly unjust; in the second it is unclear which way justice lies because you are unsure who deserves what. Subjects in the medium- and low-agency manipulations found themselves in this latter situation. As agency decreased from one manipulation to the next, subjects continued to believe themselves and others deserving of their payoffs, but with increasingly less confidence. If individuals cannot confidently claim responsibility for their economic achievements and failures, they cannot convincingly assert deserving the resulting rewards or punishments.

Redistribution here is essentially a means for subjects to hedge their bets. Except for a handful of subjects who approached a truly egalitarian endgame, most subjects who redistributed gave the other players a moderate, but unsolicited and personally-detrimental amount of their own earnings. In so doing, they neither maintain the status quo—which would be admitting that payoffs are deserved—nor do they often give away the lion's share of their payoffs—which would be admitting their payoffs are undeserved. Although not saints by any stretch, it is nonetheless reassuring that people in the best positions are willing to aid others against their immediate self-interest and for reasons that appear purely moral.

4 | Proportionality and Economic Desert

As laid out in Chapter 1, economic justice is likely to take on a local flavor. What exactly constitutes economic deservingness will vary across geographies and peoples, and is sensitive to individual incentives and psychologies. Americans, however, are remarkably uniform in associating personal responsibility and economic deservingness, as we learned in Chapter 3. Game theoretic models and laboratory experiments point to another commonality in definitions of economic desert: The cross-cultural emergence of a general class of fairness norms that balance a person's gains with their worth (Binmore 2011, 63; Wagstaff 2001). Contemporary scholars study this phenomenon as "modern equity theory," but Aristotle (1999)—beating us to the punch by a few millennia—hit upon the idea when he observed that "What is just [...] is what is proportional." We are to treat equals equally, and unequals unequally. Individuals are equals, in the parlance of desert, if they possess the same amounts of the same desert bases. And their treatment is equal if they receive the same deserved objects.[1]

[1] Aristotle's use of mathematical terminology—proportions, geometric proportions, and ratios—in his treatment of justice may lead to some confusion, not because the concepts are difficult but because competent language users may employ them with different strictures. As used by mathematicians, "proportionality" describes a relationship between two variables whereby a change in one variable accompanies a *constant* change in the other. Indeed, if two variables are proportional, they are related by a non-zero "proportionality constant" k. A proportional rewarding of desert, then, would equate the deserved object y to desert basis x multiplied by a constant such that $y = kx$, where $k \neq 0$. (Whether the variables and constant are positive or negative will probably depend on how the scenario is framed. For example, punishment might be conveyed as a negative y, and/or some wicked trait might be a negative x).

There is not some divine constant, a special value of k according to which our payoffs ought to vary with our merit, and I do not read Aristotle as advancing such a notion. "Monotonicity" might be a more appropriate description of a just relationship between payoff and merit. The idea here is the preservation of order, generally. A monotonic mapping of desert onto outcomes only requires that an increase in one does not accompany a decrease in the other. We avoid having to specify a constant, and people cannot receive less than others who are as or less meritorious than they. The problem with this monotonic mapping is that a person could receive more than her equally deserving peers. Accordingly, we might further specify that our monotonic function be "injective"—a one-to-one mapping of merit to payoff—so as to preserve not just order but distinctiveness. Distinct levels of deservingness ($x \in X$) map to unique outcomes ($y \in Y$), commonly denoted $f : X \to Y$. This way we treat equals equally, unequals unequally, and greater desert yields greater outcomes. I will, however, employ "proportionality" in deference to Aristotle's head start of several millennia and the popularity of his terminology among philosophers and scholars. (See also footnote 11 from this chapter.)

If proportionality is a critical component of economic desert, deserving a particular economic rank is not a simple matter of possessing a particular quality or a constellation of qualities. Rather, possessing more or less of the valued quality (desert basis) nets you more or less of the economic reward (deserved object). Take willingness to work hard and expend effort. Employees who *work harder* express frustration and feelings of inequity when they see colleagues of equal pay-grade getting by with less effort (Thompson and Rainey 2003). Why? Diligent workers believe their greater industry merits greater compensation; compensation proportional to their efforts. Their seemingly lazy colleagues, however, may identify efficiency or quality of work as more appropriate desert bases, and they too want compensation proportional to these criteria. For example, employees who *perform better* at some task but are compensated as well as employees who perform worse express a loss of morale and motivation (Schay 1988). Assuming some desert basis or bases can be agreed on, economic justice may require payoffs to accurately reflect varying degrees of economic deservingness.

There is a vast empirical literature testifying to the importance of proportionality and equity in the laboratory and the workplace.[2] I review the major findings and concepts of this literature in Chapter 2. In this chapter, I look at proportionality and equity specifically as they relate to desert. Although simple concepts themselves, a full appreciation of their relationship necessitates two accompanying concepts: (i) desert metrics and (ii) levels of resolution. Each will be addressed in turn in the first part of this chapter, followed by a brief discussion of the practical difficulties facing the proportional rewarding of desert.

The bulk of this chapter is devoted to an empirical investigation into the variable importance of proportionality to economic justice. I show using a survey experiment that, even when of equal magnitude and along a single desert base, some inequities register as more unjust than others. People's demand for proportionality is not static. Specifically, the importance experimental subjects place on the proportional rewarding of desert is contingent on where along a desert metric desert subjects fall. Proportionality, while an indispensable aspect of economic justice, is not always in high demand: Tolerance for inequity is elastic.

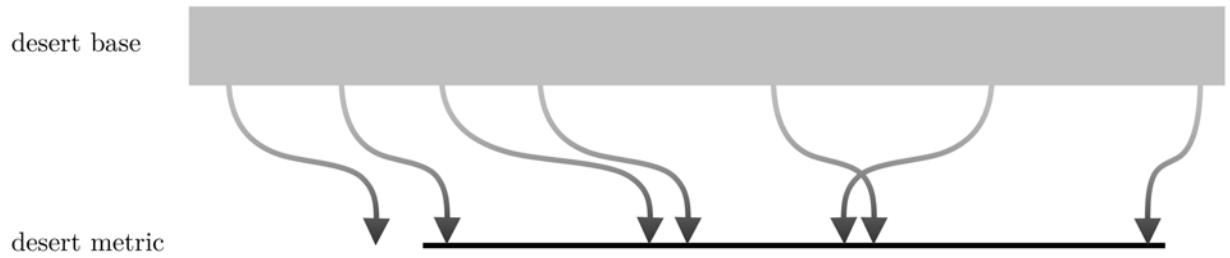
[2]This line of research is usually understood to have begun with Adams (1963; 1965), whose definition of inequity—which exists for a person whenever she perceives as unequal the ratio of her outcomes to inputs and the ratio of another's outcomes to inputs—continues to drive research in psychology, sociology, political science, management, and myriad other disciplines and sub-disciplines.

4.1 Measuring and comparing desert.

4.1.1 Metrics—translating a desert base into a measurable proxy.

Proportionality is the correlating of deservingness and reward. Because deservingness is often associated with nebulous, sometimes hidden qualities, we need a ready metric for its assessment. Some of these metrics will be formal, others less so, and what exactly they are measuring may be contentious. Consider the intelligence quotient. Not only is the notion of "intelligence" itself knotty and open to some debate (e.g., Neisser et al. 1996), but there is much argument over what standard IQ exams are actually measuring (e.g., Marks 2010). Without a God's-eye-view of peoples' intelligences, we must rely on imperfect measures of this elusive attribute. So it goes with all manner of desert bases. Number of academic publications may indicate productivity of thought, or a careful recycling of old work in new venues. Years with a company may signal employee loyalty, or an unmarketable résumé. Firmness of handshake may convey strength of character, or a well-polished persona. And educational background regularly signals an array of virtues, from specialized knowledge to perseverance, without necessarily imparting those virtues (Spence 1973).

Figure 4.1: Translating a desert base into a metric.



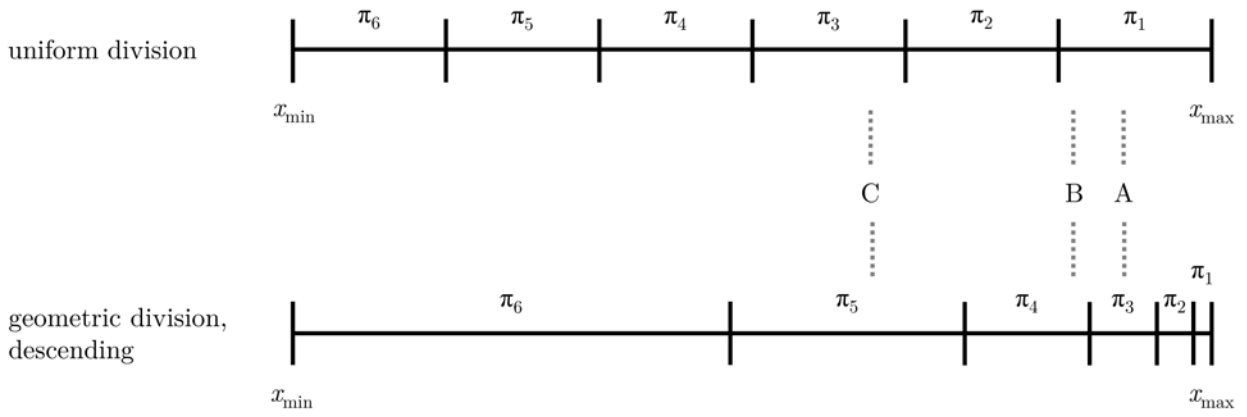
All of these measures serve as cues, proxies for some otherwise obscured quality. As proxies, there is room for error. The translation from desert base to desert metric is unavoidably imperfect. Problems of validity (i.e., Are we actually measuring what we think we are measuring?) and reliability (i.e., Do our measures produce consistent results?) plague even our most vetted psychometrics (Lemann 1999; Murphy and Davidshofer 2004). In Figure 4.1, a wide gray bar represents a desert base and a thin black bar represents a metric meant to capture and convey where individuals fall along that base. As indicated by the arrows, this process transpires with varying fidelity.

Assuming we can agree on a desert base, and assuming we are comfortable translating that base to a given metric, we still have to determine how performance on that metric translates into deserved objects. It is to that process that we next turn.

4.1.2 Levels of resolution—translating a desert metric into a deserved object.

What I call the "level of resolution" describes how finely we parse deservingness when assigning reward, given some metric. Figure 4.2 shows two of many possible levels of resolution for a desert metric that arrays performance between x_{min} and x_{max}. Any given point x_i along the line indicates an individual's performance on that metric, which in turn is meant to stand-in for deservingness. A range of x values corresponds to a deserved object, which we will call payoff π_n. These may be salaries, fines, kudos, positions within a company, etc, and the value of π_n increases with proximity to x_{max}, meaning $\pi_n > \pi_{(n+1)}$. Both lines in Figure 4.2 represent the same metric. They have the same length, the same x_{min} and x_{max}, the same x values in between, and the same six payoffs. The difference is in how they assign payoffs π_n according to performance x_i.

Figure 4.2: Comparing two levels of resolution.



The upper line allocates payoffs evenly across the entire range of performance on the metric; the level of resolution is constant. Each of the six possible payoffs is associated with a range of performance equal to $(x_{max} - x_{min})/6$. Thus, each π_n covers a line segment of equal length. The lower line, however, allocates payoffs according to a geometric sequence, such that the level of resolution becomes finer as performance increases. The range of x associated with a given π_n is

equal to $a_1 \times r^{n-1}$, where a_1 is the first term of the sequence and r is the common ratio.[3] Thus, in the illustration, different values of π_n correspond to line segments of different lengths, such that those lengths are smaller as the value of the payoff increases (i.e., as n decreases and π_n becomes proximal to x_{max}). This geometric association of performance and rewards draws attention to differences in top performing individuals, but does not do much to distinguish between individuals with middling to low levels of performance on our metric.

Each of the illustrated divisions permits a proportional, equitable division of resources, but only up to a point. Imagine Persons A, B, and C are assessed on our desert metric. Person A outperformed Person B, who outperformed Person C, with $x_A > x_B > x_C$. Looking at Figure 4.2, you can see what payoffs the different desert subjects receive for their performances. Under the uniform distribution, Person C takes home π_3, which is of less value than the payoffs taken home by Persons A and B, so this scheme seems to accord with proportionality and the equity principle. Except that Persons A and B both take home π_1, despite Person A's superior performance on the metric. Person A, that is, appears more meritorious, more deserving than Person B, and yet the uniform level of resolution in Figure 4.2 has awarded them the same payoff. This seems an inequitable outcome.

Not so under the geometric scheme. Person C receives π_5, which is of lower value than Person B's π_4, which is of lower values than Person A's π_3. This outcome appears more equitable than the previous. Notice two things, though. First, each of our three characters receives a lower payoff under the geometric scheme than under the uniform scheme. Person C drops from π_3 to π_5, Player B drops from π_1 to π_4, and Player C drops from π_1 to π_3. None of the three get the top payoff of π_1 under the geometric scheme. Indeed, Player A's top performance nets her π_3, which is what the much worse performing Player C received under the uniform distribution. Second, it is entirely possible under both the uniform and geometric schemes to have inequitable outcomes. Had Person B performed only slightly better than she did, but still worse than Player A, they might have both taken home π_3 under the geometric division. Such inequitable outcomes become increasingly likely as desert subjects perform worse on the metric, and the level of resolution becomes coarser.

Resolution is directly tied to equity. Coarse resolutions—associating a common outcome to a

[3]For this illustration, $a_1 = 0.10$ and $r = 1.87$. These values allow the geometric sequence to sum to 4.80 at $n = 6$. The horizontal lines representing the desert metrics are 4.80" long, and there are six values of π.

broad swath of performances—invite greater opportunity for inequity. Small differences in performance on a metric (which hopefully represent small differences in deservingness) do not yield differences in payoff. As resolution becomes finer—a smaller range of performance nets a common outcome—inequitable payoffs are less likely. Small differences in deservingness net small differences in payoffs.

4.1.3 Potential sources of injustice and practical problems with equity.

Justice may demand proportionality, but due to natural constraints, justice as it is practiced in reality will occasionally require treating *near* equals *nearly* equally. Inequity is, at some level, unavoidable. The reasons are practical, and there are at least two.

First, our level of resolution can only be as fine as our metrics, and some desert bases are best served by an unrefined metric, and/or low levels of resolution. Dichotomous measures will lump all desert subjects into one of two groups (e.g., firm/limp handshake, or pass/fail score on a test), to which ordinal measures will add some nuance and subject differentiation (e.g., very-firm/firm/somewhat-firm handshake, or high-pass/pass test score), to which near-continuous measures will add even more differentiation (e.g., pounds of compression registered from grip, or percentage of correct answers on a test). Aristotelians may demand evermore granular measures of a desert base. Devising and administering such measures, however, may be costly in terms of finance, and in terms of the metric's validity. Precise dynamometers (which can measure grip strength) and intelligence exams are not cheap. Moreover, a marginally firmer handshake is unlikely indicate increased trustworthiness, and a few percentage points more on an IQ exam are unlikely to divulge truly deeper intelligence. An overly precise measure may foster unfounded confidence in our ability to accurately measure an individual's deservingness and accurately assign deserved objects.

Second, the deserved outcomes we wish to distribute may be less refined than our metrics. Martial victories won commanders laurel wreaths in ancient Rome, but more decisive victories did not come with larger wreaths.[4] Job performance today may earn you a better title within a company, but there are only so many levels of management a company can reasonably accommodate within its organizational structure. Does a job better done merit a heartier congratulations, a more

[4]Some aspects of Roman civic religion did allow a more proportional reward of military desert. Major victories won commanders *triumphs*, while minor military victories might merit an *ovation*, which was aesthetically similar to a triumph, but with considerably less pomp.

beautiful touchdown more elaborate high-fives, or an act of sweeter kindness more hugs? Perhaps so, but there are real constraints on the granularity with which can parse rewards.

Introducing these two new concepts allows us to be more specific when diagnosing the source of apparent injustices, of which I now count five. We may (i) disagree on the appropriate desert base: You think my definition of merit is wrong. If we agree on a desert base, we may (ii) disagree on the appropriate desert metric: You think the proxy I use to measure deservingness does not reflect the desired base. If we agree on a base and a metric, we may (iii) disagree on the appropriate level of resolution: You think I am too fine or coarse in my alignment of rewards and merit. And if we agree on a base, a metric, and a level of resolution, we may (iv) incorrectly apply the desert metric and get a false reading of performance, or (v) award the deserved object to the wrong subject. These last two sources of injustice result from stochastic error, the kinds of error we make daily going about our business, and they speak to the importance of procedural justice to desert, the tenets of which are meant to either reduce or correct such mistakes.

4.2 Varying demands for proportionality.

In the remainder of this chapter, I show that demand for proportionality can be variable, even along a single metric. Tolerance for inequity is elastic. Different adjudicators of desert may want different levels of resolution depending on the desert base(s) being rewarded, the metrics available to assess that base, and the object being awarded. But it is also possible that a single adjudicator wants different levels of resolution along a single metric, contingent upon where on the metric desert subjects fall.

Within my large-N survey (first introduced in Chapter 1), I embed a simple experiment regarding letter grades (deserved objects) and student performance (desert metric). Assigning rewards based on homework and test scores, experimental subjects want a finer level of resolution when evaluating students of middling desert than when evaluating their better- and worse-performing peers. Essentially, experimental subjects are more accepting of inequity at some levels of performance than others.

4.2.1 Proportionality from different perspectives and for different purposes.

When assessing the deservingness of others, people are keenly interested in parsing desert at very high or very low levels and less interested in differentiating between people of middling desert. This is especially the case when adjudicators have some stake in final desert assessment. A manager looking to award promotions will want a granular differentiation of the best candidates, as in the lower-half in Figure 4.2. A social worker trying to allocate her time among clients will want a similarly granular differentiation of the most desperate dependents, as if the lower-half in Figure 4.2 were flipped horizontally.

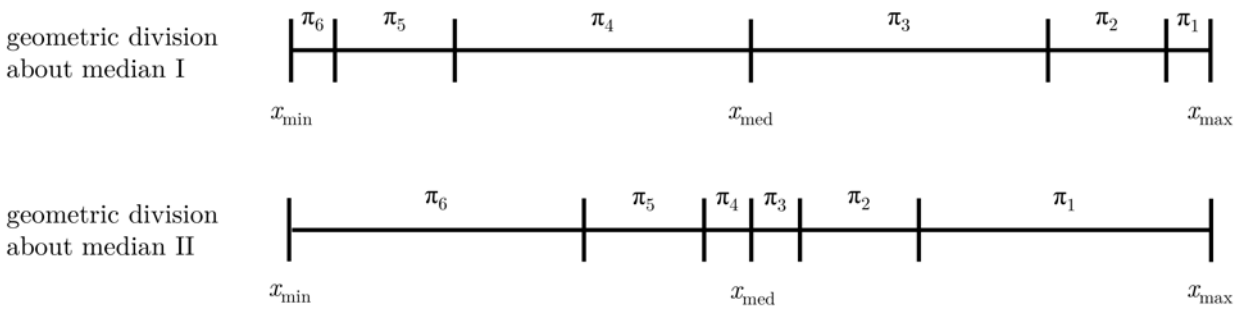
Then there are instances when assessing desert is part of a spectacle, when adjudicators have no direct stake in the outcomes. Here people are keenly interested in parsing desert at extremes in both directions and less interested in differentiating between people of middling desert, as in the upper-half of Figure 4.3. Ten world-class athletes compete in a 100 meter sprint. The two front runners both finish in the tenth second of the race. Do they both deserve a gold medal? Most sports fans would demand that judges employ a more accurate timepiece to single out the fastest sprinter. The fourth and fifth finishers both cross the line in the twelfth second of the race. Do they both deserve an honorable mention? Most sports fans do not care. As we move toward the end of the pack, however, our desire for resolution once again increases; we want to know with confidence who finished last and by how much. The difference between first and second and the difference between last and next to last *seem* greater, more important, than the differences between fourth, fifth, and sixth.[5]

In terms of economic standing, we want to believe that the CEO merits to the dollar his fabulous wealth and that the destitute beggar failed to merit every dollar he lost. But people in the middle, more or less comfortable and able to get by? Well, we may harbor jealousies about our neighbors affording a new television or going on a nice vacation, but our metrics for desert get a bit hazy when applied to intermediate ranges. The American "middle class", for example, covers an impressive number of people: According to both 2012 presidential candidates, more than 96% of citizens

[5]The case for being keenly interested in victories seems self-evident, but there are plenty of situations where failure can be considered a spectacle. And scenarios where failure is only just skirted are also enthralling. As such cases apply to our 100 meter dash: Seeing someone lose a race by a tremendous distance has a strange appeal, as does learning that one of the racers barely qualified for the meet or that another racer only just failed to qualify for the meet (e.g., Reid 1986).

qualified as middle class or middle income (Matthews 2012; Thompson 2012).

Figure 4.3: Levels of resolution in relation to median performance.



Spectators, I posit, want greater resolution in their measures of desert at the upper and/or lower echelons of desert to better differentiate between the very best and very worst. Contrast this with the perspective of the people whose merit is being judged. People who fall into the middling ranges on whatever metric desert is measured, I suspect, have a greater incentive than people registering extreme values to prize proportion and want a high level of resolution in the evaluation of their merit. As a strategic consideration, justice for them is not to be measured coarsely. These middling folks—being in whatever regard neither outstanding nor abysmal—are in danger of being lost, lumped together as "average" or "mediocre". Individuals ranking very highly or very lowly on our desert scale, conversely, may be content with desert being rewarded proportionally but with broader strokes.

Consider a college admissions committee, whose members want to reward academic ability and civic mindedness. Applicants' SAT scores are a common measure of the former desert base. Tony did very well on the SAT, sufficiently so that he does not want the committee to group SAT scores by quintile.[6] He looks pretty good when scores are broken into deciles,[7] estimating that he placed among in the top ten percent of applicants. He is not so certain of his placement within that decile. If all the adjudicators know is that Tony ranks in the top ten percent, he is a member of an elite group. If, however, the adjudicators go a step further and divide the applicant scores into vigintiles,[8] Tony and the judges may find that he is not in the top-tier of performers, but the

[6] Five groups of equal frequency.
[7] Ten groups of equal frequency.
[8] Twenty groups of equal frequency.

second-tier. His elite status has been compromised. The same reasoning applies at the opposite extreme. Roger reckons he ranks rather poorly against other applicants in SAT score. Better to be thought in the bottom half than in the bottom quarter than in the bottom tenth, and so on. It is good to have company at the bottom so Roger favors a low level of resolution in measuring this particular aspect of desert.

Then there is Jean, who has always been an average test taker. The anonymity that a low level of resolution afforded Tony and Roger is of less value to her. If her score is just above average, a low resolution might be helpful in that it puts her in the top half. If her score is just below average, a low resolution would be unhelpful in that it puts her in the bottom half. But she is not competing against the best and worst students, who have already been identified for special consideration. She is competing for a spot in college against other average testees. There is a threshold at which she wants a higher level of resolution to avoid being lumped together with other middle performers.

4.2.2 Survey experiment.

For the purposes of this dissertation, I am less interested in when and where along a metric adjudicators relax their aversion to inequity (i.e., accept lower levels of resolution), and am more interested in showing that it happens at all. To that end, I run a survey experiment wherein experimental subjects evaluate whether two students (desert subjects), with slightly different performance records (desert base/metric), deserve the same or different letter grades (deserved object). Some experimental subjects[9] will think a shared letter grade for marginally different performances is just, whereas others will classify the inequity as unjust and demand a greater level of resolution.

Because this dissertation focuses on economic desert and justice, an experiment about schooling may seem out of place. Quite the opposite. The beneficial influence of formal education on economic standing is well studied and popularly understood (Goldin 1999, 1998; Goldin and Katz 1999; Psacharopoulos and Patrinos 2004). Moreover, high school is probably a superior backdrop for an experiment than a strictly economic setting. Whereas respondents might have all manner of economic expectations and workplace experiences, high school education is compulsory in all American states, and high school by and large constitutes a powerful, shared cultural experience

[9]It is important that we not confuse desert subjects (Students 1 and 2) with experimental subjects (the people reading about Students 1 and 2 and answering questions).

among Americans (Angus and Mirel 1999; McDonogh and Wong 2001, 535).

4.2.3 Survey experiment manipulations.

Subjects in my survey experiment are randomly assigned to one of three "wide" conditions or one of four "narrow" conditions. The control conditions present subjects with a situation facing people of approximately average deservingness, and the remaining manipulations present subjects with a situation facing people of extreme (very high and very low) deservingness. I predict that subjects in the control conditions will be more demanding of a high level of resolution for measuring desert than subjects in the manipulations.

First we will review the three "wide" conditions. In the control C_{wide} condition, subjects read about two high school students and their teacher. Over the course of the most recent semester, Student 1 performed slightly better than the majority of the students and has a final score of 79%. Student 2 performed slightly worse than the majority of studies, finishing with a score of 71%. Their teacher has, for all his many years in education, assigned only simple letter grades: A for "superior quality" work, B for "high quality" work, C for "satisfactory" work, D for "minimally acceptable" work, and F for "unacceptable" work; no pluses or minuses. According to his rubric, any score at or above 70% and below 80% is a C so both Student 1 and Student 2 are given Cs as their official letter grades.

Following the vignette, subjects are asked whether Student 1 and Student 2 deserve the same letter grade. Subjects who protest both students getting a grade of C expose their desire for a higher level or resolution in the identification and rewarding of desert. Scores of 79% and 71% are sufficiently removed that a just outcome would differentiate between them. Other subjects will express no qualms with the students receiving the same grade; they are satisfied with the level of resolution the teacher used in assigning their grades.

Compare this control with its two manipulations. In the A_{wide} manipulation Students 1 and 2 are at the top of their class. Student 1 finishes the course with a 99% and Student 2 finishes with a 91%. As in the control, their teacher awards them the same grade, in this case an A. In the F_{wide} manipulation Students 1 and 2 are at the bottom of their class. Student 1 finishes with a 59% and student 2 finishes with a 51%. Their teacher gives each an F. These manipulations are symmetric about the control: Students 1 and 2 score either 20 percentage points above or below

Table 4.1: Survey experiment example.

Instructor X is a well-liked and well-respected educator who has taught high school for many years. When assigning final letter grades, Instructor X uses the following rubric:

Grade	Definition	Homework and test scores
A	superior quality work	90% to 100%
B	high quality work	80% to 89.9%
C	satisfactory work	70% to 79.9%
D	minimally acceptable work	60% to 69.9%
F	unacceptable work	less than 60%

The average score in the most recent semester was a 76%, so the average student will receive a grade of C.

Student 1 performed [satisfactorily and slightly better than the majority of students] and has a final score of [79%]. *Student 1* will receive a [C] on his/her report card.

Student 2 also performed [satisfactorily but slightly worse than the majority of students] and has a final score of [71%]. *Student 2* will receive a [C] on his/her report card.

their control counterparts, and their final marks are two letter grades removed from the control in both directions. Table 4.1 shows what control subjects see. Subjects do not see the brackets, which indicate text that changes between treatments.

In addition to the three "wide" conditions, I run four "narrow" conditions. Two correspond to the wide control (C_{wide}), and one for each of the manipulations. The premise of each is the same as in the previous conditions, but the range separating the scores has been decreased, making for an even more conservative test of people's tolerance for low resolution in the rewarding of desert. Whereas Students 1 and 2's scores are separated by 8 percentage points (i.e., 80% of the letter grade range) in the wide condition, their scores are separated by a mere 3 percentage points (i.e., 30% of the letter grade range) in the narrow conditions.

Table 4.2 summarizes the experimental treatments. The "high score" and "low score" columns show the scores Students 1 and 2 get in each condition, and "letter grade" column shows the mark their instructor intends to give them. The symmetry of the experiment about the median score (75%, associated with letter grade C) is also apparent in the table.

As I already stated, predicting where along the desert metric experimental subjects want high

Table 4.2: Summary of survey experiment conditions.

Condition	Letter grade	High score	Low score	Median − High	Median − Low	High − Low
A_{wide}	A	99%	91%	−24%	−16%	8%
C_{wide}	C	79%	71%	−4%	4%	8%
F_{wide}	F	59%	51%	16%	24%	8%
A_{narrow}	A	99%	96%	−24%	−21%	3%
$C_{narrow\ high}$	C	79%	76%	−4%	−1%	3%
$C_{narrow\ low}$	C	74%	71%	1%	4%	3%
F_{narrow}	F	54%	51%	21%	24%	3%

or low resolution is of secondary importance to seeing if there is a demand for varying levels of resolution (i.e., different tolerances for inequity at different levels of performance). Accordingly, I cue experimental subjects to a common baseline against which they can assess Student 1 and 2's scores. I explicitly state that the median student has a class score of 75%, effectively anchoring subjects at that median level of performance (see Etzioni 2011; Jacowitz and Kahneman 1995). Without this cue, different subjects may be inclined to treat high, median, or low levels of performance as their points of comparison, which might in turn influence where along the desert metric they want high and low levels of resolution, making it impossible to measure if there is a variable demand for resolution along the metric at all.[10] Anchoring at the median will not influence the variable nature of experimental subjects' tolerance for inequity; it will only affect *where* along the metric that variability, if any, expresses itself.

The difference separating Student 1 and 2's performance for each condition is displayed in the "high − low" column of Table 4.2. In the wide conditions, I see whether subjects are comfortable giving the same letter grade to two students whose scores are separated by 8 percentage points, placing one student at the upper-bound and one student at the lower-bound of the given letter grade, according to the instructors metric. In the narrow conditions, the two students still receive the same letter grades but their scores are separated by only 3 percentage points, with one student at the upper- or lower-bound of her letter grade, and the other just above or below the middle value of the letter grade.

[10] For example, a subject who uses top performance as a baseline may want variable resolution that looks like the bottom-half of Figure 4.2, whereas a subject who uses median performance as a baseline may want variable resolution akin to those illustrated in Figure 4.3.

To summarize, in each condition I provide experimental subjects with the following: Desert subjects (Students 1 and 2), a deserved object (letter grade), a metric for measuring desert bases (cumulative homework and test scores), information on how desert subjects performed on the metric (Student 1 and 2's scores), and a level of resolution showing how to translate the metric into the deserved object (the range of scores that map onto different letter grades). Experimental subjects who think Students 1 and 2 deserve different letter grades are essentially lobbying against what they see as an inequitable outcome—they want a finer resolution. Experimental subjects who think the instructor is acting justly—who think Students 1 and 2 deserve the same letter grades—are fine with the level or resolution and accept the inequity as just.

4.2.4 Survey experiment hypotheses.

In each of my experimental conditions, Students 1 and 2 receive the same payoff (e.g., a letter grade of C) for different levels of performance on a desert metric (e.g., a 76% on homework and tests versus a 79%). Because I cue subjects to the median class score, any variation in tolerance for this inequity should occur as student performance approaches the median score. I predict that, relative to subjects in the control conditions, subjects in the A and F manipulations will be less inclined to demand differentiation in the student's letter grades. The closer desert subjects are to the mean level of performance on the specified metric, the greater the demand for resolution in assigning outcomes. At extreme levels of performance, experimental subjects will be content with a lower resolution.

Specifically, I hypothesize that:

H_{1a} Subjects in the C_{wide} condition will be less inclined to give Students 1 and 2 the same letter grades than will subjects in the A_{wide} condition.

H_{1b} Subjects in the $C_{\text{narrow high}}$ condition will be less inclined to give Students 1 and 2 the same letter grades than will subjects in the A_{narrow} condition.

H_{2a} Subjects in the C_{wide} condition will be less inclined to give Students 1 and 2 the same letter grade than will subjects in the F_{wide} condition.

H_{2b} Subjects in the $C_{\text{narrow low}}$ condition will be less inclined to give Students 1 and 2 the same letter grade than will subjects in the F_{narrow} condition.

Moreover, I contend that there is a symmetry in the relationship between people's desired level of resolution in a desert metric and their performance on that metric. Distance from the medium performance matters, not the direction of the performance. As such, I further hypothesize that:

H_{3a} Subjects in the A_{wide} condition will be about as inclined to give Student 1 and 2 the same letter grades as will subjects in the F_{wide} condition.

H_{3b} Subjects in the A_{narrow} condition will be about as inclined to give Student 1 and 2 the same letter grades as will subjects in the F_{narrow} condition.

H_4 Subjects in the $C_{\text{narrow high}}$ condition will be about as inclined to give Student 1 and 2 the same letter grades as will subjects in the $C_{\text{narrow low}}$ condition.

To test these hypotheses, I have experimental subjects indicate (i) whether the two students deserve the same letter grade, and (ii) how strongly they feel that way. The resulting measure is a seven-point ordinal variable bounded by $[-1, 1]$, where 1 means the subject strongly believes the two students deserve the same grade and a -1 means the subject strongly believes the two students deserve different grades. Intermediate values indicate varying levels of agreement with one or the other sentiment, with 0 indicating uncertainty about either proposition. The average value of this variable, I predict, will vary by experimental condition as delineated in my hypotheses. Restated in basic mathematical notation:

if

$$\uparrow \|x\| \rightarrow\downarrow y$$

then

$$\bar{y}_{\mathrm{A}_{\mathrm{wide}}} > \bar{y}_{\mathrm{C}_{\mathrm{wide}}} \qquad \bar{y}_{\mathrm{F}_{\mathrm{wide}}} > \bar{y}_{\mathrm{C}_{\mathrm{wide}}}$$

$$\bar{y}_{\mathrm{A}_{\mathrm{narrow}}} > \bar{y}_{\mathrm{C}_{\mathrm{narrow\,high}}} \qquad \bar{y}_{\mathrm{F}_{\mathrm{narrow}}} > \bar{y}_{\mathrm{C}_{\mathrm{narrow\,low}}}$$

and

$$\bar{y}_{\mathrm{A}_{\mathrm{wide}}} \approx \bar{y}_{\mathrm{F}_{\mathrm{wide}}}$$

$$\bar{y}_{\mathrm{A}_{\mathrm{narrow}}} \approx \bar{y}_{\mathrm{F}_{\mathrm{narrow}}} \qquad \bar{y}_{\mathrm{C}_{\mathrm{narrow\,high}}} \approx \bar{y}_{\mathrm{C}_{\mathrm{narrow\,low}}}$$

where $x = \{$performance of Students 1 and 2$\}$, double-bar brackets $\|$ indicate distance from the median level of performance, and $y = \{$conviction that Students 1 and 2 deserve the same letter grade$\}$. The notation $\uparrow \|x\| \rightarrow\downarrow y$ is read: "As Student 1 and 2's homework and test scores increase in distance from the median score of 75%, experimental subjects are more comfortable assigning Students 1 and 2 the same letter grade."[11] The greater an x value, the higher the test and homework scores for Students 1 and 2. The greater a y value, the more strongly an experimental subject feels Student 1 and 2 deserve the same letter grade. A low y value, then, means an experimental subject thinks giving Student 1 and 2 is an injustice; she is less tolerant of this inequity and wants a finer resolution.

The basic thrust of these predictions: Proportionality varies in its importance to justice; some inequities seem more unjust than others. In the case of this experiment, I predict that tolerance for inequity depends on where desert subjects fall relative to the average performance on the desert metric. The closer desert subjects are to the mean level of performance on the specified metric, the greater the demand for resolution in assigning outcomes. At extreme levels of performance, experimental subjects will be content with a lower resolution. In other settings, tolerance for inequity depends on the performance of desert subjects relative to some other point along the

[11] An alternative means of conveying the relationship is $y = kx$, where $k > 0$. But this notation would imply a specific proportional relationship ($y \propto x$) rather than a general morphism, which is all I am prepared to advance. (See also footnote 1 from the start of this chapter.)

metric.

Before moving onto my findings, note that the experimental design presents a conservative test of my hypotheses in that subjects must go against the status quo presented in the vignettes. Support of my hypotheses requires a large portion of subjects to upset the status quo by saying that the letters grade Instructor X gave Student 1 and Student 2 is morally dubious and should be altered. But there exists a strong bias toward the current state of affairs (Kahneman, Knetsch and Thaler 1991; Samuelson and Zeckhauser 1988). Experimental subjects are predisposed to interpret "the mere existence of something as evidence of its goodness" (Eidelman, Crandall and Pattershall 2009, 765). Moreover, challenging the present state of affairs invites a medley of psychological and cognitive costs, such that status quo maintenance is "ubiquitous and subtle" (Eidelman and Crandall 2009, 85). Experimental subjects are therefore inclined to accept Instructor X's grading regardless of the condition to which they are assigned. If I do uncover consistently varied tolerance for inequity along a single desert metric, it will in the face of many psychological obstacles.

4.2.5 Survey experiment findings.

Even with my conservative design, all but one of my hypotheses pass statistical muster. To ease interpretation, experimental results are presented graphically in Figures 4.4–4.5 and numerically in Table 4.3. Table 4.4 summarizes the statistical confidence with which we can compare results across experimental conditions. Our variable of interest measures whether and how strongly experimental subjects support giving Students 1 and 2 the same letter grades. Interpret Figures 4.4–4.5 as follows: On the vertical axis, a value of 1 means experimental subjects strongly believe that Students 1 and 2 deserve the same grade, and a value of -1 means subjects strongly believe Students 1 and 2 deserve different grades. The lower the value of the vertical axis, therefore, the finer a resolution experimental subjects desire and the less their tolerance for inequity. Similarly, lower mean values in Table 4.3 indicate less support for assigning the same letter grade in the specified condition, which is the same as desiring a finer resolution.

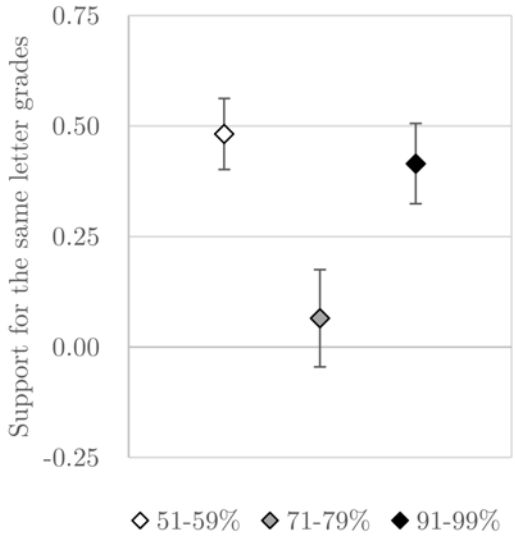
First we will compare the desire for finer resolution in situations with high and middling performances by desert subjects. I predict in H_{1a} and H_{1b} that experimental subjects should be more content with a coarse resolution in the A_{wide} and A_{narrow} conditions than they are in the C_{wide} and $C_{\text{narrow high}}$ conditions, respectively. That is, we should see lower mean values in our variable of

Table 4.3: Survey experiment results.

Condition	Treatment	N	Mean	St. dev.
A_{wide}	91%–99%	139	0.707	0.271
C_{wide}	71%–79%	138	0.533	0.327
F_{wide}	51%–59%	148	0.741	0.248
A_{narrow}	96%–99%	148	0.782	0.239
$C_{narrow\ high}$	76%–79%	144	0.615	0.282
$C_{narrow\ low}$	71%–74%	132	0.706	0.244
F_{narrow}	51%–54%	143	0.823	0.202

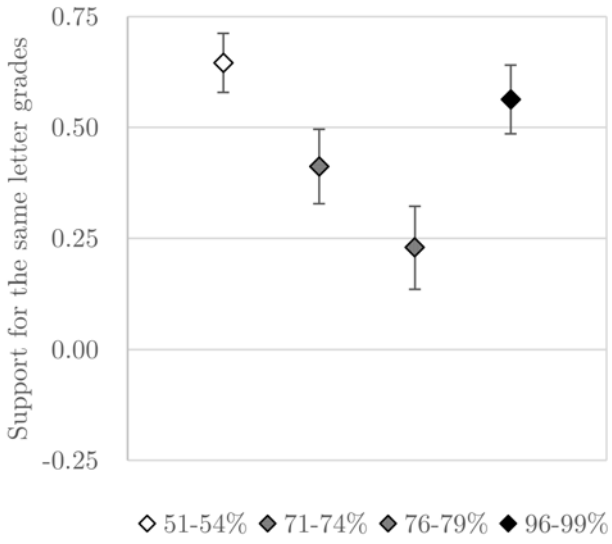
interest when Students 1 and 2 perform at middling levels on a desert metric (as they do in the C conditions) than when they perform at high levels on desert metric (as they do in the A conditions). We see just that.

Figure 4.4: Wide condition results.



The mean scores for A_{wide} subjects (M=0.707, SD=0.271) and A_{narrow} subjects (M=0.782, SD=0.239) indicate a high degree of comfort giving the exemplary Students 1 and 2 the same letter grades. The mean scores for C_{wide} subjects (M=0.533, SD=0.327) and $C_{narrow\ high}$ subjects (M=0.615, SD=0.282), conversely, indicate relative discomfort assigning the mediocre Students 1 and 2 the same letter grades. The smaller mean scores for A_{wide} subjects relative to C_{wide} subjects and for A_{narrow} subjects relative to $C_{narrow\ high}$ subjects surpass traditional levels of significance;

Figure 4.5: Narrow condition results.



t(275)=4.848, p=0.000, and t(290)=5.467, p=0.000, respectively. Graphically, all of this is conveyed in the two left-most points from Figures 4.4 and 4.5.

Next we will compare the desire for finer resolution in situations with low and middling performances by desert subjects. I predict in H_{2a} and H_{2b} that experimental subjects should be more content with a coarse resolution in the F_{wide} and F_{narrow} conditions than they are in the C_{wide} and $C_{narrow\ low}$ conditions, respectively. That is, we should see lower mean values in our variable of interest when Students 1 and 2 perform at middling levels on a desert metric (as they do in the C conditions) than when they perform at low levels on desert metric (as they do in the F conditions). Again, we see just that.

The mean scores for F_{wide} subjects (M=0.741, SD=0.248) and F_{narrow} subjects (M=0.823, SD=0.202) indicate a high degree of comfort with giving the deplorable Students 1 and 2 the same letter grades. The mean scores for C-wide subjects (M=0.533, SD=0.327) and $C_{narrow\ low}$ subjects (M=0.706, SD=0.244), conversely, indicate relative discomfort assigning the mediocre Students 1 and 2 the same letter grades. The smaller mean scores for F_{wide} subjects relative to C_{wide} subjects and F_{narrow} subjects relative to $C_{narrow\ low}$ subjects surpasses traditional levels of significance; t(284)=6.099, p=0.000, and t(273)=4.351, p=0.000, respectively. Graphically, all of this is conveyed in the two right-most points from Figures 4.4 and 4.5.

In confirming H_{1a}, H_{1b}, H_{2a}, and H_{2b}, we have evidence that, compared to middling per-

Table 4.4: Comparisons of survey experiment results.

Comparison	N	Diff. of means	t-score	p-value (diff.≠0)
$A_{\text{wide}} - C_{\text{wide}}$	277	0.175	4.848	0.000
$F_{\text{wide}} - C_{\text{wide}}$	286	0.208	6.099	0.000
$A_{\text{wide}} - F_{\text{wide}}$	287	−0.034	−1.097	0.274
$A_{\text{narrow}} - C_{\text{narrow high}}$	292	0.167	5.467	0.000
$F_{\text{narrow}} - C_{\text{narrow low}}$	275	0.177	4.351	0.000
$A_{\text{narrow}} - F_{\text{narrow}}$	291	−0.041	−1.591	0.113
$C_{\text{narrow high}} - C_{\text{narrow low}}$	276	−0.091	−2.865	0.005

formances on a desert metric, a coarser resolution suffices at extreme performances. But how symmetrical is this phenomenon? The V-shape of the data points in Figures 4.4 and 4.5 indicates it is fairly symmetrical, especially at extreme levels of deservingness. According to H_{3a} and H_{3b}, desired resolution should be about equal at high and low levels of deservingness. As predicted, we cannot differentiate between the mean dependent variable from A_{wide} (M=0.707, SD=0.271) from F_{wide} (M=0.741, SD=0.248), nor can we differentiate between the mean dependent variable from A_{narrow} (M=0.782, SD=0.239) from F_{narrow} (M=0.823, SD=0.202), at traditional levels of statistical significance; t(285)=−1.097, p=0.274, and t(289)=−1.591, p=0.113, respectively. This symmetry starts to breakdown as we approach middling performance on our desert metric, such that H_4 is not well supported. The mean score of $C_{\text{narrow high}}$ (M=0.615, SD=0.282) is statistically differentiable from the means score of $C_{\text{narrow low}}$ (M=0.706, SD=0.244); t(274)=−2.865, p=0.005.

4.3 Conclusions.

Practical limitations to equity abound. Desert metrics may not fully capture the nuances of the underlying desert base, they may be difficult to craft and expensive to administer, and the deserved objects to be awarded may be too few in number to allow significant granularity in the proportional rewarding of desert. In spite of these worldly restriction, decades of social science research tells us equity is an important facet of economic justice. But its importance is not necessarily uniform. In this chapter, I reveal that people's demand for the proportional rewarding of desert can vary along a single metric. Experimental subjects are less tolerant of inequity and want a finer level of resolution when evaluating students of middling desert than when evaluating their better- and

worse-performing peers.

Given the exploratory nature of this investigation, I was foremost concerned with uncovering variation in demand for proportionality, period. But there are many patterns this variable demand for proportionality might take, contingent on a diverse set of contextual factors. In my experiment, experimental subjects emphasized equity as desert subject performance approached the median value. This was in part an artifact of my experimental design, meant to ensure consistency of any variation in the demand for proportionality based on relative performance on the metric. Future studies should investigate when and why subjects grow more or less tolerant of inequity at other points along a desert metric. I outline a few possible reasons this might happen earlier in this chapter (Section 4.2.1), ranging from the stakes desert adjudicators have in assessments they make, the nature of the deserved object being awarded, and the strategic consideration of the desert subjects themselves. Another fruitful avenue of research might examine when this variation disappears and people want uniform resolution along a desert metric.

Having explored how Americans define economic desert in terms of two underlying dimensions of justice—agency and proportionality—it is time we moved onto actual appraisals of desert. In the next chapter of this dissertation, I measure who in America actually believes people get what they deserve.

5 | Do Americans (Think They) Get What They Deserve?

Determining if desert is accurately compensated is no small task. There are many elements, some working at odds, that factor into a person's economic standing. Individual employees are quick to point out when they or their co-workers take home a paycheck worth more or less than their due (Gordon 2002; Greenberg and Cropanzano 2001; Kurland and Egan 1999; Lee and Shin 2000; Miner 1980; Rainey 1997), but how do you make the case that primary school teachers, SAT examiners, college admission board members, human resource directors, bank loan managers, and the legion of other people directly and indirectly responsible for our economic wellbeing are all more or less working to tailor economic outcomes to merit? It becomes even more difficult to say that the American economic system does not reward hard work and perseverance when our early schooling, political leaders, and advertising executives all work to persuade us otherwise (e.g., Hochschild and Scovronick 2004; Lim 2002; Marchand 1986).

People undoubtedly have some evidence with which to assess the fairness of the economic system, be it mined from newspaper reports, anecdotes, or personal experience. But in the end, whether or not an individual believes that the institutions governing economic mobility reward desert is just that—a belief, sometimes justified and sometimes not. Despite mounting evidence that advancement is not equally open to all (Arrow, Bowles and Durlauf 2000; Bowles, Gintis and Groves 2005), a great many Americans have faith in the meritocratic functioning of their economic system. That is not to say, however, that all Americans exhibit that faith with equal fervor.

5.0.1 Translating economic myth into reality.

Chapters 3 and 4 give us insight into what different Americans consider economically just. This fourth chapter attempts to discern the degree to which different Americans believe the prevailing economic system operates justly—the extent to which people believe economic justice has been achieved.

In the first half of this chapter, I use a large-N survey to measure different people's beliefs regarding the overall justness of the economic system in which they operate. Whatever a person's definition of economic desert, there are plenty of reasons she might or might not believe it properly rewarded on a greater scale. For example, women, ethnic minorities, and homosexuals have historically faced and continue to face workplace prejudices that overshadow their individual talents and efforts. They may therefore be skeptical that economic desert is rewarded. Poor people may also express incredulity, either because they see no evidence for justice or because they want to avoid blame for their disadvantaged state. People who grew up poor but are now well-off, conversely, may be quick to classify economic outcomes as deserved so as to paint a rosy picture of their rise up the economic ladder. These are just a few of the factors that might influence an individual's wiliness to believe that desert is rewarded.

So how confident are Americans that their fellow citizens deserve their economic standing? That depends. Americans, it seems, hold very different opinions about the deservingness of rich and poor individuals, and very different opinions about the deservingness of individuals versus broad categories of people. In general, I uncover the following: We regard "the poor" as undeserving of their poverty, but Americans are divided over or withhold judgment on the economic deservingness of "the rich" and "average Americans." Deservingness assessments take on a very different quality when directed at specific individuals, as I learn from the survey experiments in the second half of this chapter. With these experiments, I uncover the assumptions people make about wealthy and poor individuals in situations of scant information as compared to situations of ample information, when no assumptions need to be made.

Americans are quick to rate a rich individual as deserving of her fortune, even when almost nothing is known about her. We are confident that unworthy individuals do not make it into our economic elite, and so the system is just in its rewards. But we are not so confident about

economic punishment. Americans are agnostic when it comes to the economic deservingness of poor individuals. While they do not tend to outright blame her for her poverty, neither do they extend to her the benefit of the doubt the so readily extend her wealthy counterpart. Our assumptions regarding individual deservingness might be summed as follows: Charity for the rich; ambivalence for the poor.

5.1 Assumptions about the deservingness of groups.

It is important to differentiate between different groups when evaluating desert assessments because justice may be selective in its revelation. Believing that most poor people deserve to be poor, for example, does not require you to believe that most rich people deserve to be rich. As part of my large-N survey, I ask respondents whether or not they believe that rich, poor, and average Americans deserve their economic positions. Respondents are also asked to indicate the strength of these beliefs and their confidence in them. Our dependent variable can therefore be binary or ordinal. Independent variables include belief in economic agency, political and religious convictions, perceived deservingness of salary, demographic characteristics which may bring on motivated reasoning, membership in an economic outgroup, and standard demographic controls. Each will be treated in turn.

5.1.1 Hypotheses about group deservingness assessments.

Belief in economic agency. First, I take a finding from Chapter 3 and control for belief in economic agency. Personal responsibility, an ability to link agency with outcomes, is an essential component of American conceptions of economic justice. The more convinced a person is that economic standing is up to the individual and not stochastic factors, the more likely she is to say that the prevailing economic system is just—the more likely she is to believe that rich, average, and poor Americans receive their economic due.

Philosophical outlook. Political ideology, I contend, will have a significant influence on an individual's belief in economic justice. I predict and find in Chapter 3 that, saving for some minor differences, liberals and conservatives have broadly similar definitions of economic desert. The modern American narrative—emphasizing rugged individualism and a frontier environment in which

the individual can advance unopposed—is powerful. Indeed, Americans' views on economic mobility have been shown time and again to rest upon two complimentary, sometimes tension-inducing social ideologies: economic individualism and social equality (Feldman 1983; Furniss and Tilton 1977; Hansenfeld and Rafferty 1989; Huber and Form 1973; Lipset 1963*a*; McClosky and Zaller 1984; Williams 1970). Put succinctly, "The individual must work hard and the system must be open for advancement" (Feldman 1983, 6). Liberals, conservatives, and anyone who has watched television, listened to a presidential address, or attended a primary school in this country has been subject to this refrain (Hochschild and Scovronick 2004; Lim 2002; Marchand 1986).

Political ideology, as I see it, does not so much determine whether or not you hold these twin ideals. Rather, it influences whether you believe they have been achieved. As Jost, Glaser, Kruglanski and Sulloway (2003, 63) put it, conservatism in the American experience is a "prototypical system-justifying ideology, in that it preserves the status quo and provides the intellectual and moral justification for maintaining inequality in society." If Jost and colleagues are correct, we would expect that conservative respondents will be more inclined than non-conservatives to believe the prevailing economic system—with all its glaring inequalities—a just system. For conservatives, people get what they deserve, even if that means that large numbers of people do not get much. They may have been inculcated with the same values, the same notions of economic justice as Americans at the opposite end of the ideological spectrum, and they may hold those values with equal fervor. But conservatives are predisposed to believe those values are in practice. The system is open for advancement and hard work is rewarded.

Like political convictions, religious convictions are apt to influence an individual's faith in the justness of the American economic system. The theology variable accounts for the progressive or fundamental nature of respondents' spiritual beliefs. Whereas a religious progressive may feel a call to fight for social and economic justice, fundamentalists are more likely to leave judgment to God and exhibit faith that people will or do get what they deserve (Emerson and Hartman 2006; Pargament et al. 1988).

Extrapolation from self. For better or worse, each of us has a readymade sample of one in ourselves, from which we may be inclined to extrapolate to a broader population. Our belief that the American economic system is just will vary along with our belief that we are justly compensated for our work.

Respondents who believe that they are paid what they deserve will be more likely to deem the US economic system just than respondents who think themselves deserving of better remuneration. And because a just economic system delivers to people what they deserve, being paid more than deserved is—under a strict interpretation of our definition—unjust. Rather than assume that people who are overpaid will construe their situation as super-extra-just, I instead measure how far people feel their salary is from a deserved one. Indeed, laboratory and field evidence indicates that under- and over-compensation lead to feelings of dissatisfaction, although people do seem to have a greater threshold for overcompensation (Adams 1965; Mowday 1987; Sweeney 1990).

Motivated reasoning. Similarly, I expect that belief in the widespread award of economic desert will be influenced in part by motivated reasoning, and increase with a respondent's income and education (insofar as education correlates with earning potential). Consciously or not, the more well-to-do you are the more you want to think yourself—and the more you want others to think you—deserving of your economic position. I expect wealthy respondents, then, to rate rich Americans as deserving of their wealth. Conversely, as you leave the realm of financial security and approach impoverishment, the less you want to be viewed by yourself and others as deserving of your situation. Poor respondents, I expect, will rate poor Americans as underserving of their hardships. Extrapolating from their personal rank within the economic distribution, the successful will posit their success as the result of a just system and the unsuccessful will be inclined to posit their lack of success as the result of an unjust (or, at least, a less just) system.

It is not enough to look at respondents' economic standing as a static phenomenon. Mobility is a potent notion in the American context. A respondent may take home a median income, but if she grew up in a family that was earning well below the median, she will want to see her ascent as deserved. A respondent falling from a high economic position to a median position will, through the same face-saving mechanism, want to see her descent as undeserved. Taken broadly, belief in the justness of the economic system increases or decreases with a respondent's sense of change in economic rank. The better off a respondent believes herself to be compared to her childhood self (or to her parents at the same age), the more likely she is to believe the economic system just. And the worse off she believes herself to be, the more likely she is to believe the economic system

unjust.[1]

Economic outgroup membership. Female, homosexual, and minority respondents may or may not have experienced workplace prejudice themselves, but I anticipate that they will nonetheless be aware of the traditional biases that inhibit economic advancement among their fellow out-group members (Blackstone 1975). Accordingly, respondents from these demographics will be less inclined than their in-group counterparts to believe the economic system just.

Demographic controls. Finally, I account for the potential effect of generation, schooling, and place on an individual's association of economic desert with agency. Compared to their younger, publicly educated, urban, and non-southern counterparts, older Americans, those who attended private schools, and Americans from rural communities and southern states may be have grown up with different expectations about the reward of economic desert.

5.1.2 Data and findings about group deservingness assessments.

Measures of deservingness are based on three different questions regarding each of the three groups. For example, respondents were asked to think about the rich. "Generally, do you think that rich Americans deserve their wealth?" Their responses were coded as either -1 ("The rich generally deserve their wealth") or 1 ("The rich generally do not deserve their wealth."). Respondents were then asked "How confident are you in your assessment?" the responses to which were coded as either 3 ("very confident"), 2 ("confident"), 1 ("somewhat confident"), or 0 ("not at all confident"). Finally, depending on their answers to the first question, respondents were asked how deserving/undeserving the rich generally are of their wealth. Responses were coded 3 ("very deserving"), 2 ("deserving"), 1 ("somewhat deserving"), or 0 ("not especially deserving").

Four measures of deservingness can be calculated from the three questions. The first is a dichoto-

[1]It is worth mentioning the difference between "absolute" and "relative" mobility as a social and economic phenomenon. This dissertation focuses primarily on inequalities so I write about relative mobility, which deals with peoples' social and economic wellbeings vis-à-vis one another. Imagine two people, A and B. Person A has \$100 and Person B has \$5. If each receives a miraculous transfer of \$50, and if the buying power of a dollar remains unchanged, both A's and B's economic situations have improved *in absolute terms*. There is still, however, a sizeable gulf separating A's and B's financial wellbeings: *Relative* to A, B's financial situation remains effectively unchanged. An individual who grew up in a poor family may now have far more resources than she did as a child, but if everyone else experienced a similar increase in absolute wealth, that individual remains in a lower economic strata. Our definitions of "need" and "poor" may be very different when viewed from absolute and relative perspectives.

mous variable indicating the direction of the assessment: 1 for deserving and −1 for undeserving. The second multiplies direction of deservingness by confidence in assessment. After being scaled to our [−1, 1] range, a score of 1 here indicates that the respondent feels the rich (or whomever was featured in the question) are generally deserving of their wealth, and is quite certain of this appraisal, a −1 indicates great confidence in the general lack of deservingness among the wealthy, and a 0 suggests the respondent has no conviction in their appraisal of desert. The third measure multiplies direction of deservingness with magnitude of deservingness. Once scaled, a score of 1 means the respondent rates the rich (or whoever) as very deserving of their wealth, a −1 means very underserving, and a 0 means neither especially deserving not undeserving.

The fourth and final measure combines the second and third, incorporating direction, magnitude, and certainty of desert. A 1 in this last measure means the respondent is quite convinced that the rich are very deserving of their wealth. Intermediate, scores, however, could mean different things. For example, a score of 0.5 may mean that a respondent is very confident the rich are deserving of their wealth, or it could mean that the respondent is somewhat confident in the extreme deservingness of the rich. In the end, the last three measures are all highly correlated with one another (mean $r = 0.953$, minimum $r = 0.874$) and did not produce statistically differentiable regression results. As such, in the analysis that follows I use either the first, binary version of the variable or the fourth, most nuanced measure of group deservingness, for which there are 13 possible values summarized in Table 5.1.

I estimate a respondent's assessment of rich, average, and poor Americans' deservingness using three different regression techniques: ordinary least squares, ordinal logit, and logit. There are reasons for running each. The dependent variable is ordinal, making ordinal logit the most appropriate of the three. But because I use sampling weights to increase the external validity of these analyses, many of the standard diagnostic techniques for ordinal logit are unavailable (Institute for Digital Research and Education 2014). Not so for OLS models: Standard diagnostics and measures of fit remain intact regardless of sampling weights. Moreover, the fourth version of the dependent variable has thirteen possible values. This level of granularity makes estimation with OLS less farfetched, and unlike ologit and logit output, OLS regression coefficients are easy to interpret in tabular form.

The logit estimation, which is the least refined of the three and uses the first version of the

Table 5.1: Deservingness values and their meanings.

				NU VC						ND VC			
			SU VC	SU C	NU C				ND C	SD C	SD VC		
		U VC	U C	U SC	SU SC	NU SC	ND NC	ND SC	SD SC	D SC	D C	D VC	
Magnitude	VU	VU	VU	VU	U	SU	NU	SD	D	VD	VD	VD	VD
Confidence	VC	C	SC	NC	NC	NC	NC	NC	NC	NC	SC	C	VC
Value	−1.000	−0.833	−0.667	−0.500	−0.333	−0.167	0.000	0.167	0.333	0.500	0.667	0.833	1.000

VD/U	Very Deserving/Undeserving	Very Confident	VC
D/U	Deserving/Undeserving	Confident	C
SD/U	Somewhat Deserving/Undeserving	Somewhat Confident	SC
ND/U	Not especially Deserving/Undeserving	Not Confident	NC

dependent variable mentioned above, is useful because desert assessments may not be meaningfully subject to scales of magnitude. In the same way that something seems amiss about the "most fatal" poison or a "very unique" necklace, deservingness may be an absolute, better unadorned and without modifiers. And while a respondent's confidence in her desert assessment does seem a reasonable weight, logit analysis cuts through respondent equivocation and deals only with the direction of a respondent's final assessment.

Taken together, the three estimation techniques provide a check on each other. Tables 5.2–5.4 show these estimations side-by-side for each group respondents were asked to assess. All dependent and independent variables save *age* are standardized to a [0, 1] scale for easier interpretation of regression coefficients. OLS coefficients in Tables 5.2–5.4 are especially easy to interpret given this scaling, as they show the percent change in the dependent variable for a unit change in the independent variable, which because of the standardization means that the full range of independent variable values are captured in this one coefficient.

Interpreting ordinal logit coefficients is a bit trickier, and will be aided by graphs in the following analysis, wherein I examine the relative importance of statistically significant independent variables on an average respondent's assessment of rich, average, and poor Americans' economic deservingness. A few items to note before we embark on that analysis. First, all the following graphs save density plots are based on the OLOGIT Model 2s presented in Tables 5.2–5.4. Second, the graphs contain many curves and may appear unwieldy. Reducing the number of curves, however, does not aid interpretation in this case; in fact, I think showing the curves for each category gives a better overall impression of the models results. Third, all variables from the model not explicitly identified in a given graph have been held constant at their median values. Fourth, although deservingness assessments are standardized [0, 1] for regression results on which the following graphs are based, graphical representation of those results uses a $[-1, 1]$ scale for readier identification of assessments of equal magnitude but opposite direction (i.e., it is easier to use 0 as a point of symmetry than 0.5).

Belief in economic agency and its effect on group deservingness assessments. Whether and how strongly you believe people are in control of their economic standing has a powerful influence on your assessment of group desert. As a variable, it is a statistically significant predictor in all models

Table 5.2: Do rich Americans deserve their wealth?

	OLS		OLOGIT		LOGIT	
Variable	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Agency	0.257***	0.266***	2.024***	1.756***	2.239***	2.500***
	(0.050)	(0.051)	(0.429)	(0.406)	(0.473)	(0.419)
Party	−0.180**	−0.238***	−1.059		−1.670***	−3.056***
	(0.092)	(0.079)	(0.910)		(0.792)	(0.525)
Ideology	−0.201**	−0.145*	−2.162**	−2.707***	−1.063	
	(0.103)	(0.083)	(0.957)	(0.494)	(0.908)	
Theology	−0.017		−0.119		−0.679	
	(0.053)		(0.456)		(0.513)	
Deserve salary	0.093*	0.120***	0.941**	1.270***	0.619	
	(0.051)	(0.042)	(0.397)	(0.345)	(0.486)	
Income	0.011		0.007		0.124	
	(0.074)		(0.562)		(0.689)	
Education	−0.087		−0.768		−0.448	
	(0.065)		(0.518)		(0.638)	
Class change	−0.085		−1.373		0.251	
	(0.107)		(0.865)		(1.018)	
Nonwhite	0.056		0.775***	0.701***	0.082	
	(0.035)		(0.282)	(0.245)	(0.325)	
Female	−0.009		−0.114		−0.243	
	(0.033)		(0.247)		(0.328)	
Gay	−0.049		−0.199		−0.433	
	(0.038)		(0.279)		(0.465)	
Age	0.001		0.015		0.005	
	(0.001)		(0.012)		(0.015)	
Private school	0.066***	0.040*	0.387*	0.146	0.568**	0.587***
	(0.026)	(0.022)	(0.220)	(0.175)	(0.248)	(0.217)
Urban	0.007		−0.015		0.124	
	(0.048)		(0.376)		(0.474)	
South	−0.019		−0.340		−0.257	
	(0.030)		(0.251)		(0.326)	
Constant	0.570***	0.495***			0.286	0.141
	(0.094)	(0.063)			(0.907)	(0.490)
N	689	983	689	983	689	983
adj-R^2	0.4272	0.3605				

All variables save *age* standardize [0, 1]. * significant at 10%; ** 5%; *** 1%

Table 5.3: Do average Americans deserve their economic standing?

	OLS		OLOGIT		LOGIT	
Variable	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Agency	0.327***	0.287***	2.380***	2.024***	2.597***	2.302***
	(0.063)	(0.059)	(0.543)	(0.416)	(0.521)	(0.493)
Party	0.075		0.363		0.712	
	(0.118)		(1.043)		(0.806)	
Ideology	−0.315***	−0.123**	−2.102**	−0.950***	−2.660***	−0.807
	(0.124)	(0.064)	(1.091)	(0.411)	(0.898)	(0.524)
Theology	0.074		0.526		0.614	
	(0.068)		(0.495)		(0.626)	
Deserve salary	0.149***	0.180***	0.757**	1.089***	1.150***	1.272***
	(0.055)	(0.055)	(0.393)	(0.373)	(0.432)	(0.373)
Income	−0.049		−0.288		−0.212	
	(0.088)		(0.689)		(0.742)	
Education	0.040		0.390		0.113	
	(0.069)		(0.492)		(0.592)	
Class change	0.161		0.348		1.307	
	(0.115)		(0.826)		(1.061)	
Nonwhite	−0.029		0.192		−0.539*	−0.477*
	(0.039)		(0.269)		(0.327)	(0.286)
Female	−0.070*	−0.074**	−0.667***	−0.591***	−0.399	
	(0.036)	(0.031)	(0.254)	(0.204)	(0.304)	
Gay	0.001		0.113		0.024	
	(0.062)		(0.429)		(0.451)	
Age	−0.005***	−0.002	−0.022*	−0.009	−0.048***	−0.022
	(0.002)	(0.002)	(0.012)	(0.013)	(0.013)	(0.014)
Private school	0.059**	0.062**	0.250		0.541**	0.508**
	(0.030)	(0.027)	(0.209)		(0.266)	(0.235)
Urban	0.016		−0.009		0.082	
	(0.054)		(0.422)		(0.470)	
South	−0.004		−0.256		0.105	
	(0.033)		(0.252)		(0.289)	
Constant	0.459***	0.416***			0.217	−0.535
	(0.109)	(0.084)			(0.964)	(0.609)
N	689	983	689	992	689	983
adj-R^2	0.3024	0.2338				

All variables save *age* standardize [0, 1]. * significant at 10%; ** 5%; *** 1%

Table 5.4: Do poor Americans deserve their poverty?

	OLS		OLOGIT		LOGIT	
Variable	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Agency	0.136***	0.132***	1.383***	1.265***	1.053*	1.830***
	(0.038)	(0.031)	(0.382)	(0.307)	(0.610)	(0.514)
Party	0.005		−0.126		0.563	
	(0.070)		(1.827)		(0.923)	
Ideology	−0.197**	−0.207***	−2.072***	−2.288***	−1.576	
	(0.081)	(0.039)	(0.854)	(0.367)	(1.052)	
Theology	−0.011		−0.284		−0.221	
	(0.068)		(0.586)		(0.864)	
Deserve salary	−0.004		−0.506		−0.470	
	(0.046)		(0.386)		(0.561)	
Income	−0.045		−0.371		0.136	
	(0.073)		(0.631)		(0.835)	
Education	0.142**	0.121***	1.723***	1.158***	0.997	
	(0.067)	(0.046)	(0.593)	(0.376)	(0.740)	
Class change	−0.018		−0.793		0.400	
	(0.116)		(1.039)		(1.370)	
Nonwhite	−0.058*	−0.071***	−0.663**	−0.707***	−0.479	
	(0.033)	(0.024)	(0.301)	(0.233)	(0.460)	
Female	0.022		0.210		0.373	
	(0.027)		(0.239)		(0.397)	
Gay	−0.064**	−0.034	−0.486		−1.350*	−1.180**
	(0.029)	(0.025)	(0.420)		(0.771)	(0.561)
Age	−0.003***	−0.002***	−0.033***	−0.022**	−0.028**	−0.021*
	(0.001)	(0.001)	(0.008)	(0.010)	(0.014)	(0.012)
Private school	0.010		0.024		0.165	
	(0.032)		(0.305)		(0.378)	
Urban	−0.016		−0.092		−0.393	
	(0.047)		(0.464)		(0.565)	
South	0.021		−0.058		0.634*	0.309
	(0.035)		(0.320)		(0.382)	(0.346)
Constant	0.381***	0.349***			−1.298	−2.202***
	(0.091)	(0.049)			(1.219)	(0.532)
N	689	945	689	992	689	945
adj-R^2	0.1957	0.1973				

All variables save *age* standardize [0, 1]. * significant at 10%; ** 5%; *** 1%

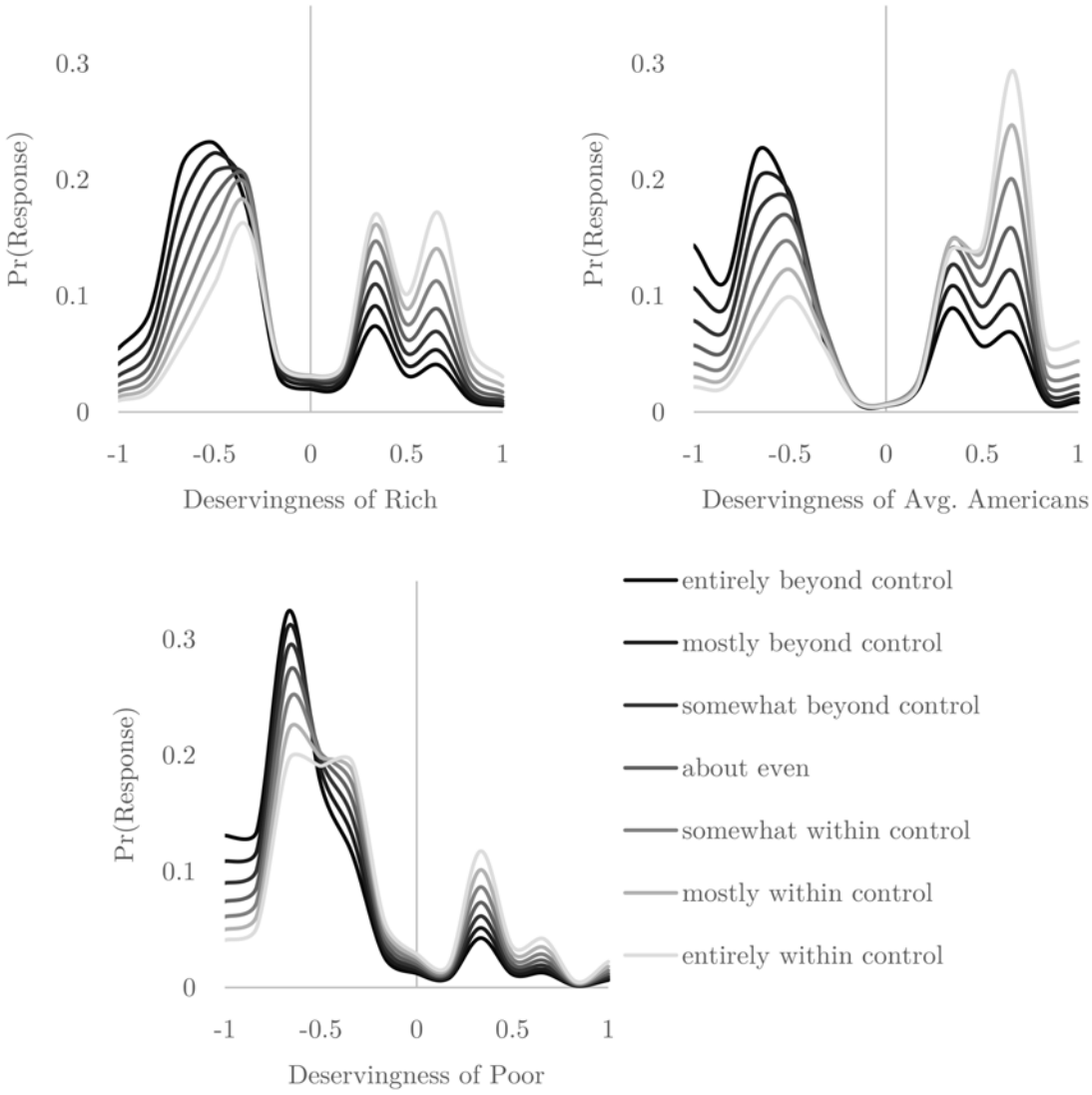
from Tables 5.2–5.2. This finding fits with what we learned in Chapter 3. Economic justice, in the minds of most Americans, demands agency; to deserve her economic standing an individual must be in part responsible for it. If, as respondents in the increasingly darker curves of Figure 5.1 believe, Americans are without control over their economic fates, then Americans do not necessarily deserve their economic lot. The probability of these respondents rating their wealthy, average, and destitute compatriots undeserving of their economic stations is much greater than the probability of them rating them as deserving. This trend reverses as respondent belief in economic agency strengthens and you move through the increasingly lighter curves of Figure 5.1.

In the analyses to follow, saying that rich Americans are generally undeserving of their wealth could be taken to imply that rich Americans ought to be among the average or poor of our nation. Similarly saying that poor and average Americans are undeserving of their economic lots could imply that poor and average Americans would more rightfully be among the rich. Such inferences are not so straightforward in the case of economic agency. Because personal responsibility is a critical ingredient of economic desert, its absence could mean that individual Americans do not deserve any particular economic station. Without a meaningful role for agency, the rich, average, and poor are not only undeserving their high, median, and low economic rankings, but they would be undeserving of any economic ranking, period. Redistribution, in this case, may not alleviate economic justice, per se.

So that we can proceed more quickly with future analyses of ordinal logit regressions, we will now spend two paragraphs interpreting Figure 4.1. Horizontal axes show the range of deservingness assessments (13 possible values) arrayed from -1 (very confident that rich/average/poor Americans are very undeserving of their economic standing) to 1 (very confident that rich/average/poor Americans are very deserving of their economic standing). Vertical axes show the probability of offering a particular deservingness assessment. Curves of different shades represent varying levels of belief in economic agency.

For example, look at the lightest curve in the bottom graph of Figure 5.1. The origin of that curve occurs at the coordinates $(-1, 0.041)$. This means that an individual who (i) believes strongly in economic agency (i.e., believes that economic standing is determined almost entirely by factors within our control) and (ii) is in every other regard average has a 4.1% probability of being very confident that poor Americans are very undeserving of their poverty. The darkest

Figure 5.1: Agency's effect on assessments of group deservingness.



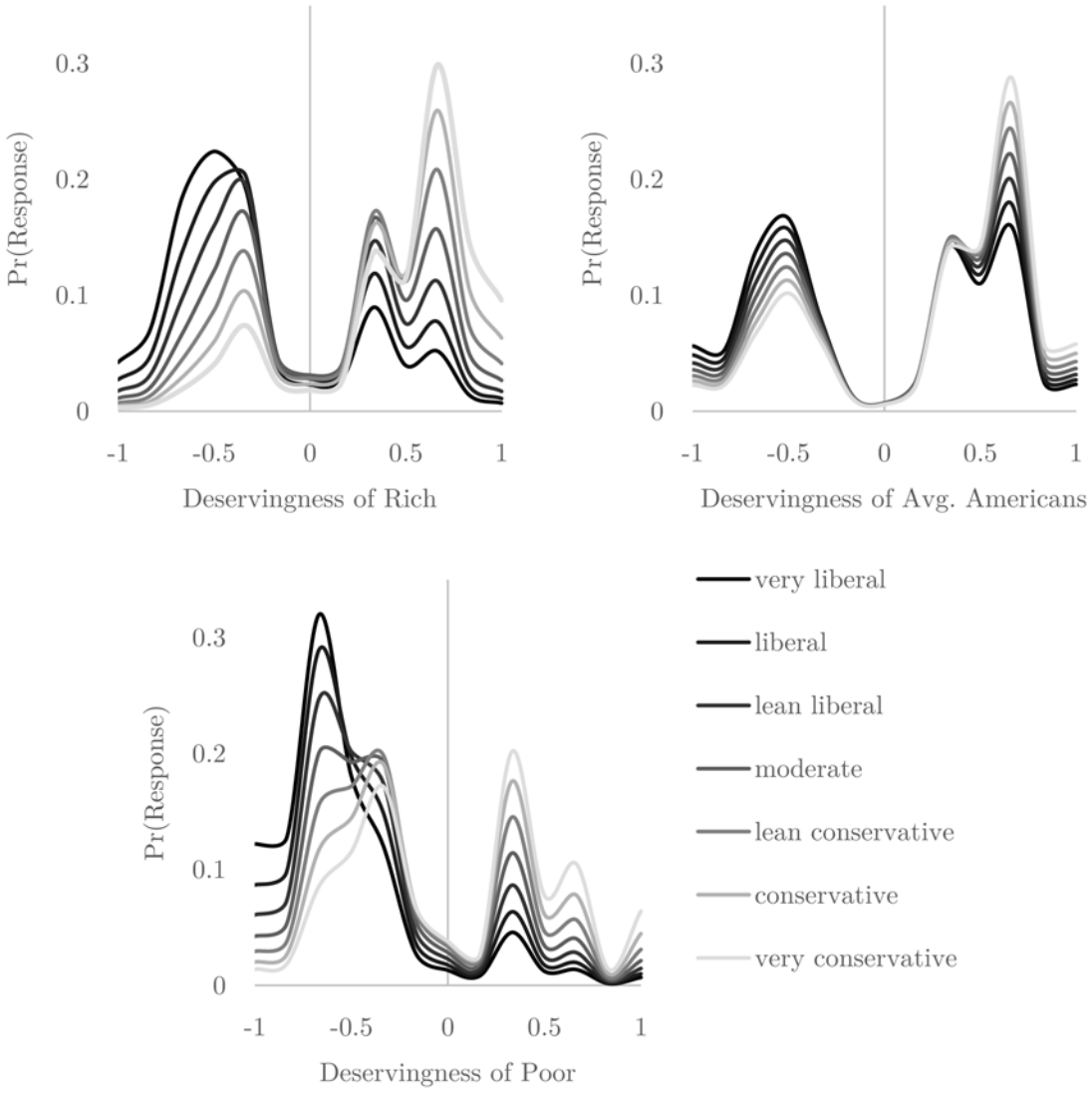
All other independent variables held at their median values.

curve, conversely, starts at coordinates (1, 0.131). This means that, according to our model, an individual who (i) strongly disbelieves in economic agency and (ii) is in every other regard average has a 13.1% probability of being very confident that poor Americans are very undeserving of their poverty. You can follow a curve of any shade to see how likely an average respondent with varying belief in economic agency is to pass a particular deservingness assessment of rich, average, and poor Americans. The same procedures can be applied to any point along a curve of any shade for Figures 5.2, 5.4, and 5.6–5.9, the only difference being what the different shades represent.

Political ideology and its effect on group deservingness assessments. Our models in Tables 5.2–5.2 consistently show political ideology to be a statistically significant predictor of group deservingness assessments. The more conservative an individual, all else equal, the more likely she is to rate rich, middle class, and poor Americans as deserving their respective economic lots. As I explain in the preceding section of this chapter, this finding is likely the result of the system-justifying nature of the conservative creed. As a matter of ideological conviction, conservatives see the American economic system as just, as correctly delivering to deserving subjects their deserved objects. The more vehemently you identify as a conservative, the more powerful this conviction. Liberals, on the other hand, are more likely to express moral dissatisfaction with the economic status quo than are their conservative counterparts, especially when assessing the deservingness of our nation's rich and poor. As seen in Figure 5.2, the vertical distance separating lighter from darker curves in these graphs is significantly greater than the relatively compact curves in the graph regarding average Americans.

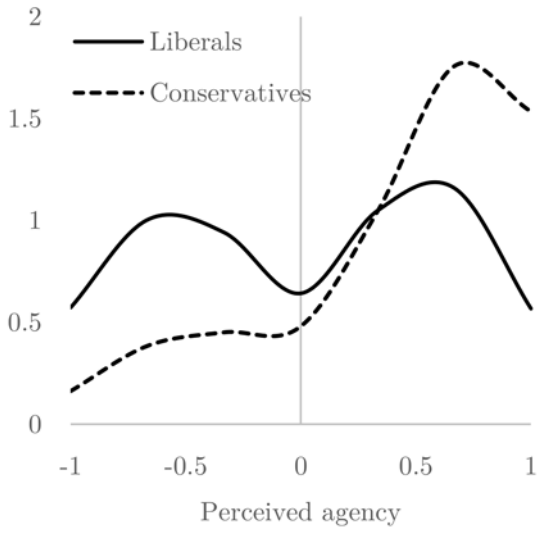
Although not shown here, ideology's influence on desert assessments increases in its already impressive magnitude and statistical significance when belief in economic agency is removed from the models of Tables 5.2–Tables 5.4. Ditto for political party. Conservatives and Republicans are much more likely than liberals and Democrats to believe that individuals have control over their economic fates (see Figure 5.3), which in turn makes conservatives and Republicans more likely to believe the economic system just. By including belief in economic agency as a separate explanatory variable, I made it possible to focus more intently on ideology and party's relationship with system-justification.

Figure 5.2: Ideology's effect on assessments of group deservingness.



All other independent variables held at their median values.

Figure 5.3: Density plot of perceived economic agency according to ideology.

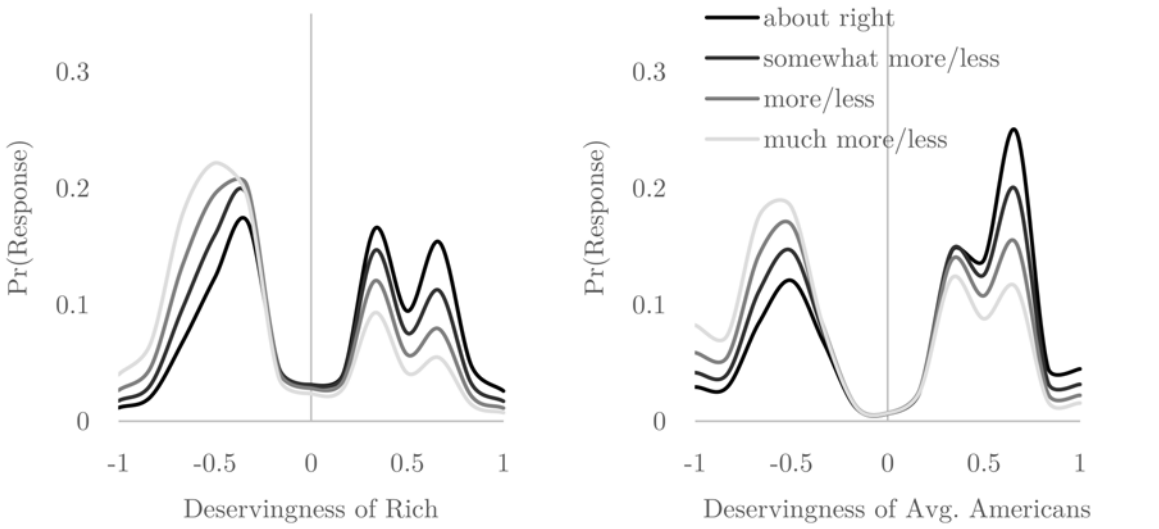


Perception of personal salary and its effect on group deservingness assessments. If you get your economic due, it stands to reason that others get theirs. But this extrapolation does not extend to the poor. The apparent justness of an individual's salary influences how she rates rich and average Americans on the deservingness scale, as Figure 5.4 shows. The farther a respondent's salary is from what she considers the deserved amount, the less likely she is to say that the rich deserve their wealth or average Americans their average economic station. Individuals receiving just and unjust salaries, however, are statistically indistinguishable in their deservingness assessments of poor Americans. Extrapolation from one's own economic situation, it seems, does not apply to undesirable economic circumstances, only the tolerable and enviable.

It is possible that this variable suffers from simultaneity bias: Your faith in economic justness broadly may cause you to think your own salary is or is not just. The extensive empirical literature on organizational justice and equity theory in the workplace, however, suggests that individuals compare themselves to co-workers and other immediate references when judging their salaries, not vague categories of people (see Greenberg 2011; Jost and Kay 2010).

Another potential hiccup is the relationship between perceived deservingness of salary and income. As you can see in Figure 5.5, the higher a respondents income the more just she feels her salary. Because of this relationship, I anticipated that including a variable measuring perceived deservingness of salary in my models of group deservingness might decrease the statistical and

Figure 5.4: Salary's effect on assessments of group deservingness.



All other independent variables held at their median values.

Figure 5.5: Density plot of perceived deservingness of personal salary according to income.

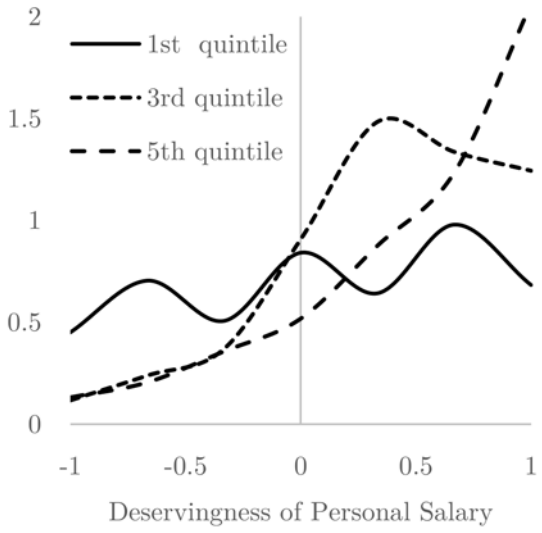
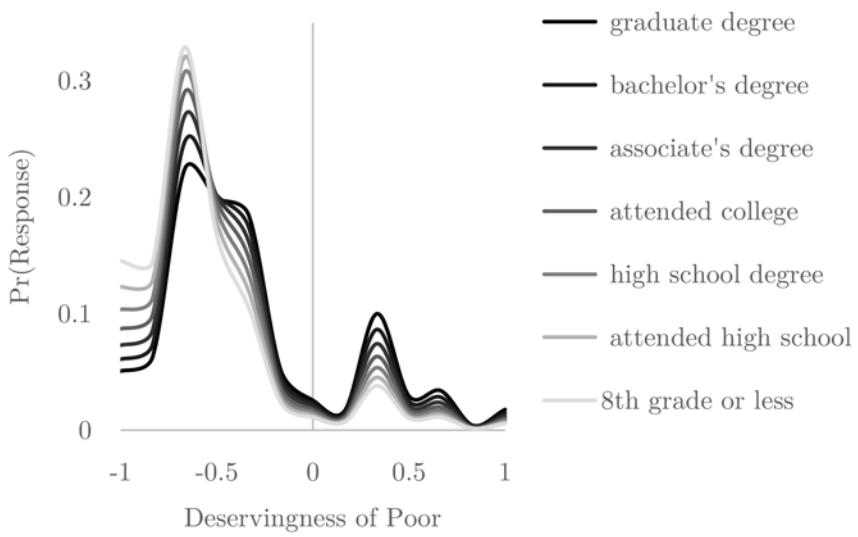


Figure 5.6: Education's effect on assessments of group deservingness.



All other independent variables held at their median values.

substantive importance of the income variable. To test for this possibility, I conducted sensitivity analyses of several model variations. Income achieved statistical significance in the simultaneous absence of several independent variables, but was robust to incremental changes in variables like perceived deservingness of salary.

Education's effect on group deservingness assessments. None of the variables hypothesized to divulge the influence of motivate reasoning on group deservingness assessments had a statistically significant effect in any models except for education, and that only on the assessment of America's poor. All else constant and compared to the well-schooled, the relatively unschooled are more likely to believe the poor undeserving of their circumstances, although respondents of all education levels are inclined to give the poor the benefit of the doubt, as Figure 5.6 shows.

That education does not have a statistically differentiable effect on desert assessments of the rich and middle class illustrates the importance of looking at desert assessments of separate economic groups as opposed to looking at economic justice broadly. The uneducated, who face regular economic hurdles, do not appear to begrudge the relatively well-off their economic fortunes. They are, however, more forgiving of those facing economic hardship than are the well-educated, distancing themselves from any guilt over their low socio-economic status. Conversely, it may be that the

Figure 5.7: The effect of race on assessments of group deservingness.

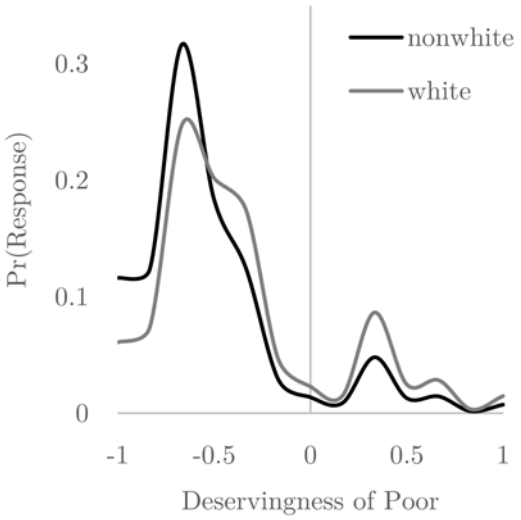
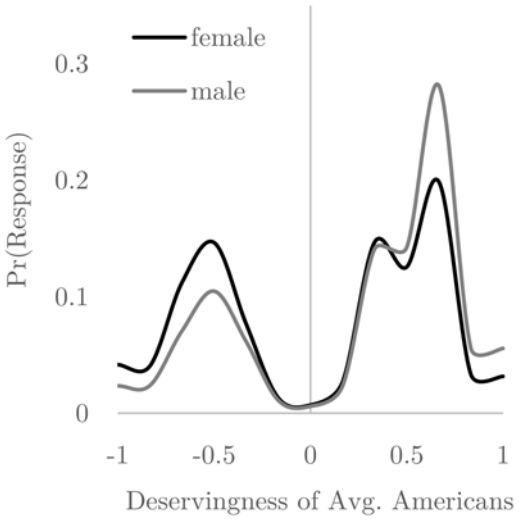


Figure 5.8: Gender's effect on assessments of group deservingness.



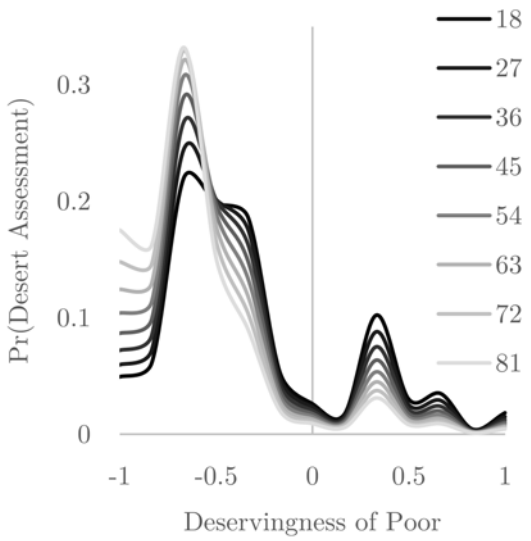
All other independent variables held at their median values.

well-educated are driving this result, justifying their superior socio-economic status as they identify the poor as deserving of their poverty.

Outgroup membership's effect on group deservingness assessments. Membership in an economic out-group does influence deservingness assessments, but only among certain outgroups and only in their assessments of certain economic groups. Racial minorities, who are more likely than whites to face poverty, are also more likely to appraise poor Americans as undeserving of their destitution. Because I control for household income, class change, education and the like, this finding is difficult to construe as motivated reasoning.

It may be a form of group solidarity: Even if you are economically comfortable, knowing that others like you are predisposed to face economic adversity prompts you to see that adversity as undeserved. This explanation also seems to miss the mark, or at last not fully capture the story behind Figure 5.7. When belonging to a group that has historically been barred from climbing the economic ladder, and in many cases has been confined to the single lowest rung, instances of poverty will appear particularly unjust. This is not to say that the people in preferable economic circumstances are undeserving of their affluence; indeed there is no statistical indication that racial minorities differ from whites on their assessments of middle and upper class deservingness. Rather,

Figure 5.9: The effect of age on assessments of group deservingness.



All other independent variables held at their median values.

racial minorities are more keenly aware of the many unjust factors that can lead to poverty as so many of those factors have been leveled against fellow members of their outgroup.

Compared to men, women are more likely to think average Americans undeserving of their average economic status, as Figure 5.8 illustrates. It is unclear if this difference in judgment means that women think many middle class Americans belong in higher or lower economic echelons. Also unclear is why this gender difference exists at substantively and statistically significant levels only when dealing with desert assessments of average Americans. The majority of people living in poverty are women, and women are underrepresented among top wage earners (DeNavas-Walt, Proctor and Smith 2013; Pearce 1978; Peterson 1987). Perhaps men and women are equally aware of the poverty traps and glass ceilings that females face, whereas women respondents are particularly attuned to the widespread, everyday prejudices, such as the gender pay gap.

Generational effects on group deservingness assessments. Of all the demographic variables considered, only age had a statistically significant effect on group deservingness assessments, and only on the poor. This relationship—shown in Figure 5.9—may be a result of familiarity with macroeconomic whims that, from time to time, result in financial adversity for many.

If this is in fact the case, it is interesting that familiarity with the business cycle's vagaries do

Figure 5.10: Mean assessments of group deservingness.

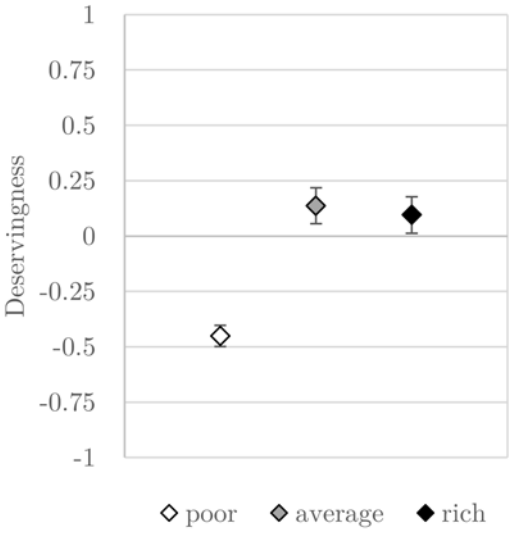
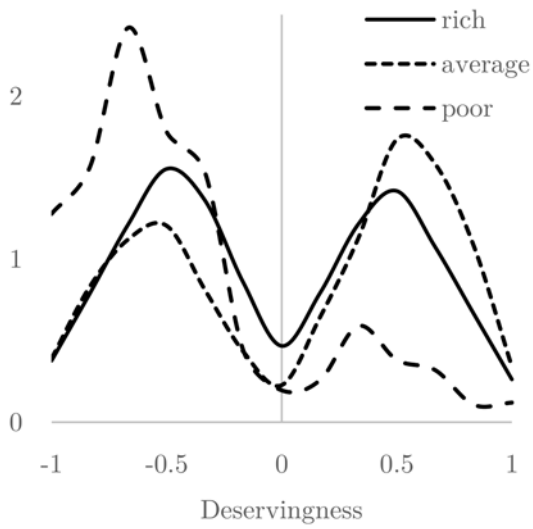


Figure 5.11: Density plot of group deservingness assessments.



not cause the more aged to also see the rich—who benefit from economic booms just as others suffer from economic busts—as undeserving of their status. Future analysis should control not just for age, but for specific generational effects that occurred during a person's prime working years. For example, individuals who experienced the Great Depression may be especially forgiving of poverty, having seen many people living in, but not deserving of, terrible economic conditions.

5.1.3 Overall assessments of group deservingness.

Despite the aforementioned variation in respondent assessment, weighted responses from the large-N survey provide some insight into whether the average American believes others get their economic due. Figures 5.10 and 5.11 display the results graphically using the same 13-point variable of deservingness as in the preceding regression analysis.

Respondents are, on average, fairly confident that poor Americans do not deserve their poverty (M=−0.451, Std Err=0.024),[2] suggesting a level of sympathy for the economically downtrodden, at least as an abstract category of people. This finding is represented in Figure 5.10 by the hollow point's distance from the zero-line and in Figure 5.11 as the dotted line's the tall, wide peak on the negative side of the horizontal axes and the short blip on the positive side.

[2]Note that I report linearized standard errors for these figures rather than standard deviations as a result of using sampling weights in the analysis.

Respondents are largely divided on the whether average and rich Americans have received their economic due. Figure 5.11 shows nearly balanced probability distributions, with adjudicators being about equally likely to deem average and rich Americans as deserving their middle and high statuses, respectively. The dashed-line representing deservingness assessments of average Americans is less symmetrical than is the solid-line representing rich Americans, with respondents erring on the side of "deserving" for average Americans. Still, Figure 5.10 shows overall assessments of average and rich (M=0.137, Std Err=0.041; M=0.095, Std Err=0.042) very near the zero-line and economic undeservingness.

This schism over whether or not they get their economic due is not as damning for average Americans as it is for the rich. Saying that a middle-class American deserves her middle-class standing is not exactly a criticism. Such people are presumably comfortable in their finances. Moreover, saying that a middle-class American does not deserve her middle-class standing could mean could mean she deserves a lower economic rank, or it mean she deserves a higher economic rank. That so many people are inclined to rate the rich as undeserving of their wealth, however, is less open to interpretation: A great many Americans think that the people who make up the rich of America should be less wealthy. They lack a moral claim to their wealth.

5.2 Assumptions about the Deservingness of Individuals.

Results from the large-N survey offer us valuable insight into people's beliefs regarding the overall justness of the American economic system, but the intersection of politics and economics as most people experience it is populated not with abstractions like "the wealthy" or "buyers and sellers," but with neighbors and friends, coworkers and classmates. "Person-to-person, citizen-to-citizen relationships are what life in democratic societies is all about" (Ostrom 1997, 3). I supplement the survey analysis, therefore, with twin survey experiments that get participants thinking about the economic experiences of specific, named individuals—one wealthy, the other poor.

Specifically, I want to know: How willing are people to pass judgment on an individual's economic deservingness, and how confident are they in their assessment? Some people will be as comfortable deeming a person's economic situation just or unjust with the only the most basic biographical sketch. These people have great faith that, by and large, folks get what they deserve

financially speaking. Others will reserve judgment, or offer less authoritative judgment, until they know more about the individual and how they got to their present economic state. These people are less stalwart in their faith that economic machinations are just.

5.2.1 Survey experiment manipulations.

In the control condition, subjects read the most basic economic profile of an individual named Amanda and are asked to judge whether or not Amanda deserves her economic lot and how confident they are in their judgment.[3] The resulting dependent variable is the same one used in the previous analysis and is detailed in Table 5.1. In the manipulation conditions, subjects are asked the same two questions, but they are provided with additional details about how Amanda arrived at her present economic condition. In the first manipulation, Amanda's route to her present circumstances is sympathetic. In the second manipulation, Amanda traveled an unsympathetic track to her economic standing.

Sympathetic and unsympathetic routes to riches or poverty abound in literature and popular culture. Horatio Alger's classic pull-yourself-up-by-your-bootstraps novels are the epitome of the American narrative on how wealth should be achieved, and decades of social science research point to the widespread belief in hard work as the key to financial success in America, and laziness as the path to poverty (Feldman 1983; Furniss and Tilton 1977; Hansenfeld and Rafferty 1989; Huber and Form 1973; Lipset 1963*a*; McClosky and Zaller 1984; Williams 1970). As we learned in Chapter 3, this tale of industry versus lethargy is intimately tied to economic agency and personal responsibility. A sympathetic account of the road to wealth is one where the central character secures, through her own actions, an enviable status. Dislikeable protagonists, conversely, garner success though luck and circumstance. A sympathetic account of destitution has the character make all the right choices, only to be brought low by external forces. Little sympathy accrues to a character whose decisions and behavior lead her to hardship.

In the experimental control, the story goes like this: Amanda is a high-paid business executive with an impressive educational pedigree and a healthy savings plan. That is all experimental subjects learn. Subjects randomly assigned to the sympathetic condition receive the same rudimentary biography, but they also learn that before she became an economic success, Amanda grew up in

[3] In experimental pretesting, the name "Amanda" tested as having no racial or socio-economic bias.

a working class home, devoted herself to study while in school, and spent her years after college working diligently in unglamorous posts. Subjects randomly assigned to the unsympathetic condition learn that Amanda grew up in an upper class home, was an apathetic student, and used her parent's business connections to transition directly from her studies to a prominent business position. See the left half of Table 5.5 for a summary.

Table 5.5: Do poor Americans deserve their poverty?

	Prosperity	Poverty
Control	• top 10% income • healthy savings • graduate education • longstanding work record • executive position	• bottom 10% income • anemic savings • high school education • meager work record • subordinate position
Sympathetic	• information from control + • born into lower class, advances • diligent student • diligent employee • rewarded for industry	• information from control + • born into lower class, remains • diligent student • diligent employee • victim of bad luck
Unsympathetic	• information from control + • born into upper class, remains • lazy student • lazy employee • beneficiary of bad luck	• information from control + • born into upper class, declines • lazy student • lazy employee • punished for sloth

The sympathetic and unsympathetic manipulations provide two extremes between which we expect the responses in the control to fall. The question is, where relative to these extremes do responses in the control fall? Specifically, we are looking at the direction, strength, and conviction behind subjects' judgments. The sympathetic backstory presents an Amanda that will be rated uniformly as more deserving of her position than the Amanda with the unsympathetic dossier. And because both manipulations provide equal amounts of information over and above that provided in the control, nothing about the experimental design should influence the confidence with which subjects judge Amanda.[4] Will subjects in the control, not privy to Amanda's history, respond more

[4]This is not to say that subjects in the two manipulations will be equally confident in their assessments. Even though the experiment provides subjects in the manipulations with the same amount of knowledge about Amanda's history, the knowledge provided may bolster or undermine a subject's worldview. For example, a subject who is predisposed to believe that the American economic system is just will be unnerved by Amanda's backstory in the unsympathetic manipulation, but not enough to rate her as undeserving. Instead, he may still say she deserves

like subjects in the sympathetic or unsympathetic manipulations? Control results edging toward results from one or the other manipulations will reveal a great deal about Americans biases in assessing the deservingness of specific individuals.

We learned in the foregoing analysis on group deservingness that the degree to which people believe others deserve their economic fortunes depends in part on how ample or meager that fortune is. The survey experiment so far described only measures assessments of an economically successful individual. Are Americans equally predisposed to assume economic failures deserve or do not deserve their lot? For example, no matter how emphatically Amanda's biography attests to her achieving success through unsavory means, some subjects may refuse to accept that Amanda's success is undeserved. They simply cannot conceive of someone getting ahead unjustly. But what if Amanda were poor? Those same subjects may readily accept the idea of Amanda not deserving her poverty, of falling behind unjustly. I expect the economic position of the person whose desert is being assessed influences her apparent deservingness.

Economic success and failure may be conceptually distinct in American minds, rather than opposite poles of a continuum. It is critical, therefore, that I conduct a second, parallel survey experiment. The setup remains largely the same, except that Amanda as described in the "poverty control" is point for point the opposite of Amanda from the "prosperity control". This can be seen when comparing the two cells in the top row of Table 5.5. Responses to the poverty control, like the prosperity control, will fall within a range established by responses to the sympathetic and unsympathetic manipulations. Where exactly those responses fall will tell us a great deal about American biases when judging poor people. Compare the left and right sides of Table 5.5 to see the symmetry between the prosperity and poverty controls and manipulations.

In addition to dividing the experiment according to Amanda's economic position, I also separate the responses of liberal and conservative subjects. We learned in the foregoing analysis of group deservingness assessments that conservatives are more likely than liberals to defend the status quo, saying that Americans in whatever state of financial health deserve their economic lots. I anticipate that this tendency will express itself in the appraisal of individuals, as well.

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her success, but with the caveat that he is not very confident in his assessment. Conversely, the unsympathetic manipulation will buttress the worldview held by a subject predisposed to thinking that the American economic system in unjust. The same information leads this subject to rate Amanda as undeserving with a great deal of confidence.

5.2.2 Hypotheses about individual deservingness assessments.

Subject ideology. My first set of hypotheses deal with subjects' ideology. I predict that conservative subjects, whose philosophical outlook is "prototypical[ly] system justifying" (Jost, Glaser, Kruglanski and Sulloway 2003, 63), will be uniformly more prone than liberals to rate that Amanda as deserving (or more deserving, at least) of her economic lot, regardless of Amanda's success and the sympathy her story elicits. Specifically, I hypothesize that:

H_{1a} Conservatives in the Control conditions will on average offer higher deservingness scores than liberals in the Control conditions.

H_{1b} Conservatives in the Sympathetic conditions will on average offer higher deservingness scores than liberals in the Sympathetic conditions.

H_{1c} Conservatives in the Unsympathetic conditions will on average offer higher deservingness scores than liberals in the Unsympathetic conditions.

Expressed mathematically, I predict that:

$$\bar{y}_{\text{control liberals}} < \bar{y}_{\text{control conservatives}}$$

$$\bar{y}_{\text{sympathetic liberals}} < \bar{y}_{\text{sympathetic conservatives}}$$

$$\bar{y}_{\text{unsympathetic liberals}} < \bar{y}_{\text{unsympathetic conservatives}}$$

where $y = \{\text{deservingness assessment}\}$.

Manipulation check. My second set of hypotheses serve as a check of my manipulations. I am most interested in the results from the control conditions, wherein subjects had no criteria, no bases or narrative, on which to judge Amanda's deservingness. While I could simply report whether control subjects deem the prosperous and poor Amandas deserving or undeserving of their wealth and poverty, it would be far more instructive to use results from the sympathetic and unsympathetic manipulations as high and low benchmarks with which to gauge the severity of any biases uncovered in the controls. I make comparisons to the benchmarks in hypotheses $H_{4a–b}$ and $H_{5a–b}$, but first

I must establish that my manipulations provide the necessary benchmarks. To wit, I hypothesize that:

H_{2a} In the Prosperity experiment, subjects assigned to the Sympathetic condition will on average rate Amanda as deserving of her wealth.

H_{3a} In the Prosperity experiment, subjects assigned to the Unsympathetic condition will on average rate Amanda as undeserving of her wealth.

H_{2b} In the Poverty experiment, subjects assigned to the Sympathetic condition will on average rate Amanda as undeserving of her poverty.

H_{3b} In the Poverty experiment, subjects assigned to the Unsympathetic condition will on average rate Amanda as deserving of her poverty.

In mathematical notation, I predict:

$$\bar{y}_{\text{prosperity sympathetic}} > 0 \qquad \bar{y}_{\text{poverty sympathetic}} < 0$$

$$\bar{y}_{\text{prosperity unsympathetic}} < 0 \qquad \bar{y}_{\text{poverty unsympathetic}} > 0$$

Note that, despite holding Sympathetic or Unsympathetic constant, the inequality symbols ($>$ and $<$) switch order depending on whether we are looking at the Prosperity or Poverty experiment. This change does not signal a difference in the theoretical justification behind the prediction, but results from the change in meaning of deservingness related to economic success and failure. To say that rich Amanda deserves her wealth ($y_{\text{prosperity}} > 0$) is to offer a positive assessment of her person and behavior. To say that poor Amanda deserves her poverty ($y_{\text{poverty}} > 0$) is to offer a negative assessment of her person and behavior. Both pronouncements, however, classify the situation as just: Amanda, good or bad, gets what she deserves.

Deservingness assumptions. My third set of hypotheses address where, relative to the sympathetic and unsympathetic narratives, desert assessments in the control conditions fall. In the control conditions, subjects have only basic economic biographies of Amanda and no narrative describing how she arrived at her current state. Without this background, I anticipate subjects will reserve

or temper their judgments of Amanda's deservingness. Those who do not will have no information to dispose them toward an assessment one way or the other and should cancel each other out. I expect the average deservingness assessments, then, to fall in between those that subjects offer in the manipulations. This finding should hold regardless of a subject's ideology and regardless of Amanda's success. Specifically, I hypothesize that:

H_{4a} In the Prosperity experiment, subjects assigned to the Control condition will on average offer lower deservingness scores than will subjects assigned to the Sympathetic condition.

H_{5a} In the Prosperity experiment, subjects assigned to the Control condition will on average offer higher deservingness scores than will subjects assigned to the Unsympathetic condition.

H_{4b} In the Poverty experiment, subjects assigned to the Control condition will on average offer higher deservingness scores than will subjects assigned to the Sympathetic condition.

H_{5b} In the Poverty experiment, subjects assigned to the Control condition will on average offer lower deservingness scores than will subjects assigned to the Unsympathetic condition.

In standard mathematical notion, I predict:[5]

$$\bar{y}_{\text{prosperity control}} < \bar{y}_{\text{prosperity sympathetic}} \qquad \bar{y}_{\text{poverty control}} > \bar{y}_{\text{poverty sympathetic}}$$

$$\bar{y}_{\text{prosperity control}} > \bar{y}_{\text{prosperity unsympathetic}} \qquad \bar{y}_{\text{poverty control}} < \bar{y}_{\text{poverty unsympathetic}}$$

Finding otherwise would reveal a bias in subjects' assumptions regarding a wealthy and/or poor person's deservingness. For example, imagine that in the prosperity experiment, the average value of the deservingness assessment from the control falls close to the average sympathetic value. That would mean that subjects in the control condition concocted for themselves a narrative of Amanda's success that was as sympathetic as the one I told subjects in manipulation.

[5] H_{4a} and H_{5a} could be combined, and H_{4b} and H_{5b} could be combined into more parsimonious hypotheses:

$$\bar{y}_{\text{prosperity unsympathetic}} < \bar{y}_{\text{prosperity control}} < \bar{y}_{\text{prosperity sympathetic}}$$
$$\bar{y}_{\text{poverty unsympathetic}} > \bar{y}_{\text{poverty control}} > \bar{y}_{\text{poverty sympathetic}}$$

I have opted, however, to express each inequality individually to allow for a more nuanced understanding of experimental results.

Charity of assumptions. The final, and perhaps most interesting comparison we can make is between the two control conditions. Will subjects be equally magnanimous in the assumptions they make about the deservingness of two individuals in roughly opposite economic situations? The symmetric design within and across experiments allows us to compare responses to the prosperity and poverty vignettes, but only to a point. In general terms, the Amanda from the prosperity experiment is a near-perfect mirror of the Amanda from the poverty experiment. But the overview provided in Table 5.5 is fleshed out in the prose experimental subjects actually read, and the balance of that cross-experiment symmetry is muddied. For example, wealthy Amanda is an executive at a major corporation while poor Amanda is a recently unemployed fast food worker. It is unlikely that the latter position is as humble as the former is prestigious. Still, with appropriate caveats, there is something to be gleaned from a comparison between results from the two control conditions. Specifically, I hypothesize that:

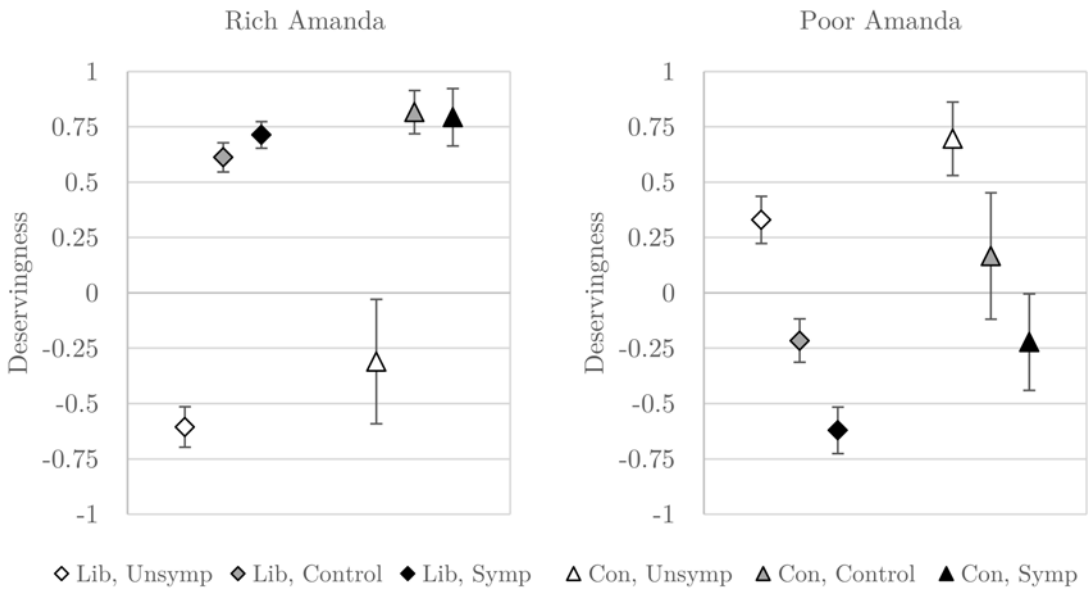
H$_6$ Subjects assigned to the Control condition of the Prosperity experiment will on average be as charitable in their deservingness assessments as subjects assigned to the Control condition of the Poverty experiment.

If subjects are equally magnanimous in their assessments of the successful and unsuccessful Amandas, the average values from the two controls will (i) have opposite signs and (ii) their absolute values will be about equal. This relationship can be represented mathematically as:

$$\bar{y}_{\text{prosperity control}} \approx -1\,(\bar{y}_{\text{poverty control}})$$

If the average deservingness assessments share a sign (negative or positive), then subjects are more charitable in their assessments of one or another Amanda. For example, if both $\bar{y}_{\text{prosperity control}}$ and $\bar{y}_{\text{poverty control}}$ are positive, subjects give rich Amanda the benefit of the doubt, believing she deserves her wealth, but do not extend the courtesy to poor Amanda, who they believe deserves her poverty. Assessments of different magnitudes (absolute values) indicate greater or lesser confidence and/or levels of deservingness when evaluating rich versus poor Amanda.

Figure 5.12: Survey experiment results.



5.2.3 Findings about individual deservingness assessments.

The results from the survey experiment are displayed numerically Table 5.6 and graphically in Figure 5.12. In Figure 5.12, diamonds denote average liberal responses and triangles denote average conservative responses, and both are bound by 95% confidence bars. Subjects who consider themselves political moderates but lean toward one or another ideological position are counted as liberals or conservatives. The shade (white, gray, or black) of the diamond or triangle indicates to which of the six experimental conditions the subjects was randomly assigned. The closer to 1, the more deserving Amanda is of her wealth/poverty, and the closer to -1, the more undeserving Amanda is of her wealth/poverty. See Table 5.1 to review the substantive meanings of specific deservingness values.

Subject ideology. As predicted, conservatives are more confident than liberals that individuals receive their economic due. Their average ratings of Amanda's deservingness is consistently higher than liberals as Table 5.7 attests. All differences of means are positive and statistically significant, with one trivial exception. The difference in the sympathetic manipulation has the expected direction, but the magnitude just fails to meet traditional levels of statistical significant. Although

Table 5.6: Survey experiment results.

Prosperity	*Liberals*			*Conservatives*		
Condition	N	Mean	St. dev.	N	Mean	St. dev.
Unsympathetic	109	−0.606	0.483	21	−0.310	0.618
Control	104	0.612	0.337	20	0.817	0.209
Sympathetic	110	0.714	0.321	25	0.793	0.313
Poverty	*Liberals*			*Conservatives*		
Condition	N	Mean	St. dev.	N	Mean	St. dev.
Unsympathetic	89	0.330	0.508	28	0.696	0.428
Control	105	−0.216	0.505	20	0.167	0.609
Sympathetic	102	−0.621	0.534	36	−0.222	0.645

Table 5.7: Comparisons of conservative and liberal responses.

Prosperity				
Conservative − Liberal	N	Diff. of means	t-score	p-value (diff.>0)
Unsympathetic	130	0.296	2.452	0.008
Control	124	0.204	2.615	0.005
Sympathetic	135	0.080	1.080	0.131
Poverty				
Conservative − Liberal	N	Diff. of means	t-score	p-value (diff.>0)
Unsympathetic	125	0.383	3.002	0.002
Control	138	0.399	3.643	0.000
Sympathetic	117	0.367	3.452	0.000

conservatives and liberals receive the same information about Amanda, conservatives are more supportive of the status quo. Be Amanda rich or poor, be her story sympathetic, unsympathetic, or unknown, conservatives are more inclined than liberals to believe her economic situation just. Given the impressive support for H_{1a}, H_{1b}, and H_{1c}, I will independently analyze liberal and conservative responses when testing the remaining hypotheses.

Manipulation check. Subject assessment of Amanda is predictably affected by the sympathetic and unsympathetic narratives, regardless of subject ideology. When Amanda is personally responsible for her success (sympathetic manipulation) liberals and conservative subjects agree that, on average, that she deserve her success (M=0.714, SD=0.321; M=0.793, SD=0.313). When Amanda

arrives at her enviable position through no fault of her own (unsympathetic manipulation), subjects consider her, on average, undeserving (M=−0.606, SD=0.483; M=−0.310, SD=0.618). These findings support H_{2a} and H_{3a}. The reverse holds in the poverty experiment, as predicted in H_{2b} and H_{3b}. Liberal and conservative subjects rate Amanda as undeserving of her poverty when, in the sympathetic manipulation, outside forces instigate her misfortune (M=−0.621, SD=0.534; M=−0.222, SD=0.645). And the Amanda from the unsympathetic manipulation, whose behavior and attitude produce her disagreeable position, is on average cast as deserving her economic distress (M=0.330, SD=0508; M=0.696, SD=0.428).

Upper bounds of the 95% confidence intervals for conservative responses in the prosperous-unsympathetic manipulation and in the poverty-sympathetic manipulation skirt the zero line in Figure 5.12, but nevertheless fall on negative values and within the traditional confines of statistical significance.

Deservingness assumptions. In the control conditions, subjects learn only the basics of Amanda's economic profile and nothing about how she arrived in her current economic position. We learn what, if any assumptions Americans make when assessing individual desert by comparing control subject responses—which were made in relative ignorance—to those proffered by subjects in the manipulations. As you can tell from the left-half of Figure 5.12 (top-half of Table 5.8), Americans from both ideological camps make heroic assumptions about Amanda's path to wealth. They are much more restrained and much less charitable in their assumptions about poor individuals, as seen in the right-half of Figure 5.12 (bottom-half of Table 5.8).

The mean deservingness assessments of rich Amanda in the control and sympathetic conditions are nearly identical and—for conservatives—statistically indistinguishable. Liberal responses confirm H_{4a} and H_{5a}: The mean sympathetic assessment (M=0.714, SD=0.321) is greater than the mean control assessment (M=0.612, SD=0.337), which is greater than the mean unsympathetic assessment (M=−0.606, SD=0.483), and each of these differences is statistically significant; t(212)=2.256, p=0.013, and t(211)=21.244, p=0.000. At a mere 0.101 units, however, the difference between average sympathetic and control assessments is substantively meager among liberals, betraying a tendency to look favorably on wealthy individuals about whom they know very little.

The same phenomenon exists among conservative subjects, only more pronounced. Conserva-

Table 5.8: Comparisons of experimental controls and manipulations.

Prosperity		*Liberals*		
Comparison	N	Diff. of means	t-score	p-value (diff.>0)
Symp. − Control	214	0.101	2.256	0.013
Control − Unsymp.	213	1.218	21.244	0.000
Symp. − Unsymp.	219	1.319	28.821	0.000
		Conservatives		
Comparison	N	Diff. of means	t-score	p-value (diff.>0)
Symp. − Control	45	−0.023	−0.286	0.388
Control − Unsymp.	41	1.126	7.742	0.000
Symp. − Unsymp.	46	1.103	7.825	0.000
Poverty		*Liberals*		
Comparison	N	Diff. of means	t-score	p-value (diff.>0)
Unsymp. − Control	194	0.545	7.477	0.000
Control − Symp.	207	0.405	5.610	0.000
Unsymp. − Symp.	191	0.951	12.552	0.000
		Conservatives		
Comparison	N	Diff. of means	t-score	p-value (diff.>0)
Unsymp. − Control	48	−0.530	−3.542	0.001
Control − Symp.	56	0.389	2.204	0.016
Unsymp. − Symp.	64	0.919	0.636	0.000

tive responses confirm H_{5a}: The mean control assessment (M=0.817, SD=0.209) is greater than the mean unsympathetic assessment (M=-0.310, SD=0.618), at traditional levels of statistical significance; t(39)=7.742, p=0.000. Conservative responses do not back H_{4a}: The mean sympathetic assessment (M=0.793, SD=0.313) is slightly less than, but statistically indistinguishable from the mean control assessment, despite the impressively narrow confidence intervals surrounding each value; t(43)=−0.286, p=0.388. Like liberals, conservatives need not know anything about rich Amanda beyond her economic particulars to give her the benefit of the doubt.

Taken together these findings suggests that, when confronted with the bare sketch of a wealthy individual, subjects envision a backstory very much like the one told in the sympathetic manipulation. Additional information that paints the biographied wealthy individual in a positive light does little to change subject assessments of her deservingness—they already rate her as very deserving

of her riches, and do so assertively. Additional information of an unsympathetic variety, however, drastically reduces their assessment of rich Amanda's deservingness. This drop in esteem is only a relative one, at least for conservatives, who seem unwilling to declare rich Amanda as outright undeserving of her wealth, regardless of how she achieved it. Rather, responses in the unsympathetic manipulation range from somewhat undeserving and approach neither deserving nor undeserving, although the small number of conservative subjects and the breadth of their assessments mean wide confidence intervals around this value. Still, many Americans, it seems, have difficulty imagining their well-to-do compatriots as unworthy of their affluence.

Figure 5.12 and Table 5.8 show that, in the absence of a narrative, subjects undergird their assessments of poor Amanda with fewer, or perhaps more temperate assumptions than when judging rich Amanda. Were Americans as magnanimous in their assumptions regarding poor individuals as they are regarding rich individuals, we would expect to see responses from the control condition overlap with responses from the sympathetic manipulation. That would mean that Americans, when provided only the barest economic biography of a poor person, envision that person as having been the victim of an unjust system, not actually deserving her unfortunate financial predicament. As it turns out, Americans are largely agnostic as to poor Amanda's deservingness in the control condition.

Respondents have no difficulty passing judgment when provided with poor Amanda's backstory. In the sympathetic manipulation, neither liberals (M=−0.621, SD=0.534) nor conservatives (M=−0.222, SD=0.645) think her situation just. And in the unsympathetic manipulation liberals (M=0.330, SD=0.508) and conservatives (M=0.696, SD=0.428) rate Amanda as deserving of her hardship. When ignorant of her story, however, liberals on average assess Amanda as undeserving of her circumstances (M=−0.216, SD=0.505), but without much conviction and/or comment on her level of deservingness. Conservatives in the poverty control condition come even closer to the zero line (M=0.167, SD=0.609), with confidence intervals bridging temperate, skeptical assessments of deservingness and undeservingness. Most importantly, control responses in the poverty experiment do not tend toward those in the sympathetic or unsympathetic manipulations. Liberal and conservative responses across the three conditions are statistically differentiable at standard significance levels. Looking at the bottom-half of and Table 5.8, p-scores are all well below 0.05, supporting H_{4b} and H_{5b}.

Charity of assumptions. We now know that respondents tend toward the generous when appraising a wealthy person and toward the ambivalent (perhaps slightly ungenerous, if conservative) when appraising an impoverished individual. Neither the above analysis nor a cursory examination of Figure 5.12 support H_6. Rigorous testing confirms this suspicion. As Table 5.9 attests, differences between mean responses in the prosperity and poverty controls are statistically and substantively distinguishable, regardless of subject ideology.

Table 5.9: Comparison of prosperity and poverty controls.

$\text{Prosperity}_{\text{control}} - (-1)\text{Poverty}_{\text{control}}$	N	Diff. of means	t-score	p-value (diff.$\neq$0)
Liberals	209	0.396	6.670	0.000
Conservatives	40	0.983	6.827	0.000

Essentially, subjects give rich Amanda the benefit of the doubt by confidently deeming her success meritorious. Poor Amanda receives no such slack. Liberals view her poverty as unjust, but without the same conviction with which they proclaim rich Amanda's situation just. Conservatives are similarly ambivalent in their assessment of poor Amanda, even labeling her—with some reservation—deserving of poverty; a far cry from their resounding assessment of rich Amanda. A truly magnanimous subject in the control conditions would evaluate rich Amanda's state as deserved and poor Amanda's state as undeserved, and they would do so to roughly equal magnitudes. American, however are stingy with their magnanimity when it comes to poor individuals. Charity for the rich, ambivalence for the poor.[6]

5.3 Conclusions.

Do rich Americans generally deserve their wealth, do poor Americans generally deserve their poverty, and do average Americans generally deserve their economic standing? There are many people on both sides of the issue, such that summary statistics tend toward tentative, moderate assessments. Rich and average Americans are generally thought to be deserving of their financial

[6]Rather than being a matter of magnanimity, this finding may be an artifact of how people think about luck. I am operating under the assumption that luck is stochastic, such that "good" and "bad" luck come in roughly equal proportions and cancel one another out (if not in an individual's life, then broadly across a population). It could be, however, that some people do not consider luck a symmetric phenomenon, but conceive of it as dominantly good or bad, harmful or hurtful. If it is the case that a significant portion of people conceptualize exogenous shocks as uniformly positive or negative occurrences, then the interpretation of my empirical findings will be much changed albeit still intriguing.

rank, although they very nearly qualify as being neither deserving nor undeserving of their wealth. The poor, as a broad class of people, are shown some favor, being deemed fairly undeserving of their unenviable economic lot.

Philosophical, psychological, and demographic differences among respondents and subjects accounts for much of the variation in deservingness assessments. Political conservatives and those who believe in economic agency are much more inclined to trust that the American economic system is just, that wherever their compatriots are on the economic ladder is where they belong. Faith in the justness of your own salary similarly inspires trust that the rich and middle-income of our nation are rightly compensated, although this extrapolation does not extend to assessments of the poor. Education, age, and race do influence belief in the deservingness of the poor, with the well-educated, the elderly, and non-whites believing that the poor are on the bad end of a raw deal. Women are largely skeptical that average Americans are justly compensated.

A statistically and substantively significant change occurs when respondents go from judging the deservingness of Americans generally to the merit of one American in particular. Learning even the most basic economic profile of a top-wage earner emboldens respondents to offer an assertive desert appraisal, in terms of both magnitude and certainty. Respondents are confident to very confident that rich Amanda from the prosperity control is either deserving or extremely deserving of her wealth. Variance in responses is remarkably low. Conversely, rich Americans broadly construed barely rate as deserving, and there is a fair amount of variance in that already lukewarm assessment. A rich person about whom little of substance is known rates as far more deserving than her wealthy albeit un-named counterparts.

In the absence of information about how a poor person arrived in their position of need, Americans do not make assumptions. Instead, they reserve judgment, declaring the needy individual as neither deserving nor undeserving. Their estimations are considerably more charitable when confronted with scant information about a rich personage. Unless provided explicit information to the contrary, Americans presume, with some vigor, that the wealthy individual deserves her wealth. And even when they are provided damming information, conservative Americans appear reluctant to deem the person undeserving.

If justice is the proper rewarding of desert, then these assumptions speak volumes about American attitudes regarding the justness of their economic system. Americans rest easy believing that

their financial betters merit their wealth. The unworthy, they trust, are kept out of the upper economic echelons. But this faith is only so deep. There is no corresponding conviction that our economic system manages to keep people undeserving of poverty out of it.

6 | Desert and Large-Scale Redistribution

Americans overwhelmingly espouse egalitarian views in the abstract (chap. 5 Bartels 2008). This egalitarian fervor, however, is decidedly not manifest in Americans' estimation of redistributive policy. Even minimally progressive tax structures like those employed in federal income and local property taxes are routinely rated the "worst" and "least fair", whereas regressive sales and payroll taxes receive markedly more favorable reviews (Page and Shapiro 1992, 165). Indeed, specific instances of tax policy blatantly favoring the wealthy receive sizeable support and almost no opposition from ordinary, egalitarian-minded Americans; this even as those same Americans diagnose the policies in question as exploitative.

Consider the example afforded by President Bush's 2001 tax cuts. Poll after poll showed a clear majority of Americans expressing support for the measure. The cuts, however, were essentially a "massive government-engineered transfer of wealth from the lower and middle classes to the rich" (Bartels 2008, 162). Did Americans see this policy for what it was? Without question. Take a look at Table 6.1. Three-quarters of Americans acknowledged that the cuts would inordinately benefit the rich, two-thirds of Americans recognized that they would not personally enjoy any measurable benefits, and a majority of Americans conceded that low- and middle-income citizens would similarly see no gains (Bartels 2008, 172–173).

The inconsistency extends to public opinion on the economy more broadly. Popular perception holds that the economic system is fundamentally just despite widespread awareness of inequality. So it has been for decades (Fong 2001; Gilens 1999; Hochschild 1981; Jost, Blount, Pfeffer and Hunyady 2003; Kluegel and Smith 1986; Lane 1959; Verba et al. 1987), and as Figure 6.1 shows, so it continues to be. While 67% of citizens believe that differences in income are "too large" and 59% of Americans recognize that there are "strong conflicts" between the rich and poor, 52% think the

Table 6.1: Public expectations for the 2001 tax cuts.

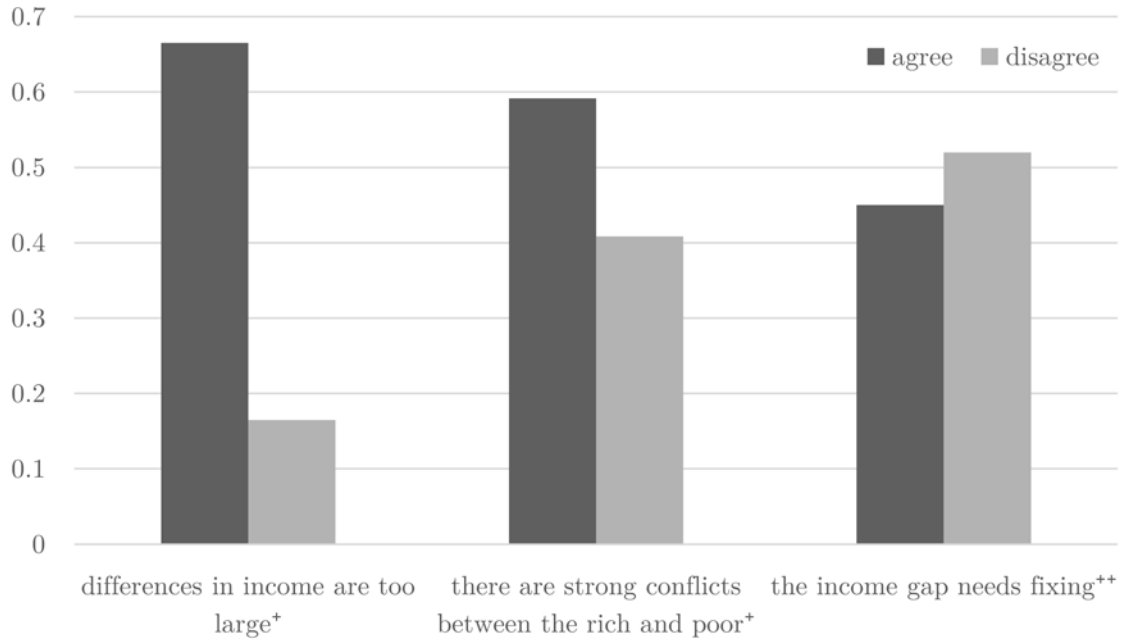
	Expect	Do not expect	Depends/ Unsure
The wealthy will benefit more from the tax cut than the middle class.	74%	21%	5%
The tax cut won't give enough to help those with low incomes.	57%	38%	5%
Special-interest groups will benefit the most from a tax cut.	50%	40%	10%
The average tax payer will get substantial tax relief.	38%	57%	8%
You [respondent] personally will get substantial tax relief.	28%	67%	5%

Source: Calculations based on data from the NBC News/Wall Street Journal poll, March 2001 (N = 2,024). Adapted from Bartels (2008, 172).

disparity is not something that needs to be "fixed." Majorities simultaneously despair at economic inequality and refuse to address it. These odd patterns are more than an aggregate phenomenon. Attempts to ascertain the individual foundations of the aforementioned pattern have been made by capable social scientists, and these micro-level results are as surprising as macro-trends. Economic and social have-nots are weirdly respectful of the tax burdens borne by their financial superiors and are quick to defend the fairness of the existing economic arrangements that work to their disadvantage (Bartels 2008, 140–143; Jost, Blount, Pfeffer and Hunyady 2003).

We have a conundrum. Americans recognize and are troubled by market-driven inequalities. They are, in short, not happy with the distribution of economic outcomes. Concurrently, they do not want to *re*-distribute wealth to correct disparities. What explains these apparent inconsistencies in public opinion? How can egalitarian Americans defend the integrity of a system with admittedly prejudiced aftermaths? Many capable thinkers and researchers have proposed explanations, among them: a flawed understanding of wealth distribution and tax incidence (Bartels 2005, 2006, 2008; Page and Jacobs 2009; Page 1979, 1983; Slemrod 2006); self-delusion (Jost, Blount, Pfeffer and Hunyady 2003; Lerner and Miller 1978); an overriding concern for national economic growth (Page and Shapiro 1992); optimism regarding personal financial wellbeing (Blakeley 2011; Brooks 2005; DeParle 2012; Winship 2011; Zakaria 2011, 2012); and general skepticism of government (Page and

Figure 6.1: Incongruent public opinion?



Sources: + Calculations based 2010 General Social Survey data (N = 1,512).
++ Calculations based Nov. 28–Dec. 1, 2011 Gallup poll data (N = 1,012)

Jacobs 2009).[1]

I argue that support for redistribution is largely a moral issue, explained by an individual's belief in and definition of economic desert. As such, what may appear irrational policy preferences—opposition to redistributive measures inconsistent with ideology and/or self-interest—may in actuality be reasonable when taking into consideration an individual's read on these moral norms.

We know from previous chapters that an individual's assessment of economic justice—whether or not they believe people deserve their economic standing—influences her willingness to voluntarily redistribute personal earnings (see Chapter 3). In this chapter, I show that belief in economic justice also influences an individual's policy preferences for redistribution on a wider scale. If you believe wealth is going to people who deserve it, then its distribution requires no tampering, at least not on any moral grounds. Indeed, redistributing wealth that seems to you justly distributed would be an immoral act. If, on the other hand, you believe there exists pervasive economic injustice and wealth is not going to whom it should, you will see some merit in redistribution. More refined evaluations of economic deservingness offer a more nuanced explanation: Although redistributive efforts are

[1]See Appendix B for an extended review of these explanations.

supposedly meant to uplift the poor, an individual's support for those efforts is primarily driven by their punitive effect on the rich. Whether or not you think poor and middle-class Americans get their economic due certainly influences your policy preference, but not nearly to the degree that your assessment of rich deservingness does.

I also show that an individual's specific definition of economic desert partly determines her redistributive preferences. We know from previous chapters that, although Americans generally agree on the importance of claiming responsibility for your economic lot, some individuals value economic agency more or less than others (see Chapter 3). The more importance you place on personal responsibility in economic matters, the more you have an incentive to limit government intervention in economic activity so as to avoid dampening people's work ethic and reliance on government assistance.

Finally, I test but find little evidence for an interactive relationship between my two explanatory variables, whereby faith in desert's reward moderates the influence of desert's definition of redistributive preferences. My two explanatory variables appear to have an additive and not interactive relationship.

6.1 What determines support for government-lead redistribution?

6.1.1 Previous research.

Given the importance of large-scale redistribution to economic inequality and the delivery of basic services, social scientists have long sought to explain popular support for and opposition to it. The literature is vast, but Alesina and Giuliano (2011) succinctly organize the major theoretical strands, arguing that redistributive preferences depend on an individual's (i) current and anticipated consumption, (ii) assessment of inequality's positive and negative externalities, (iii) ideal levels of inequality, and (iv) concern for fairness. To this list I will add an individual's faith in and definition of economic justice, but first I will review the literature's dominant explanations.

Personal consumption, current and future. Early static models of redistributive preferences posit individuals with different productivities but who care only about their consumption and the income that enables it (Meltzer and Richard 1981; Romer 1975). Progressive redistribution will take money

from the rich—who will oppose such measures—and give it to the poor—who will support such measures. Some researchers add dynamic elements to this basic model. Changes in the political environment and fluctuations in economic growth influence individual support for redistribution (Alesina and Rodrik 1994; Persson and Tabellini 1991). So do changes in an individual's social position and mobility: People consider future as well as current income when weighing policy options (Bénabou and Ok 2001). The risk averse are more likely to support vigorous redistribution, fearing that they may one day be in need of income transfers. Conversely, someone optimistic about her economic opportunities and personal economic prowess will be less supportive of redistribution, not wanting to vote for policies that stand to limit her future earning potential (Alesina and La Ferrara 2005; Checchi and Filippin 2004). Such optimism, it turns out, is often misplaced and can result from self-delusion (Bénabou and Tirole 2006) and social indoctrination (Alesina and Glaeser 2008).

Inequality, indirectly. Redistributive policies, in lessening or exacerbating economic inequality, also have an indirect effect on people's consumption. For example, researchers generally find a positive association between crime and inequality (Fajnzlber, Lederman and Loayza 2002). If reducing inequality stands to reduce crime and therefore expenditures on security, then wealthy citizens may see some benefit in redistributive measures they would otherwise oppose. Similarly, cross-country analysis confirms a negative association between economic inequality and secondary schooling (Bénabou 1996; Galor and Zeira 1993; Perotti 1996). Supposing that education produces positive externalities and increases a nation's or city's aggregate productivity,[2] the well-to-do may again have cause to back redistributive schemes so as to benefit from the rise in the average level of schooling (Perotti 1993). Working in the opposite direction, inequality may inspire increased productivity, motivating laborers to work longer hours (Bell and Freeman 2001). As the beneficiaries of such incentives, should they exists, the wealthy may thus have indirect cause to oppose redistribution.

Inequality, directly. Closer to the focus of this dissertation are models that build inequality directly into individual support for redistribution. In such utility functions, concern for social justice is relevant beyond its influence on an individual's consumption: People have in mind "an ideal profile

[2]These assumptions are compelling and the theory behind them was formulated decades ago, but empirical support is varied (e.g., Acemoglu and Angrist 2001; Benhabib and Spiegel 1994; Bils and Klenow 2000; Black and Henderson 1999; Ciccone and Peri 2006; Friedman 1955; Moretti 2004*a*,*b*; Psacharopoulos and Patrinos 2004; Psacharopoulos 1994; Rauch 1993; Schultz 1961; Temple 1999).

of inequality in a society" alongside their desire to safeguard or increase their personal consumption (Alesina and Giuliano 2011, 111).[3] An individual's preferred level of inequality is determined by a range of factors, among them: her political ideology; her religious affiliation and participation;[4] macroeconomic volatility endured during young-adulthood (Giuliano and Spilimbergo 2014); the strength of her family ties (Alesina and Giuliano 2010; Esping-Andersen 1999) and the hierarchical nature of her family structure (Todd 1985); the racial, ethnic, and linguistic homogeneity of her current polity (Alesina and Glaeser 2008; Fong and Luttmer 2009; Luttmer 2001); and the cultural norms of her motherland (Luttmer and Singhal 2008).

Fairness and effort. Still closer to notions of desert and economic justice are people's perceptions of fairness (Frohlich and Oppenheimer 1993; Hoffman and Spitzer 1985). Fairness, which I liken to procedural justice in Chapter 2, is poorly defined in much of the experimental and survey literature: A vague concept that, when not confused with general aversion to inequality, can be thought of as the means by which an actor arrives at their economic station.[5] That may mean playing by the defined rules of a game (Alesina and Angeletos 2005*b*) and not taking advantage of other actors (Alesina and Giuliano 2011). It may also mean distinguishing between luck and effort.

In Chapter 3, I showed that, to varying degrees, Americans consider a just economic system one that affords its actors agency: People must be personally responsible for their economic lot to deserve it. Rather than disentangle the notions of agency, personal responsibility, and desert, economic and public opinion researchers tend to draw a related albeit simpler distinction. Effort encompasses "all activities that require 'pain' or a utility cost for the individual" and luck "represents those factors that deliver income to individuals without any pain or loss of utility to obtain

[3] An individual's income aspirations and her hopes for society at large may pull her in opposite directions when it comes to backing this or that redistributive policy. A prosperous citizen desiring a more equitable distribution of wealth may sacrifice a share of her income to achieve an ideological goal. Rather than strain their allegiance to personal consumption or ideology, however, many people will amend their beliefs about the otherwise uncertain effects of a policy on economic efficiency so as to limit the tradeoff between their personal and social ambitions. For example, the wealthy will convince themselves of the beneficial incentives generated by inequality, or believe that the elasticity of labor supply to taxes is high. Here lies fruitful ground for collaboration between economists and psychologists, as Alesina and Giuliano (2011) suggest, and as many Just World theorists know (e.g., Bénabou and Tirole 2006; Jost, Blount, Pfeffer and Hunyady 2003; Jost, Glaser, Kruglanski and Sulloway 2003).

[4] The influence of religious affiliation and participation on redistributive preferences disappears when ideological factors are included in models (Alesina and Giuliano 2011), and experimental investigations find no significant relationship (Tan 2006).

[5] Recall that while many practicing social scientists equate fairness and justice (see the literature review by Greenberg 2011), some philosophers contend fairness is but a facet of justice (Feinberg 1974). The issue is undoubtable complicated by Rawls (1958), who distinguishes between the two concepts on the first page of his article, but titles said article "Justice as Fairness".

it" (Alesina and Giuliano 2011, 127). This distinction has proven empirically useful. While various notions of fairness are shown to influence a person's tolerance for redistribution in isolation, the importance an individual places on hard work over luck is the only one to maintain statistical significance when tested against competing notions and relevant control variables (Alesina and Angeletos 2005*a*; Alesina and La Ferrara 2005; Fong 2001).

6.1.2 The influence of desert on redistributive preferences.

I argue that, in addition to the abovementioned variables, an individual's faith in and understanding of economic justice determines her stance on economic redistribution. Specifically, predicting a person's support for redistribution requires knowledge of (i) her belief in the reward of economic desert, (ii) her definition of economic desert, and (iii) the interaction between the two. I examine the rationale behind each.

Faith that the prevailing economic system is just (i.e., rewards desert). As a matter of government policy, redistribution involves a third party taking resources from one person or set of people and giving them to another person or set of people. Prior to such intervention, I want to know whether and to what degree an individual considers the existing distribution of resources just. A just economic system, you will recall from Chapter 2, is one that delivers to people their economic due, and a just outcome is one that is deserved. Regardless of how you define economic desert, if you think that people by-and-large get the economic resources they deserve, then you will be reluctant to tamper with economic outcomes, at least on moral grounds. You may not like the current distribution of resources for reasons of efficiency or ideology, but redistributing those resources will not (in your mind) facilitate economic justice—it will not get deserved outcomes to deserving subjects. In fact merit (for you) is being actively punished. Redistribution would take from people resources to which they are entitled and transfer those resources to people who, as near as you can tell, have no claim to them. Economic outcomes following redistribution no longer accurately reflect desert.

Now consider a person convinced that economic desert is not, in general, accurately rewarded. The prevailing system appears unjust. Redistribution would take from people resources they do not deserve and hopefully transfer those resources to more deserving citizens. I say "hopefully"

because—while an individual who considers the current resource distribution unjust has no moral qualms appropriating undeserved resources—doling those resources to deserving persons requires a more developed worldview than supporters may have. It is cognitively easier to be against redistribution than for redistribution. Support for redistribution requires that (i) current resource holders not deserve those resources and (ii) the policy will transfer those resources to people more deserving of them. The first condition may apply to any redistribution scheme, but the second will depend on the specific policy. Accordingly, as long as redistributive policy is apt to increase distributional justice (i.e., will not transfer resources to people less deserving than the present owners), individuals skeptical of prevailing economic justice will see moral cause to redistribute.

Definition of economic desert. An individual may subscribe to any among countless definitions of economic desert, as we learned in Chapter 2, but there are some elements of desert that cut across definitions. In Chapter 3, we looked at the role of personal responsibility in economic deservingness because of the concept's philosophical importance to justice. Looking way back at Figure 3.3 you can see that Americans, although remarkably uniform in associating personal responsibility with economic desert, do vary in the strength with which they make the association. Agency can be more or less important to an individual's definition of economic justice, and that variation will alter an individual's stance on redistribution.

All else equal, the more crucial agency is to your definition of deservingness, the less you support redistribution. If you, as many Americans do, associate economic deservingness with industry, diligence, and other qualities that seem within an individual's control, redistributive policies threaten to undermine the very values you want instilled in your fellow citizens by encouraging people to absolve themselves of personal responsibility over their financial wellbeing. Why work hard when a third party is able to appropriate your wealth and/or covers your needs should you be in financial distress? If a person works for and consequently deserves her high income, taking a portion of that income is in itself a punitive act. It becomes outright unjust when that money is transferred to people who in your estimation worked for and deserve a lower income.

The thrust of this theory is akin to three other strands of literature, although I frame it specifically in the language of moral theory. Psychologists and sociologists find that people who exhibit the so-called "Protestant Work Ethic" (Furnham 1982, 1983; MacDonald 1972) tend to oppose

welfare policies out of fear such policies will inspire lethargy in themselves and others. Political scientists find that people who subscribe to "social ideologies" promoting personal diligence similarly exhibit the skepticism toward welfare policies (Hansenfeld and Rafferty 1989; Lipset 1963*b*; Verba and Orren 1985). And then there are the economists I mention earlier in this chapter, who show that the relative importance an individual attaches to effort and luck partly determines her redistributive preferences, supposedly as a matter of redistribution's incentives for individual effort (Alesina and Angeletos 2005*a*; Alesina and La Ferrara 2005; Alesina and Giuliano 2011; Fong 2001).

Interaction effect between definition of and faith in economic justice. Finally, an individual's faith in the justness of the economy may moderate the marginal influence her definition of justice has on her redistributive preference. As previously discussed, individuals who define a just economic system as one in which people have control over their economic well-being will be inclined to oppose progressive taxation so that people retain their incentive to work hard and assume responsibility over their economic standing. But not all of these individuals will be equally convinced that economic outcomes accurately reflect desert as they define it. Apparent injustice may curb the marginal negative influence their definition of desert has on their redistributive preferences.

Consider an individual who wants but is skeptical of the control they and others wield over their economic fates. It is possible that her definition of justice and her assessment of justice's existence have the simple linear influences on her distribution preferences that I outline above, such that the two variables draw in her opposite directions: Her definition inclines her to oppose redistribution, and her assessment inclines her to support redistribution. It is also possible that the two variables interact such that the marginal effect of her definition is contingent on her assessment. That is, she only brings her definition to bear on policy when things appear unjust. First, hold her assessment at a low level, where she thinks the prevailing economic system unjust. Increasing the import she places on personal responsibility yields only a small marginal decrease in support for redistribution. Her assessment keeps the effect of her definition in check. Next, raise her assessment so that she thinks the prevailing economic system just, and then hold it constant again. Increasing the import she places on personal responsibility now yields a larger marginal decrease in support for redistribution. Her assessment is doing less to restrain the effect of her definition.

6.2 Data and hypotheses.

Data for this analysis comes from my 992 respondent survey described in Chapter 1. Because I propose an interaction effect between belief in and definition of economic justice, it will at times be cumbersome to express the complex relationship between variables using prose. As such, I will occasionally use a shorthand to refer to variables and their values. Variables themselves will be written in italics. For example: *var_name*. The set of values that a variable takes will be expressed by an italicized capital letter with the variables name in subscript. For example: K_{var_name}.

6.2.1 Dependent variables.

I use two variables to gauge support for government redistribution, one broad in its scope, the other comparatively narrow. There are myriad government policies and programs designed to remedy the imbalanced distribution of all manner of resources. Income inequalities lie at the heart of many social and economic imbalances: An individual's access to education, free time, and political representation are all associated with income.[6] How income is distributed in a population, therefore, has an important influence on economic and social disparities. My first variable, then, deals with government response to income inequality generally: "Do you think that the government should try to reduce income differences between the rich and poor? How strongly do you feel that way?" Responses are combined and coded on a seven-point scale, ranging from "strongly disagree" to "strongly agree". For ease of exposition, I will refer to values of this dependent variable as $Y_{gov_fix_gap}$.

As a matter of economic theory, income inequality is unambiguously reduced if people's incomes are taxed progressively (Fellman 1976; Jakobsson 1976; Lambert 1993). But even the soundest theories are not guaranteed to survive a tortuous political process. That empirical research so uniformly reinforces the link between inequality reduction and progressive income taxation is evidence of "policy-makers and tax designers who are sensitive to redistributional issues" (Lambert 1993, 362).[7] My second variable, therefore, specifically addresses income tax schemes: "Generally

[6] Note that income inequalities are but a subset of economic inequalities (Sen 1997), the latter being the overarching focus of this dissertation.

[7] Indeed, this empirical finding has been replicated in countries throughout the world, including, for example, OECD states (Sawyer and Wasserman 1976), the United Kingdom (Morris and Preston 1986), Australia (Kakwani 1986), and India (Gupta and Aggarwal 1982).

speaking, do you think that rich citizens should pay a higher tax rate than citizens who earn an average wage? If so, how much higher?" Responses are combined and coded on a four point scale ranging from "the same" to "much higher".[8] For ease of exposition, I will refer to values of this dependent variable as Y_{prog_tax}.

6.2.2 Hypotheses and independent variables.

Faith that the prevailing economic system is just (i.e., rewards desert). I use three measures to determine how confident a respondent is that economic desert (as they define it) is rewarded. The first variable, *agency*, builds on my findings from Chapter 3 and the findings from the economists who differentiate between effort and luck. It measures the level of control respondent's believe people exercise over their economic fates. Respondents are asked: "Which of the following statements comes closest to your general point of view: Whether or not a person gets ahead economically in this country is (i) mostly up to them or (ii) mostly up to circumstances beyond their control? How strongly do you support that point of view?" Responses are combined and coded on a seven-point scale. The higher the value, the more control the respondent believes people have over their economic fates. For ease of exposition, I will refer to values of this independent variable as Z_{agency}. This variable is essentially a subset of my other variables in measuring faith that desert is rewarded: While agency is a critical component of economic justice for most people, its absence or presence does not account for the totality of economic justice. Accordingly, I expect the explanatory power of this variable to be the weakest of my three.

My second variable, *justice*, is the broadest measure of a respondent's faith in the reward of economic desert. Respondents are asked: "Generally speaking, do you believe that in the American economic system people get what they deserve? How strongly do you feel that way?" Responses are combined and coded on a seven-point scale. The higher the value, the more control the respondent believes people have over their economic fates. For ease of exposition, I will refer to values of this independent variable as $Z_{justice}$.

My third variable is, in truth, three variables—*rich_deserve*, *average_deserve*, *poor_deserve*—

[8] When answering this question, respondents were able to choose their answers from a seven-point scale that included regressive tax schemes wherein rich citizens are taxed at rates less than those facing average citizens. Fifteen of the 992 respondents favored a regressive tax scheme, but in the final analysis their responses were included with respondents who favored a flat tax rate and the range of the scale was truncated.

that measure whether a respondent thinks different segments of the American population get their economic due. As we learned in Chapter 5, Americans think rich, average, and poor Americans are not equally deserving of their economic lots (see Figure 5.11). Together, these three measures indicate a respondent's overall assessment of the justness of the American economic system, much like the justice variable. But by separating a respondent's assessment of economic justice as it pertains to rich, poor, and average Americans separately will allow us to determine if policy preferences are driven by concern for justice as it exists for certain groups more than others.

For *rich_deserve*, respondents are asked: "Generally, do you think that rich Americans deserve their wealth? How confident are you in your assessment? How deserving/undeserving are they?" For *average_deserve*, respondents are asked: "Do you think that average Americans generally get what they deserve, economically? How confident are you in your assessment? How deserving/undeserving are they of their economic standing?" And for *poor_deserve*, respondents are asked: "Generally, do you think that poor Americans deserve their poverty? How confident are you in your assessment? How deserving/undeserving are they?" Each of the three deserve variables is coded on a thirteen-point scale, with higher values meaning a respondent rates the group as more deserving. See Section 5.1.2, and especially Table 5.1 for a detailed explanation of these desert variables. For ease of exposition, I will refer to values of these independent variables as $Z_{rich_deserve}$, $Z_{average_deserve}$, $Z_{poor_deserve}$.

I test my theory using separate models for each of the aforementioned independent variables (or collections of variables, as in the case of the desert measures) on both dependent variables. Specifically, my hypothesis regarding faith in economic justice are:

H_{Z1} Increasing a respondent's belief that Americans have control over their economic fates (Z_{agency}) will yield a decrease in support for government redistribution ($Y_{gov_fix_gap}$ and Y_{prog_tax}).

H_{Z2} Increasing a respondent's belief that Americans generally deserve their economic standing ($Z_{justice}$) will yield a decrease in support for government redistribution ($Y_{gov_fix_gap}$ and Y_{prog_tax}).

H_{Z3} Increasing a respondent's belief that specific segments of the American population deserve their economic standing ($Z_{rich_deserve}$, $Z_{average_deserve}$, and/or $Z_{poor_deserve}$) will yield a decrease in support for government redistribution ($Y_{gov_fix_gap}$ and Y_{prog_tax}).

I expect, therefore, that the *desert* variables will be statistically significant and negative in sign. Each version of H_1 is getting at the same idea, just with a different measure of people's faith in the justness of the American economic system. The different measures allow multiple tests of my theory, and might reveal otherwise hidden aspects of the relationship I propose between belief in justice and redistributive preferences.

Definition of economic desert. If agency is a critical ingredient of economic desert, then people's preferred desert bases should be qualities over which we have control, or at least qualities over which we think we have control. Respondents saw fifteen factors, each of which might have some bearing on an individual's economic standing (e.g., intelligence, creativity, years of education, social connections, family's wealth, etc.; see Figures 3.1 and 3.2 for a full list). They answered two questions about each factor: "How much control do you think people have over this factor?" and "How important should this factor be in determining whether people get ahead or fall behind economically?"[9] Responses to the first question are coded on a seven-point scale and responses to the second question are coded on a five-point scale. The definition variable is a respondent's correlation coefficient for her responses to these two questions across the fifteen factors. Values approaching 1 indicate that a respondent values agency and personal responsibility: Those economic

[9]For the sake of clarity, this second question was rephrased for respondents thusly: "How important would each factor be to economic standing in your ideal society?"

factors she thinks we have control over are also the economic factors she thinks should influence people's economic standing. See Sections 3.1 and 3.2, and especially Figure 3.3 for a detailed explanation of this variable. For ease of exposition, I will refer to values of this independent variable as X.

I test my theory using both dependent variables. Specifically, my hypothesis regarding the definition of economic desert variable is:

$\mathbf{H_X}$ Increasing the importance of personal responsibility to a respondent's definition of economic desert (X) will yield a decrease in support for government redistribution ($Y_{gov_fix_gap}$ and Y_{prog_tax}).

I expect, therefore, that the *definition* variable will be statistically significant and negative in sign.

Interaction effect between definition of and faith in economic justice. In the final piece of my theory, I posit that a respondent's faith in economic justice (Z) will moderate the influence her definition of economic justice (X) has on her redistributive preferences (Y). Specifically, I hypothesize that an individual's support for redistribution will decline the more importance she places on personal responsibility, and the marginal negative influence thereof will increase as existing economic circumstances appear more just:

$\mathbf{H_{X|Z}}$ The marginal effect of X on Y is negative for all values of Z; this effect is weakest when Z is at its lowest and increases in magnitude as Z increases.

Because interaction terms are always symmetrical (Brambor, Clark and Golder 2006; Kam and Franzese 2007), arguing that Z moderates X implies that X, too, has some conditional influence on Z. Although my theory does not speak directly to that relationship, neither is it silent on the matter. I can measure the relationship and make certain the results do nothing to undermine my theory (Berry, Golder and Milton 2012). For example, I have no reason to expect justice assessments will, as a result of their interaction with desert definitions, suddenly have a positive influence on redistributive preferences. Moreover, increasing personal responsibility's importance will only embolden an individual who thinks economic desert rewarded in her opposition to redistribution. $H_{Z|X}$ ends up looking very similar to $H_{X|Z}$:

$H_{Z|X}$ The marginal effect of Z on Y is negative for all values of X; this effect is weakest when X is at its lowest and increases in magnitude as X increases.

Although I do not write these final hypotheses with all versions of my Z and Y variables, I will present results for the three different measures of Z and the two different versions of Y. Moreover, it is difficult and sometimes impossible to evaluate conditional hypotheses with the figures typically reported in results tables (Brambor, Clark and Golder 2006). Consequently, $H_{X|Z}$ and $H_{Z|X}$ will be evaluated graphically.

6.3 Findings.

6.3.1 The basic model and results for control variables.

Before tackling each set of hypotheses, which I will do momentarily, a few words on my model and control variables. Alesina and Giuliano (2011) devise a base model on which to build and test various determinants of redistributive preference. I use the independent variables from that base model—which you can see in Model 1 from Tables 6.2 and 6.3—as the controls in my own analyses. And like Alesina and Giuliano (2011), I show OLS results for simplicity of interpretation (similar results are obtained with ordered logit), I control for state fixed effects, and I display results with robust standard errors.[10] To further aid interpretation of regression results, I standardized all variables save *age* and age^2 to a [0, 1] scale.

For the most part, my findings for these controls are expected, as you can see in Tables 6.2–6.6. Ideology is always a substantively and statistically significant predictor of redistributive preferences. The positive sign on the *ideology* coefficients indicate that the more liberal a respondent, the most supportive she is of government efforts to reduce the income gap ($Y_{gov_fix_gap}$) and the more supportive she is of progressively taxing income (Y_{prog_tax}). Household income is a similarly important predictor of redistributive efforts. As *income* increases, $Y_{gov_fix_gap}$ and Y_{prog_tax} reliably decrease. The rich are not keen to part with their wealth.

Other control variables appear to influence one or another dependent variable. Race tends to

[10] My robust standard errors result from my use of sampling weights. Also, Alesina and Giuliano (2011) actually control for regional fixed effects, but never specify how they define regions.

have a small but statistically significant effect on $Y_{gov_fix_gap}$, such that racial minorities are slightly more supportive of government redistributive efforts than are whites. *Age* is not a consistently significant determinant, but *age* and its square are occasionally predictive of $Y_{gov_fix_gap}$, and the positive coefficient on age^2 indicates a concave curve. Support for government policy addressing the income gap grows as a respondent ages, and with an increasing marginal effect. Support for progressive taxation, on the other hand, is bolstered by a respondent's education. More schooling tends to lead to a greater Y_{prog_tax}.

A respondent's gender, marital status, and employment status do not appear to have much influence on our dependent variables. This conclusion is in line with previous research, although Alesina and Giuliano (2011) do find that women are reliably more generous in their redistributive preferences, although the substantive magnitude of this generosity is not especially large.

Appendix D contains two tables with controls that Alesina and Giuliano (Alesina and Giuliano 2011) do not include in their models, but which have some explanatory power over $Y_{gov_fix_gap}$ and/or Y_{prog_tax}. The effects of our X and Z variables remain more or less unaffected by the inclusion of these additional controls and so do not substantively change the discussion of hypothesis testing to follow, but the results are interesting in and of themselves. First, the more generous you ascertain Americans to be in their charitable giving (*charity*), the less you support progressive taxation. The effect is substantively large and uniformly significant. Second, if you believe that the government generally does more to help than hurt people trying to climb the economic ladder (*gov help*) you are more likely to support government action to reduce the income gap and progressive taxation. This effect is sizable and consistently significant, especially for $Y_{gov_fix_gap}$. Similar results were obtained with a variable measuring whether respondents believe government agencies are generally efficient or inefficient in completion of their duties, but I do not report them here. Finally, your optimism regarding your future standard of living (*good life*) has no discernable effect on the dependent variables.

With a grasp on the basics of the model, we now evaluate the evidence pertaining to my hypotheses.

6.3.2 Hypothesis testing.

Faith that the prevailing economic system is just (i.e., rewards desert). An individual's perception of economic justice is a major determinant of her support for government redistribution efforts. This finding is robust to different measures of our Z and Y variables, as you can see in Tables 6.2 and 6.3. These tables show each show seven different models composed of the same independent and control variables, but for different dependent variables. In Table 6.2 those models predict the support for general government action aimed at reducing the income gap, and in Table 6.3 those models predict support for progressive taxation. Different models within each table present different measures of our explanatory variable of interest, which is faith that the American economic system delivers to people their economic due.

Model 2 uses *agency* as a measure of the apparent prevalence of economic justice. The more control people seem to exercise over their economic station—the more responsible people are for their economic fates—the more just the American economic system appears (see Chapter 3), and the less tolerant respondents are of government altering outcomes. Tables 6.2 and 6.3 lend credence to my first hypothesis, H_{Z1}: Z_{agency} has a negative and statistically significant influence on both $Y_{gov_fix_gap}$ and Y_{prog_tax}, although the magnitude of its effect on $Y_{gov_fix_gap}$ is nearly twice as that of its effect on Y_{prog_tax}, and in neither model does Z_{agency} approach the substantive significance of *ideology*. But personal responsibility is only one aspect of the larger concept of economic justice. Although agency may be a necessary condition for some people's understanding of justice, it may not be a sufficient condition. And for some people, agency may have little or no bearing on desert's reward. My remaining measures of Z will make up for this deficit.

Model 3 uses *justice* as a measure of respondent assessment of economic justice. Whereas *agency* tells us the degree to which a critical component of desert appears present, my theory is based on perceptions of injustice whatever the beholder's definition of economic desert. Tables 6.2 and 6.3 lend credence to my second hypothesis, H_{Z2}: $Z_{justice}$ has a negative and statistically significant influence on both $Y_{gov_fix_gap}$ and Y_{prog_tax}. Its influence on $Y_{gov_fix_gap}$ is nearly as strong as *ideology*'s. $Z_{justice}$ is notably less powerful in determining Y_{prog_tax}, although its effect is still prominent and more than twice that of Z_{agency} from Model 2. The more confident you are that people get their economic due, the more government tampering threatens to undo an already just (or just-ish) resource allocation. Conversely, the more skeptical you are of desert's reward, the more appealing government's promise to correct economic injustice.

Table 6.2: Support for government action to reduce the income gap ($Y_{gov_fix_gap}$) based on perceived economic justice.

Variable	Model 1	Model 2	Model 3	Model 4a	Model 4b	Model 4c	Model 4
Agency		-0.221^{***}					
		(0.050)					
Justice			-0.375^{***}				
			(0.048)				
Rich deserve				-0.444^{***}			-0.338^{***}
				(0.051)			(0.055)
Avg. deserve					-0.288^{***}		-0.137^{***}
					(0.046)		(0.049)
Poor deserve						-0.389^{***}	-0.223^{***}
						(0.071)	(0.073)
Ideology	0.572^{***}	0.506^{***}	0.415^{***}	0.400^{***}	0.497^{***}	0.467^{***}	0.345^{***}
	(0.053)	(0.054)	(0.052)	(0.051)	(0.049)	(0.059)	(0.053)
Age	0.013^{**}	0.014^{**}	0.012^{*}	0.013^{**}	0.006	0.010	0.007
	(0.006)	(0.007)	(0.007)	(0.006)	(0.006)	(0.006)	(0.005)
Age^2	0.000^{**}	0.000^{**}	0.000^{*}	0.000^{**}	0.000	0.000^{**}	0.000^{*}
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female	0.034	0.009	-0.012	0.019	0.008	0.032	0.009
	(0.029)	(0.028)	(0.026)	(0.025)	(0.026)	(0.028)	(0.023)
Nonwhite	0.053	0.065^{**}	0.069^{**}	0.084^{***}	0.052^{*}	0.027	0.061^{**}
	(0.033)	(0.032)	(0.031)	(0.031)	(0.030)	(0.033)	(0.029)
Married	-0.014	0.007	-0.006	-0.019	-0.006	-0.009	-0.011
	(0.032)	(0.032)	(0.029)	(0.029)	(0.029)	(0.032)	(0.028)
Unemployed	0.020	0.004	0.006	0.005	0.004	0.009	-0.005
	(0.049)	(0.049)	(0.043)	(0.043)	(0.046)	(0.044)	(0.039)
Education	-0.002	-0.009	-0.023	-0.020	0.022	0.052	0.026
	(0.062)	(0.059)	(0.056)	(0.057)	(0.057)	(0.060)	(0.053)
Income	-0.209^{***}	-0.176^{***}	-0.118^{**}	-0.140^{***}	-0.166^{***}	-0.184^{***}	-0.122^{**}
	(0.060)	(0.058)	(0.054)	(0.053)	(0.054)	(0.061)	(0.053)
Constant	0.135	0.295^{**}	0.376^{***}	0.445^{***}	0.451^{***}	0.342^{***}	0.640^{***}
	(0.124)	(0.130)	(0.125)	(0.116)	(0.126)	(0.124)	(0.117)
N	992	992	992	992	992	992	992
R^2	0.4468	0.4719	0.5186	0.5304	0.4909	0.4927	0.5576
adj-R^2	0.4131	0.4391	0.4887	0.5012	0.4593	0.4612	0.5291

All regressions control for state fixed effects. Robust standard errors given in parentheses.
All variables save *age* and age^2 standardize [0, 1]. * significant at 10%; ** 5%; *** 1%

Table 6.3: Support for progressive taxation (Y_{prog_tax})
based on perceived economic justice.

Variable	Model 1	Model 2	Model 3	Model 4a	Model 4b	Model 4c	Model 4
Agency		−0.129**					
		(0.052)					
Justice			−0.285***				
			(0.053)				
Rich deserve				−0.383***			−0.336***
				(0.065)			(0.078)
Avg. deserve					−0.177***		−0.050
					(0.049)		(0.054)
Poor deserve						−0.249***	−0.116*
						(0.067)	(0.070)
Ideology	0.589***	0.550***	0.470***	0.441***	0.543***	0.522***	0.415***
	(0.044)	(0.047)	(0.052)	(0.056)	(0.046)	(0.048)	(0.054)
Age	0.010	0.011	0.009	0.010*	0.006	0.008	0.008
	(0.007)	(0.007)	(0.007)	(0.006)	(0.007)	(0.007)	(0.006)
Age^2	0.000*	0.000*	0.000	0.000*	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female	0.013	−0.001	−0.022	0.000	−0.003	0.012	−0.003
	(0.028)	(0.028)	(0.026)	(0.026)	(0.027)	(0.028)	(0.026)
Nonwhite	0.008	0.015	0.020	0.035	0.008	−0.008	0.024
	(0.031)	(0.032)	(0.031)	(0.030)	(0.032)	(0.031)	(0.029)
Married	0.008	0.020	0.014	0.004	0.013	0.011	0.007
	(0.036)	(0.036)	(0.033)	(0.033)	(0.035)	(0.036)	(0.033)
Unemployed	−0.089	−0.098*	−0.100*	−0.101*	−0.099*	−0.096*	−0.106**
	(0.055)	(0.055)	(0.053)	(0.052)	(0.054)	(0.055)	(0.053)
Education	0.104*	0.100*	0.088	0.088	0.118**	0.138**	0.110**
	(0.057)	(0.056)	(0.055)	(0.055)	(0.056)	(0.057)	(0.056)
Income	−0.176***	−0.156***	−0.106*	−0.116**	−0.149***	−0.160***	−0.108*
	(0.061)	(0.060)	(0.056)	(0.058)	(0.057)	(0.060)	(0.058)
Constant	0.065	0.158	0.247*	0.332***	0.260**	0.197	0.416***
	(0.128)	(0.129)	(0.135)	(0.127)	(0.132)	(0.127)	(0.127)
N	992	992	992	992	992	992	992
R^2	0.3926	0.4017	0.4365	0.4584	0.4104	0.4125	0.4645
adj-R^2	0.3556	0.3645	0.4015	0.4247	0.3737	0.3760	0.4300

All regressions control for state fixed effects. Robust standard errors given in parentheses.
All variables save *age* and *age*^{2} standardize [0, 1]. * significant at 10%; ** 5%; *** 1%

Whereas *agency* provides a decidedly narrow look at respondent justice evaluations, *justice* may, in its comparatively broad focus, obscure interesting nuance. With my *deserve* variables in Model 4 we can see if the apparent treatment of different sub-populations influences respondent support for redistribution efforts. Tables 6.2 and 6.3 lend credence to my third hypothesis, H_{Z3}: $Z_{rich_deserve}$, $Z_{average_deserve}$, and $Z_{poor_deserve}$ have a negative and statistically significant influence on $Y_{gov_fix_gap}$ and Y_{prog_tax} when tested independently (see Models 4a, 4b, and 4c); when tested simultaneously (see Model 4), each has a negative and statistically significant influence on $Y_{gov_fix_gap}$, but only $Z_{rich_deserve}$ has a negative and statistically significant influence on Y_{prog_tax}.

The story is actually more complicated that my simple hypothesis allows. Group-specific desert assessments vary widely in the magnitude of their effects on redistributive preferences. When explaining $Y_{gov_fix_gap}$, the coefficient on $Z_{rich_deserve}$ is greater than the coefficient on $Z_{poor_deserve}$, which is greater than the coefficient on $Z_{average_deserve}$. The same is true for predictions of Y_{prog_tax}, except that the influence of $Z_{average_deserve}$ is statistically questionable. In both the independent and simultaneous tests of the three *deserve* variables, redistributive preferences are foremost effected by perceptions of economic justice as it applies to the rich. Depending on the model, this effect is stronger than or nearly as strong as that exerted by *ideology*. Whether or not the poor appear to deserve their poverty has the next largest, and still sizeable, effect. The just compensation of average Americans is still less important in determining $Y_{gov_fix_gap}$, and has potentially no role in determining Y_{prog_tax}.

Notice that these findings for the different measures of the Z variables hold not just in Tables 6.2 and 6.3, but in Tables 6.4–6.6. Also, notice in Tables 6.2 and 6.3 that the explanatory power of my models—as measured by R^2 and adjusted R^2—increases as you move from Model 1 to 2 to 3 to 4.

Definition of economic desert. In Tables 6.4 and 6.5, I find partial support for my fourth hypothesis, H_X: X always has a negative and statistically significant influence on $Y_{gov_fix_gap}$, but it has no discernible effect on Y_{prog_tax}. While a respondent's definition of desert does not appear to influence her attitude toward progressive taxation, respondents for whom agency is an important component of desert are less supportive of other government efforts to reduce the income gap. The more central personal responsibility is to an individual's definition of desert, the more government intervention seems to undermine incentives to work for and earn your own payoff. For these respondents,

government intervention makes it harder for people to deserve their economic station.

As you look over the regression results, note that you can directly compare Models 1, 2, 3, and 4 from Table 6.4 with those models in Table 6.2, the difference being that models in the latter do not include the *definition* variable. The same comparisons between models can be made across Tables 6.5 and 6.3.

Interaction effect between definition of and faith in economic justice. I find meager and inconsistent statistical support for my proposed interaction; on the whole, I must conclude that it is not supported by the data. Rejecting my contingent hypotheses, you should note, does nothing to undermine my previous findings, which appear robust.

Figures 6.2 and 6.3, which are derived from Models 2 and 3 from the left half of Table 6.6, offer the strongest support for $H_{X|Z}$. The marginal effect on redistributive preferences of increasing agency's importance is negative for all but the lowest values of and Z_{agency} and $Z_{justice}$, when it is statistically indistinguishable from zero. And the effect of X on $Y_{gov_fix_gap}$ strengthens in magnitude as Z_{agency} and $Z_{justice}$ increase. All of this indicates that an individual's assessment of prevailing economic justice tempers the marginal influence her definition of justice has on government redistribution efforts. But note that *definition*, *agency* and *justice* have the wrong sign in these models, although those first two variables do not achieve statistical significance so the sign may not especially matter.

Regardless, $H_{X|Z}$ is not supported by Model 4 from the left half of Table 6.6, wherein *definition*, *rich_deserve*, and the interaction term between the two all achieve statistical significance, but the first two variables have the wrong sign, as confirmed by Figure 6.4. In that figure, you can see that the definition of justice has a positive marginal effect on support for government redistribution at the lowest values of $Z_{rich_deserve}$, and this contingent, marginal effect just manages statistical significance. $H_{X|Z}$ is further undone when looking at the right side of Table 6.6. None of the relevant explanatory variables achieve statistical significance in estimating Y_{prog_tax} in Models 3 and 4. In Model 2, *definition*, *agency*, and the interaction term between the two all achieve statistical significance, but the first two variables again have the wrong sign, as confirmed by Figure 6.5. As in Figure 6.4, Figure 6.5 shows X exhibiting a positive marginal influence on Y_{prog_tax}, this time at low levels of Z_{agency}. At no value of Z should X have a positive marginal effect, regardless of

Table 6.4: Support for government action to reduce the income gap ($Y_{gov_fix_gap}$) based on definition of economic justice.

Variable	Model 1	Model 2	Model 3	Model 4
Definition	-0.469^{***}	-0.382^{***}	-0.498^{***}	-0.518^{***}
	(0.143)	(0.148)	(0.126)	(0.131)
Agency		-0.215^{***}		
		(0.051)		
Justice			-0.403^{***}	
			(0.048)	
Rich deserve				-0.366^{***}
				(0.056)
Avg. deserve				-0.126^{***}
				(0.047)
Poor deserve				-0.277^{***}
				(0.067)
Ideology	0.572^{***}	0.502^{***}	0.393^{***}	0.310^{***}
	(0.051)	(0.052)	(0.051)	(0.050)
Age	0.010	0.011	0.010	0.004
	(0.007)	(0.007)	(0.007)	(0.006)
Age^2	0.000^{*}	0.000^{*}	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Female	0.048^{*}	0.025	0.005	0.031
	(0.029)	(0.028)	(0.026)	(0.023)
Nonwhite	0.035	0.048	0.052^{*}	0.050^{*}
	(0.032)	(0.032)	(0.029)	(0.028)
Married	-0.012	0.007	-0.008	-0.013
	(0.032)	(0.032)	(0.028)	(0.027)
Unemployed	0.003	-0.019	-0.015	-0.029
	(0.047)	(0.046)	(0.039)	(0.038)
Education	0.026	0.020	0.001	0.067
	(0.060)	(0.058)	(0.054)	(0.050)
Income	-0.221^{***}	-0.196^{***}	-0.129^{**}	-0.122^{**}
	(0.061)	(0.058)	(0.053)	(0.052)
Constant	0.584^{***}	0.660^{***}	0.851^{***}	1.147^{***}
	(0.191)	(0.195)	(0.182)	(0.170)
N	963	963	963	963
R^2	0.4687	0.4914	0.5462	0.5897
adj-R^2	0.4346	0.4582	0.5165	0.5619

All regressions control for state fixed effects.
Robust standard errors given in parentheses.
All variables save *age* and *age²* standardize [0, 1].
* significant at 10%; ** 5%; *** 1%

Table 6.5: Support for progressive taxation (Y_{prog_tax}) based on definition of economic justice.

Variable	Model 1	Model 2	Model 3	Model 4
Definition	0.085	0.139	0.067	0.044
	(0.137)	(0.140)	(0.128)	(0.127)
Agency		−0.133***		
		(0.053)		
Justice			−0.258***	
			(0.056)	
Rich deserve				−0.308***
				(0.080)
Avg. deserve				−0.050
				(0.055)
Poor deserve				−0.132*
				(0.071)
Ideology	0.608***	0.565***	0.494***	0.432***
	(0.043)	(0.048)	(0.054)	(0.056)
Age	0.008	0.008	0.008	0.006
	(0.007)	(0.007)	(0.007)	(0.006)
Age^2	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Female	0.002	−0.013	−0.026	−0.009
	(0.027)	(0.027)	(0.026)	(0.026)
Nonwhite	0.004	0.012	0.015	0.022
	(0.032)	(0.031)	(0.032)	(0.030)
Married	0.032	0.044	0.035	0.028
	(0.036)	(0.036)	(0.034)	(0.034)
Unemployed	−0.052	−0.066	−0.064	−0.074
	(0.057)	(0.056)	(0.056)	(0.057)
Education	0.108*	0.104*	0.092*	0.121**
	(0.057)	(0.055)	(0.056)	(0.056)
Income	−0.117*	−0.102	−0.059	−0.051
	(0.062)	(0.062)	(0.058)	(0.062)
Constant	−0.016	0.032	0.155	0.345**
	(0.176)	(0.179)	(0.175)	(0.168)
N	963	963	963	963
R^2	0.4063	0.4157	0.4406	0.4673
adj-R^2	0.3682	0.3776	0.4041	0.4312

All regressions control for state fixed effects.
Robust standard errors given in parentheses.
All variables save *age* and *age*^{2} standardize [0, 1].
* significant at 10%; ** 5%; *** 1%

the specific measure of Z or Y. I have no theoretical cause to expect an individual's definition of justice as here measured to have a positive marginal influence on redistributive preferences.

Most detrimental to the interaction piece of my theory are Figures 6.6–6.9, which all work against $H_{Z|X}$. In all four graphs—which are the respective counterparts to Figures 6.2–6.5 and show the moderating effect of desert's definition on justice assessments—the marginal effect of Z on Y is positive when X is at its lowest level. Were I to restrict the horizontal axis to only the most common definitions of desert as it relates to personal responsibility, this positive marginal effect would not be so apparent.[11] Nevertheless, I have no theoretical cause to expect an individual's assessment of existing economic justice to ever have a positive marginal influence on redistributive preferences.

Table 6.6: Interactions in support for government reducing inequality ($Y_{gov_fix_gap}$) and progressive taxes (Y_{prog_tax}).

	$Y_{gov_fix_gap}$			Y_{prog_tax}		
Variable	Model 2	Model 3	Model 4	Model 2	Model 3	Model 4
Definition	0.852	0.214	0.546**	0.903***	0.103	0.244
	(0.530)	(0.184)	(0.226)	(0.241)	(0.185)	(0.403)
Agency	2.194***			2.145***		
	(0.654)			(0.581)		
$Def. \times Agency$	−2.654***			−2.509***		
	(0.716)			(0.641)		
Justice		2.200***			−0.124	
		(0.675)			(0.550)	
$Def. \times Justice$		−2.861***			−0.148	
		(0.731)			(0.608)	
Rich deserve			2.514**			0.833
			(1.031)			(0.867)
$Def. \times Rich$			−3.148***			−0.653
			(1.123)			(0.843)
Avg. deserve			0.055			−0.922
			(0.966)			(0.821)
$Def. \times Avg.$			−0.194			−1.300
			(1.049)			(0.958)
Poor deserve			0.189			0.662
			(0.865)			(0.926)
$Def. \times Poor$			−0.544			0.860
			(0.929)			(0.900)

[11] You can determine the most common levels of importance placed in agency in the rug plot along the horizontal axis and in the histogram plotted in relation to the right side vertical axis in Figures 6.5–6.9.

Ideology	0.470***	0.376***	0.280***	0.535***	0.493***	0.432***
	(0.051)	(0.050)	(0.049)	(0.046)	(0.054)	(0.056)
Age	0.010	0.011	0.004	0.007	0.008	0.005
	(0.007)	(0.007)	(0.006)	(0.007)	(0.007)	(0.006)
Age^2	0.000	0.000	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female	0.022	−0.009	0.024	−0.016	−0.027	−0.009
	(0.027)	(0.025)	(0.022)	(0.027)	(0.026)	(0.026)
Nonwhite	0.051*	0.048*	0.042	0.015	0.015	0.019
	(0.031)	(0.027)	(0.026)	(0.030)	(0.032)	(0.030)
Married	0.013	−0.024	−0.019	0.050	0.034	0.027
	(0.036)	(0.027)	(0.026)	(0.035)	(0.034)	(0.034)
Unemployed	−0.008	−0.018	−0.013	−0.056	−0.064	−0.070
	(0.044)	(0.037)	(0.035)	(0.054)	(0.056)	(0.056)
Education	0.024	0.009	0.075	0.109**	0.092*	0.125**
	(0.057)	(0.051)	(0.048)	(0.054)	(0.056)	(0.057)
Income	−0.197***	−0.113***	−0.107**	−0.103	−0.058	−0.047
	(0.057)	(0.051)	(0.049)	(0.062)	(0.058)	(0.062)
Constant	−0.388	0.258	0.289	−0.557**	0.125	0.156
	(0.505)	(0.217)	(0.232)	(0.232)	(0.209)	(0.385)
N	963	963	963	963	963	963
R^2	0.5076	0.5659	0.6101	0.4313	0.4407	0.4700
adj-R^2	0.4748	0.5370	0.5824	0.3935	0.4035	0.4322

All regressions control for state fixed effects. Robust standard errors given in parentheses. All variables save *age* and age^2 standardize [0, 1]. * significant at 10%; ** 5%; *** 1%

6.4 Conclusions.

I find strong empirical support for my theory. An individual's assessment of economic justice explains much of their attitude towards government-sponsored redistribution and progressive taxation. Individuals who believe that people receive their economic due see income disparities as just, the product of morally sound processes and institutions. However unattractive and whatever its implications for economic and democratic functioning, these individuals have no moral grounds on which to alter inequalities. Conversely, individuals who believe there exists pervasive economic injustice, such that people do not get the resources they deserve, see virtue in government-sponsored redistribution.

Perceptions of the wealthy are especially important in this moral calculation. Individuals con-

fident that the rich deserve their wealth are apt to see redistribution and progressive taxation as unjust, perhaps even punitive. Individuals who consider the rich *un*-deserving of their wealth, however, are especially driven to redistribute and progressively tax. These individuals cannot be certain that the resources taken from the rich will go to more deserving citizens. Still, perhaps it is better that excess resources be held by the undeserving poor than undeserving rich.

Perceptions of the poor are also important in determining policy preferences, though to a lesser degree than assessments of the rich. Individuals who believe the poor are generally undeserving of their poverty want to see resources reallocated from the relatively well-to-do. Perceptions of average American deservingness influence redistribution preferences to a still lesser degree, and have no discernable effect on an individual's tax preferences.

Assessments of all three classes will work together or at odds. For example, the moral drive to redistribute will be strongest for individuals who think that neither the rich nor poor deserve their economic standings. The rich have no moral claim to their wealth so taking a portion of it does not diminish economic justice, and the poor possess fewer resources than they deserve so giving them more increases economic justice. Moral obligations become muddier when desert assessments of different classes work at odds. For example, you may believe that the poor are undeserving of their poverty and so should be given additional resources. But if you simultaneously believe that the rich deserve their wealth, there is no good source from which to redistribute. Your Robin Hoodian inclinations have been tempered. And then there is the problem with desert assessments of middling economic means. It is unclear whether labeling them undeserving of their unexceptional-yet-adequate position means they ought to have more or less economic resources.

The other major finding of this chapter: How an individual defines economic desert influences her willingness to meddle with economic outcomes. The more important personal responsibility is to you definition of economic desert, the less you support redistributive policies. Presumably, this is a result of your not wanting to give citizens an incentive to rely on a third party for their economic wellbeing, as doing so would make them (by your definition) undeserving of that wellbeing. Interestingly, this effect does not appear to influence tax preferences. Moreover, the effect of your definition on redistributive and tax preferences is not moderated by your assessment of justice. The two work together in a linear-additive model, but do not interact.

Finally, treating economic equality as a moral issue offers insight into a long-standing debate

about citizen rationality. Individual Americans routinely oppose redistributive policies that not only accord with their stated distributional values, but stand to benefit them directly (Bartels 2008; Page and Shapiro 1992). In the aggregate, a majority of Americans recognize and are alarmed at the political and economic disparities of our "new gilded age", yet they overwhelmingly support the market system that produced those disparities and oppose the most basic policy measures meant to reduce them. Scholars have puzzled at and argued over this apparently contradictory worldview, over the bizarre American combinations of egalitarian values and worsening class division, of glaring economic disparities and a comparatively weak welfare state. How can the self-proclaimed "land of opportunity" so routinely leave so many behind?

My evidence suggests that the grave economic inequalities that so disturb many Americans also appear to them deserved, the product of a just system. Meddling with those outcomes—moving resources between actors—threatens (in their minds) to undermine that. Redistribution may make for a more pleasing allocation of resources, the "ideal profile of inequality" that Alesina and Giuliano (2011, 111) propose. But while a person's ideal inequality profile may be grounded in concern for economic efficiency, democratic functioning, or aesthetics, it has little to do with justice if we take "justice" to have any relation with desert.

Figure 6.2: Marginal effect of $X|Z_{agency}$ on $Y_{gov_fix_gap}$.
Marginal effect of desert's definition (i.e., importance of agency) on support for government action to reduce economic inequality, contingent on belief that peoples' economic standing is within their control.

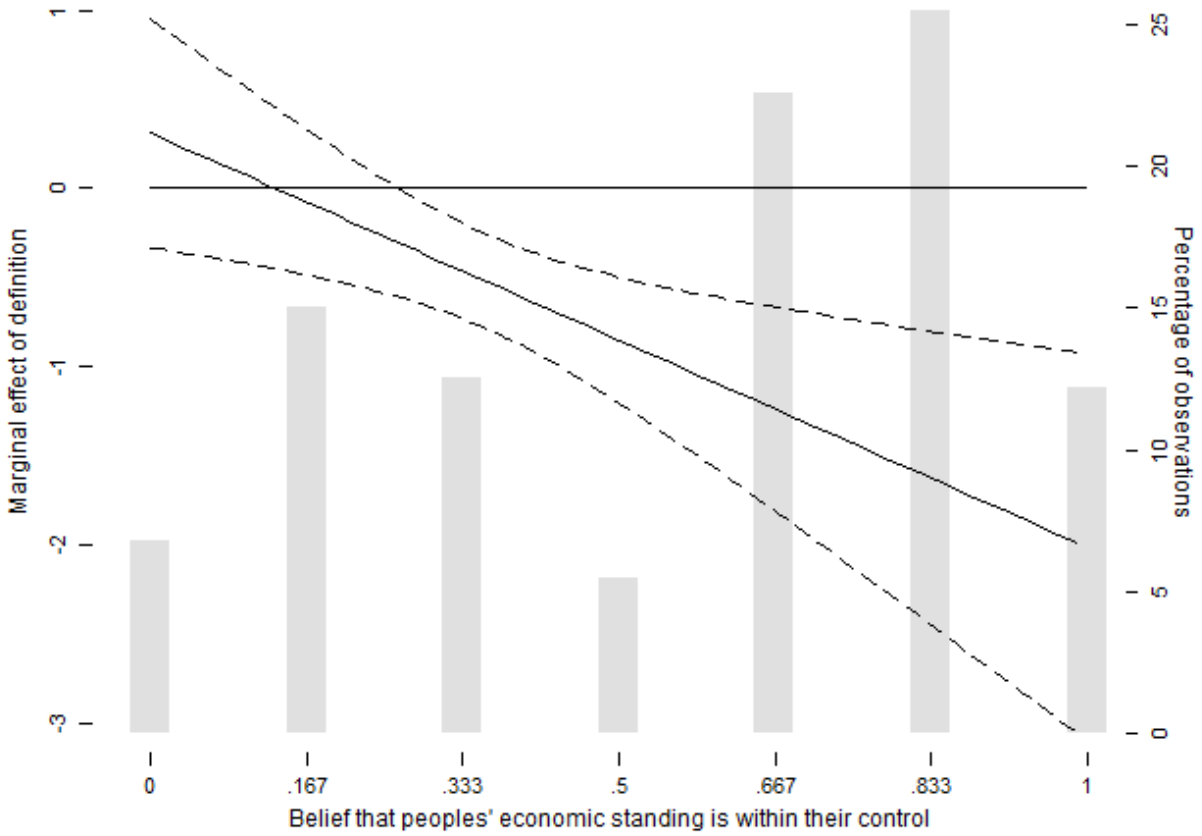


Figure 6.3: Marginal effect of $X|Z_{justice}$ on $Y_{gov_fix_gap}$.
Marginal effect of desert's definition (i.e., importance of agency) on support for government action to reduce economic inequality, contingent on belief that economic desert is rewarded.

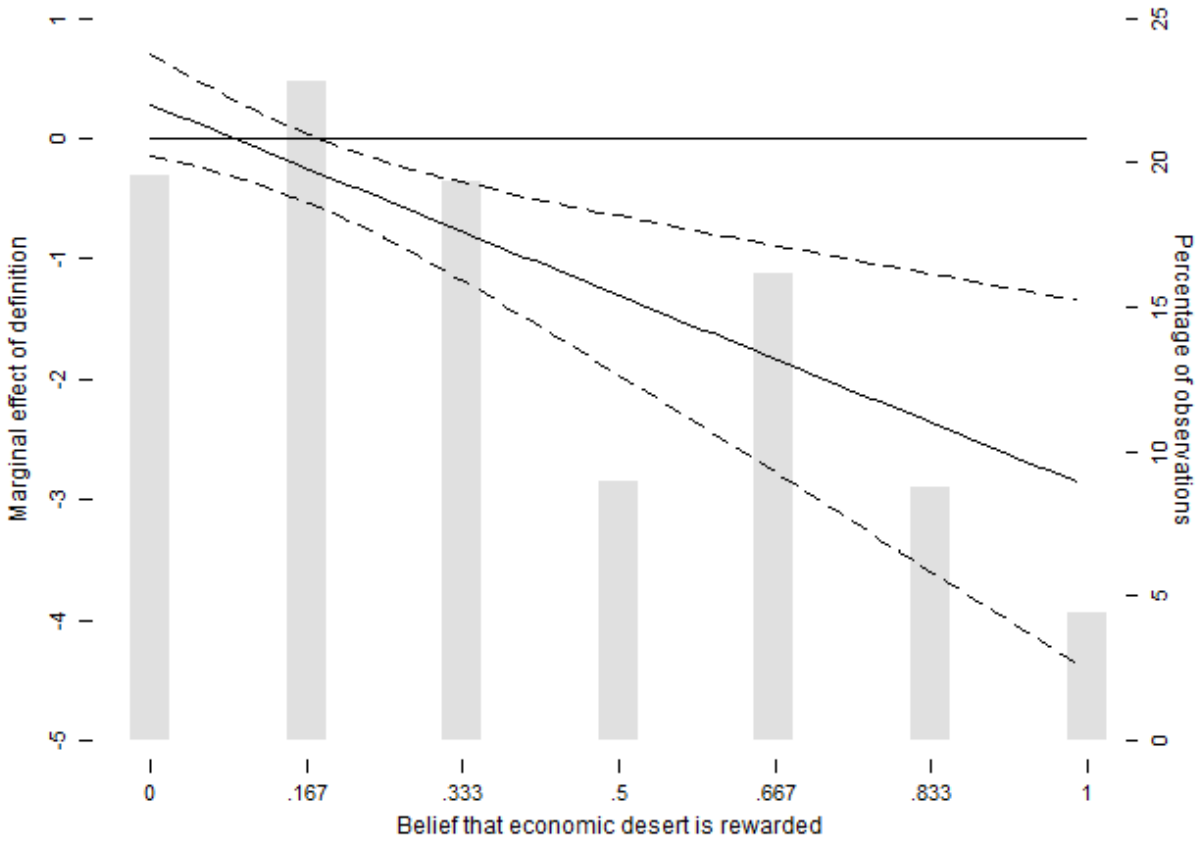


Figure 6.4: Marginal effect of $X|Z_{rich_deserve}$ on $Y_{gov_fix_gap}$.
Marginal effect of desert's definition (i.e., importance of agency) on support for government action to reduce economic inequality, contingent on belief that rich Americans deserve their wealth.

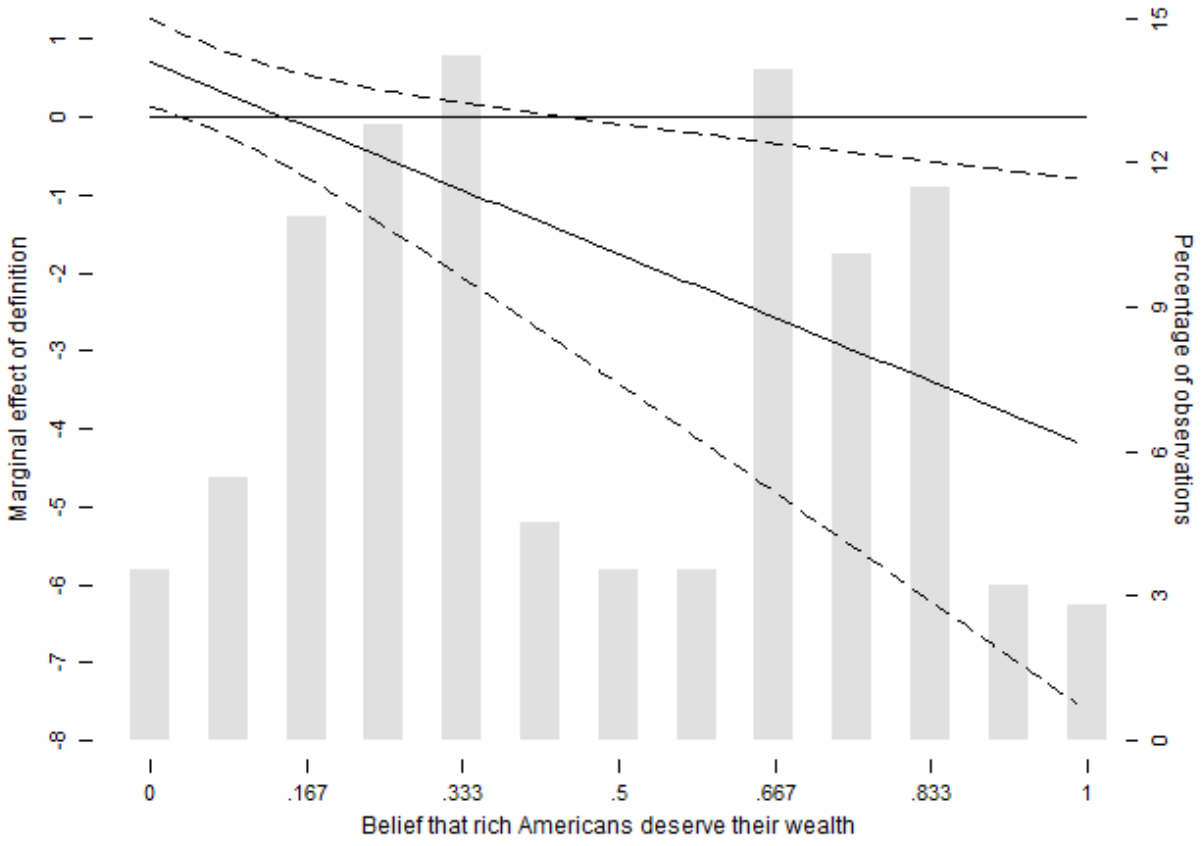


Figure 6.5: Marginal effect of $X|Z_{agency}$ on Y_{prog_tax}.
Marginal effect of desert's definition (i.e., importance of agency) on support for progressive taxation, contingent on belief that peoples' economic standing is within their control.

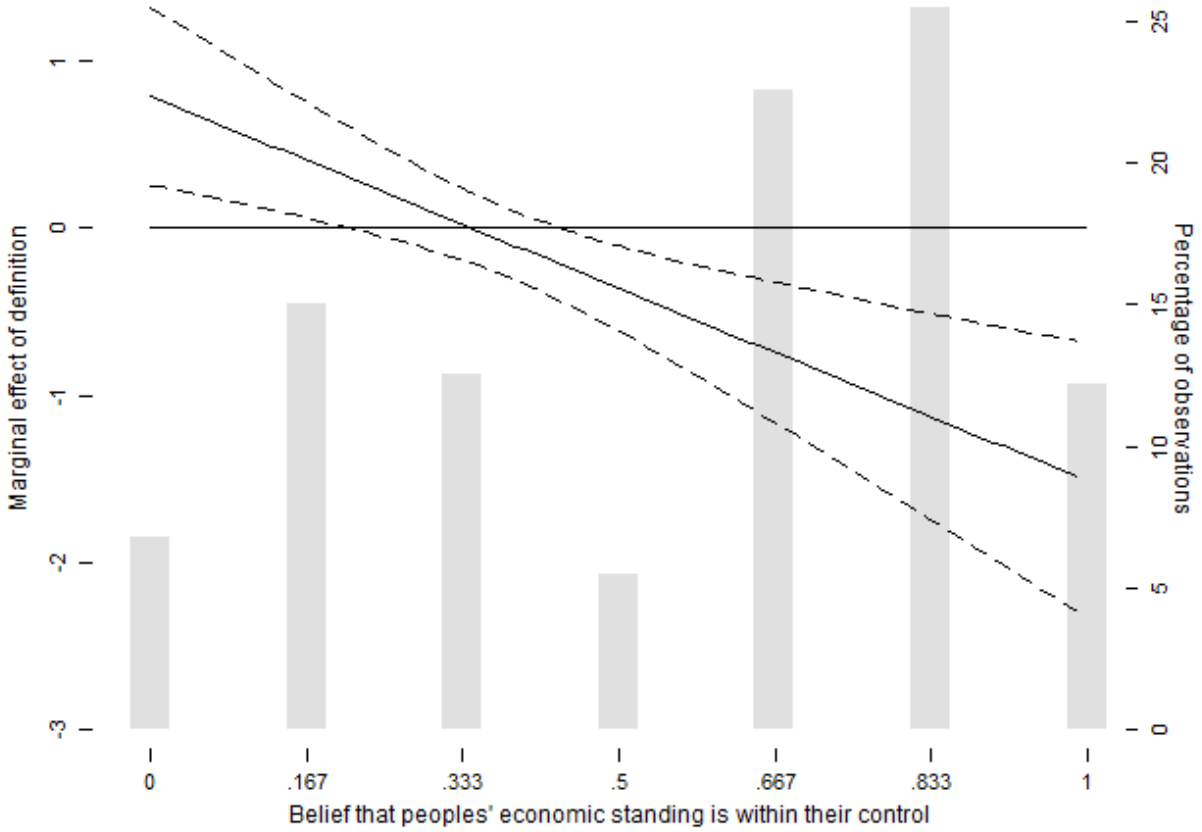


Figure 6.6: Marginal effect of $Z_{agency}|X$ on $Y_{gov_fix_gap}$.
Marginal effect of belief that peoples' economic standing is within their control on support for government action to reduce economic inequality, contingent on desert's definition (i.e., importance of agency).

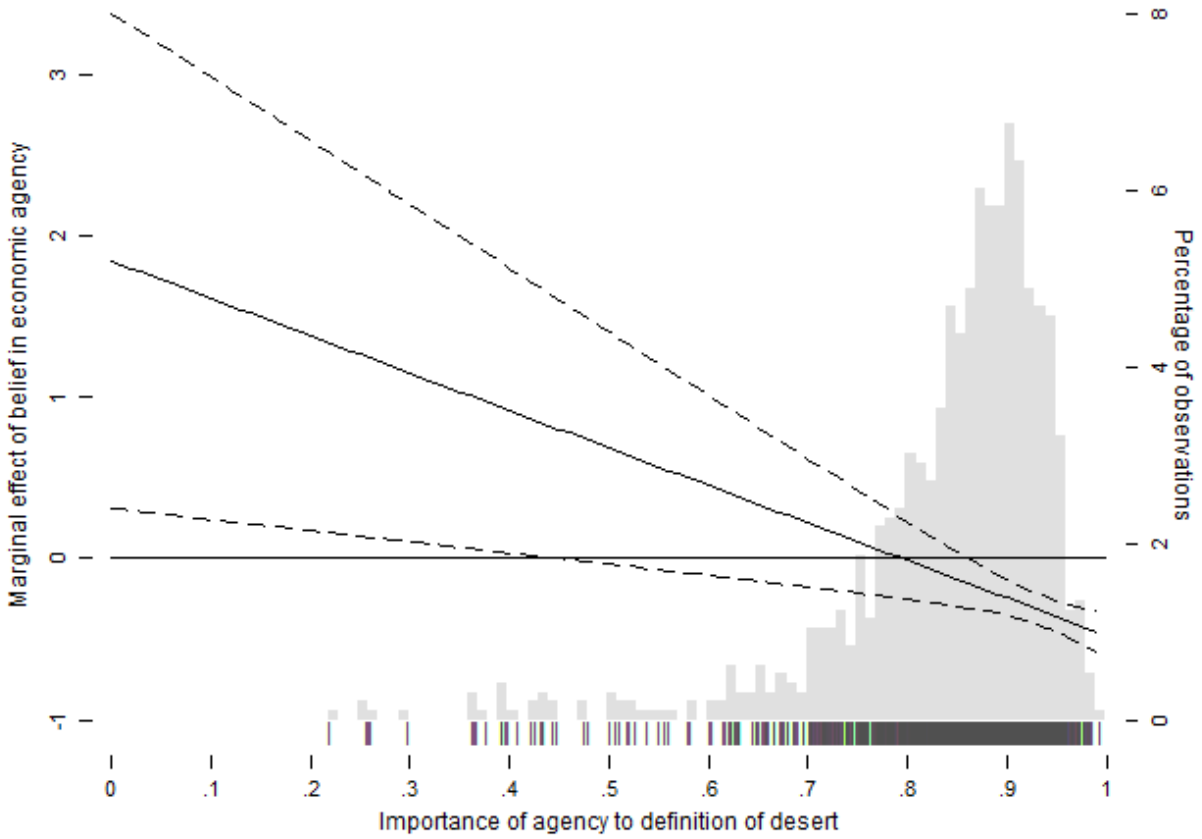


Figure 6.7: Marginal effect of $Z_{justice}|X$ on $Y_{gov_fix_gap}$.
Marginal effect of belief that economic desert is rewarded on support for government action to reduce economic inequality, contingent on desert's definition (i.e., importance of agency).

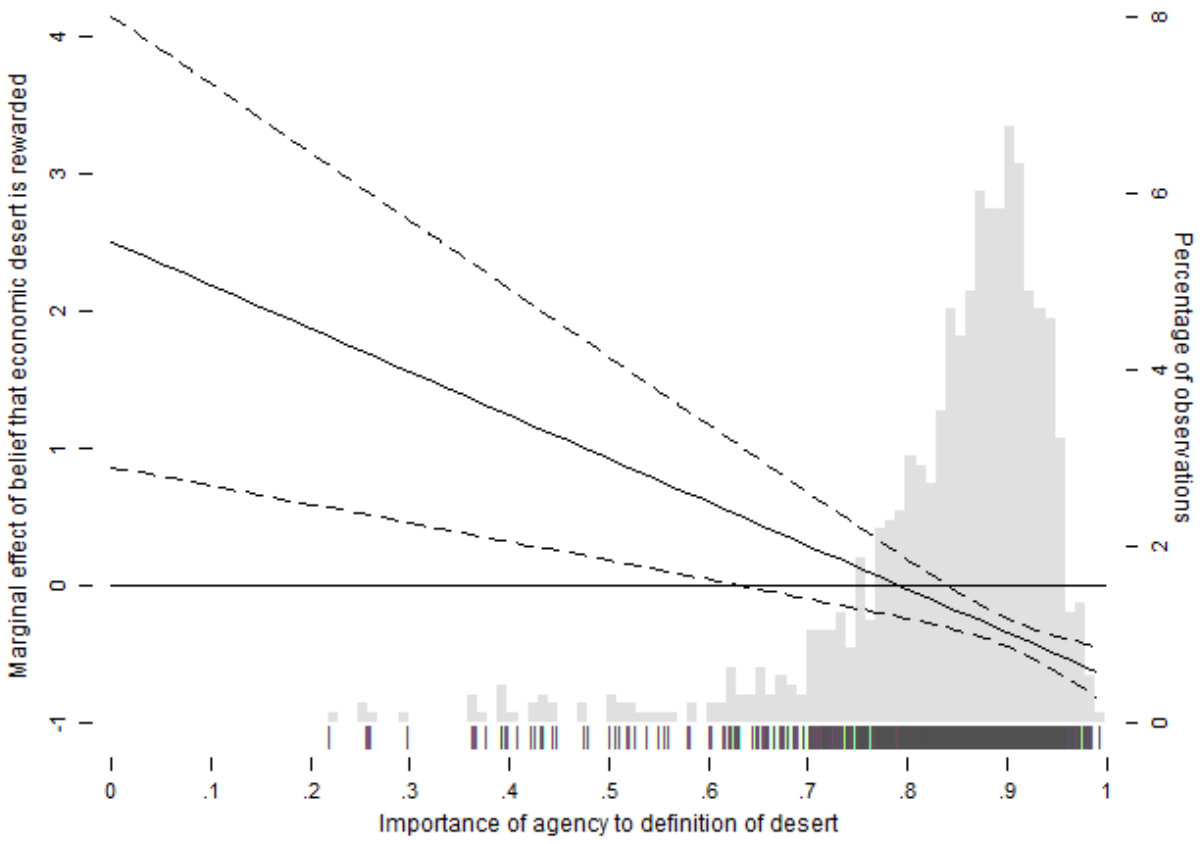


Figure 6.8: Marginal effect of $Z_{rich_deserve}|X$ on $Y_{gov_fix_gap}$.
Marginal effect of belief that rich Americans deserve their wealth on support for government action to reduce economic inequality, contingent on desert's definition (i.e., importance of agency).

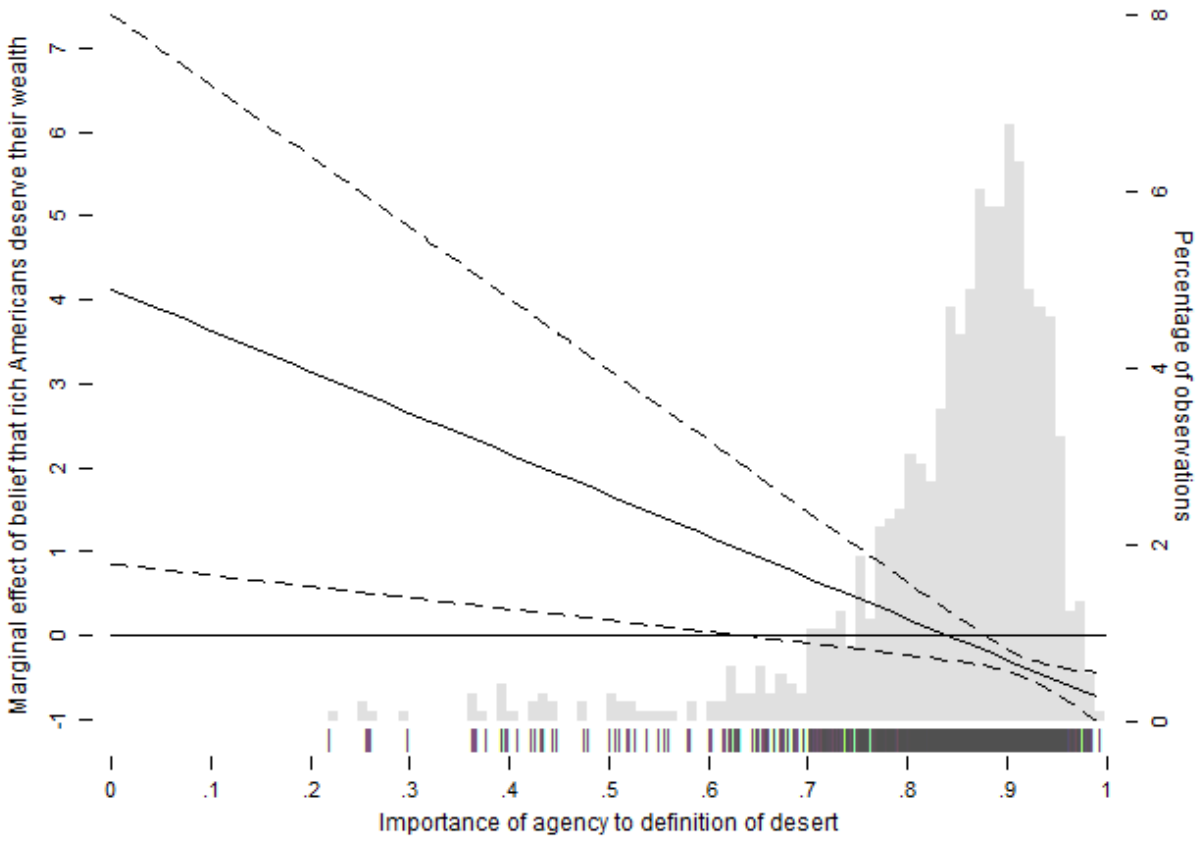
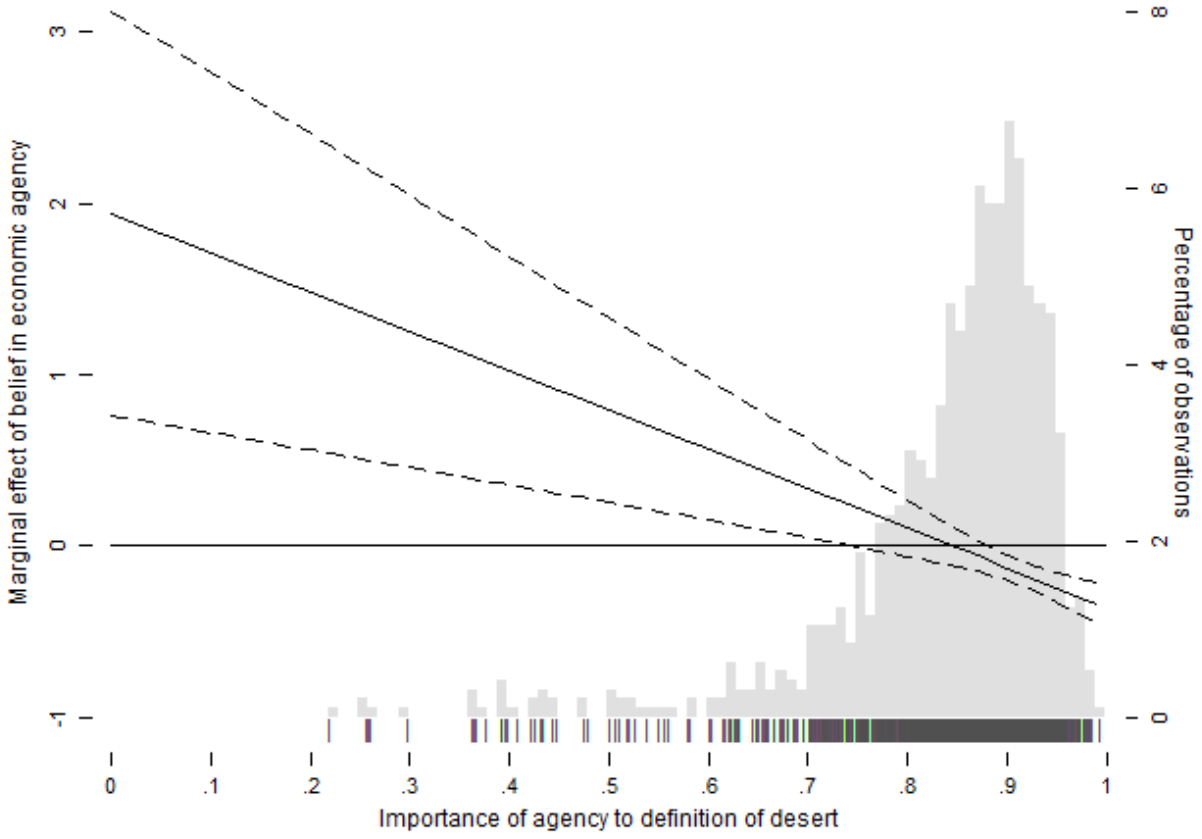


Figure 6.9: Marginal effect of $Z_{agency}|X$ on Y_{prog_tax}.
Marginal effect of belief that peoples' economic standing is within their control on support for progressive taxation, contingent on desert's definition (i.e., importance of agency).



7 | Conclusion

We have arrived at the end. To conclude, I will review the major findings and propositions of my dissertation, reflect on what they might together mean for inequality in the US, and then present what I think the most intriguing questions next confronting researchers of economic justice.

7.1 Review of findings and propositions.

7.1.1 Summary of theoretical grounding: Chapter 2.

Desert has all the hallmarks of a social institution. Communities face multiple multiple-equilibria problems, there being innumerable ways to divvy responsibilities and resources, punishments and niceties. Rather than rehash interpersonal boundaries anew at every meeting, community members erect social institutions that prescribe, demand, or forbid certain actions, with built-in incentives to conform. In so doing they generate a regularity of behavior enabling community members to go about their business with relative ease and greater efficiency. Although sometimes codified in legalese, I argue that people regularly translate institutions into a moral vernacular. Morals instruct us on right and prudent action, constraining our behavior and telling us what we might expect in the behavior of others. They are institutions, variable and evolved like any other social institutions. And by treating morals as institutions, we have a theoretical grounding for why people might act in accordance with their morals—their assessments of justice and their definitions of desert—even if those actions appear to come at personal cost.

Moreover, desert is conceptually parsimonious, joining concepts that social scientists traditionally treat as distinct. First, it unifies the three major principles of distributive justice. The need, equality, and equity principles are not discrete values that people pick from some menu of moral-

ity. Underlying each is a desert base suited to a particular context. An egalitarian, for example, is someone who thinks that good x should be allotted according to personhood. She is, at first glance, operating under the equality principle. But she is simultaneously acting on the equity principle: Every person receives x in proportion to their personhood, a scale that does not allow for much differentiation unless additional qualifications are specified.[1] Second, desert unifies distributive and procedural justice, the latter being the means by which the former is achieved. Distributive justice is concerned with determining desert bases, and procedural justice is concerned with the actual delivery of deserved objects to deserving subjects. Distinguishing between procedural and distributive justice, and between the three distributive principles, is fine as a shorthand when expediency is required. Generally better, I think, to drive right to the desert bases, objects, and subjects in question rather than erecting what are often illusory boundaries.

7.1.2 Summary of empirical findings: Chapter 3.

When it comes to economic standing, Americans want control over the factors on which their fates rest. They express this desire with impressive uniformity. The connection between personal responsibility and economic desert is not a simple parroting of the standard American refrain. It extends to American pocketbooks, such that experimental subjects are more generous in their redistributive behavior—at personal financial cost to themselves—the less agency they and others appear to exercise. More generally, my economic experiments show that apparent deservingness influences voluntary redistributive behavior, even at personal detriment to the benefactor.

7.1.3 Summary of empirical findings: Chapter 4.

There exist many practical barriers to the tailoring of reward to merit. Demand for proportionality (which might more accurately be called a "monotonic, injective mapping" of desert onto outcome) can be variable, even along a single desert metric. Some inequities seem more unjust than others; tolerance for inequity is elastic. Identifying the determinants of this variable demand for proportionality is a potentially fruitful course of research. I show that subject performance relative to

[1] Indeed, we could conceivably break "personhood" into its core components—rationality, autonomy, self-consciousness, for example—and rate potential desert subjects on those, although this leads to some uncomfortable questions (e.g., Singer 2011). Binary, categorical, or continuous, we are nevertheless confronted with the question Hofstadter (2008, 18) and so many others have posed: "Where to draw that fateful, fatal line?"

average performance on a desert metric is one source of variable demand, but there are certainly more.

7.1.4 Summary of empirical findings: Chapter 5.

People think about economic categories of people (i.e., the rich) differently than they think about individuals within those categories (i.e., a rich person). A slight majority think that the rich as a class generally lack a moral claim to their wealth. Not so for rich individuals. When confronted with the bare sketch of a wealthy person, experimental subjects already have in mind a glowing backstory. Additional information that paints the biographied wealthy individual in a positive light does little to change subject assessments of her deservingness—they already rate her as very deserving of her riches, and do so assertively. Additional information of an unsympathetic variety, however, drastically reduces their assessment of the person's deservingness. This drop in esteem is only a relative one, at least for conservatives, who seem unwilling to declare rich Amanda as outright undeserving of her wealth, regardless of how she achieved it.

The findings are reversed for the downtrodden. A healthy majority think that poor Americans do not deserve their poverty, suggesting a level of sympathy for the economically downtrodden, at least as an abstract class of people. But when assessing the deservingness of an impoverished individual about whom they know nothing else, subjects are on the whole agnostic, tending toward un-generous among conservative subjects. We do not extend the same generosity toward poor individuals that we do rich individuals.

Americans rest easy believing that their financial betters merit their wealth. The unworthy, they trust, are kept out of the upper economic echelons. But this faith is only so deep. There is no corresponding conviction that our economic system manages to keep people undeserving of poverty out of it.

7.1.5 Summary of empirical findings: Chapter 6.

The more confident you are that people get their economic due, the more government tampering threatens to undo an already just (or just-ish) resource allocation. Conversely, the more skeptical you are of desert's reward, the more appealing government's promise to correct economic injustice. How an individual defines economic desert also influences her willingness to meddle with economic

outcomes. The more important personal responsibility is to your definition of economic desert, the less you support redistributive policies. Presumably, this is a result of your not wanting to give citizens an incentive to rely on a third party for their economic wellbeing, as doing so would make them (by your definition) undeserving of that wellbeing.

7.2 Reflections on evidence for desert, and public lies.

Let us take heart in a rare overlap of liberal-conservative opinion: Americans from both sides of the isle identify personal responsibility as a critical component of economic desert. This desire for control over our socio-economic station may be a fundamental part of human psychology, or it may be nothing more than a vestige of our nation's Protestant origins, a whisper of our frontier ambitions, or a hastily swallowed opioid courtesy of the capitalist class. More likely is a combination of the above, but whatever it is, this point of left-right agreement seems a balm in these politically polarized times. Liberals and conservatives, Democrats and Republicans broadly agree on what makes a person deserving of economic success and failure. They disagree, however, over whether economic desert is actually rewarded.

These three phenomena—political ideology, definition of economic desert, and faith in its reward—together shape an individual's redistributive preferences. Their additive relationship may lead to curious political behavior: for example, a conservative citizen voting in support of a progressive tax or a poor citizen opposing government anti-poverty programs. But we are not singularly conservative or liberal, rich, poor, or somewhere in-between. Our political and economic identities simultaneously determine and are determined by numerous other considerations, including the moral ideas on which this dissertation focuses. If that conservative thinks economic desert unrewarded or that pauper is convinced that government aid will upset the moral balance, their seemingly uncharacteristic opinions are more rational than social scientists often allow. That does not mean, however, that there is no room for delusion or incompetence.

An influential set of psychological models collectively known as "just world" or "system justification" theories postulate a universal human need to believe in the fairness of outcomes; that people get what they deserve and vice versa (Lerner and Miller 1978). The basic notion is that "living in an uncontrollable, and capriciously unjust world would be unbearably threatening, and

so we cling defensively to the illusion that the world is a just place" (Jost, Blount, Pfeffer and Hunyady 2003, 58; Lerner 1980). Social scientists from a range of disciplines are similarly quick to root financially-detrimental or self-contradictory policy preferences in individual incompetence (e.g., Bartels 2005, 2006; Page and Jacobs 2009; Slemrod 2006) or gullibility (e.g., Martin 1991; Page and Shapiro 1992; Page 1979, 1983), and they wrangle an impressive array of evidence to show as much.

That many people—even the most economically vulnerable—*believe* economic outcomes are merited, the product of a just system, does seem a product of delusion and/or stupidity, especially as the distribution of economic and political resources becomes so very, undeniably imbalanced. But there are plenty of findings that call into question these research programs (for a taste, see Appendix B), and the phenomenon is more intricate than the prevailing literature allows.

There is too little effort to understand what, exactly, economic desert means to actual people. A full accounting of the economic, social, and moral pressures that bear on our values and policy preferences will show that people have good cause to be pulled in many directions. As I already demonstrated, people can be troubled by inequality but not think it right to address. Rather than summarily label as "delusional" or "irrational" the many Americans who find their political, moral, and financial values in conflict, better to find out whether this conflict is aided by inaccurate information or untenable assumptions. Put simply, we need to dig deeper to see *whether and at what point* the delusion or irrationality occurs. I will elaborate.

Imagine two wealthy, conservative citizens. Both agree that increased taxes would harm their private consumption. Both, as a matter of ideology, support a limited role for government.[2] And both tolerate inequality as a matter of principled allegiance to competition, which necessarily produces winners and losers and has socially stratifying effects. They differ on the question of whether poor denizens of their city deserve to be poor. The first citizen has it in her mind that the poor earned their lot; the second holds that the poor unjustly find themselves in that position. Everything about the first citizen's worldview moves her to oppose government action meant to reduce economic inequality. The second citizen is torn but eventually voices support for government intervention. The first citizen's values, financial interests, moral assessment, and policy preferences all

[2]If their dislike of government were based on a belief that government agencies are less efficient or effective than their private counterparts, that would be an empirical matter open to investigation (e.g., Rainey and Steinbauer 1999).

align, but that does not mean she is operating on reliable information or drawing sound conclusions from that information. The second citizen's values and financial interests conflict with her moral assessment and her stated policy preferences, but that does not mean she is delusional or confused. What is the source of the citizens' different beliefs about the deservingness of the local poor? Is it faulty data, unsound logic, or misplaced faith. These are issues that social scientists, journalists, and policymakers can meaningfully address.

The different deservingness assessments could originate in contradictory evidence. The first citizen saw on the evening news that affluent community members donated vast resources to local public schools such that local children of all backgrounds have access to adequate schooling. The second citizen read in the newspaper that affluent people tend to buy their way to more prestigious schools and funnel resources away from public schools, and children of lower socio-economic status are disadvantaged in the labor market. Or the different beliefs could be based on evidence regarding altogether different aspects of desert. The first citizen may not know anything about the state of public education, but knows from the newspaper that local merchants are desperate for unskilled labor and thus fathoms that the unemployed need not be so. Our hypothetical citizens are not necessarily misguided for believing the poor do or do not deserve their poverty. They are misguided if they are basing those beliefs on inaccurate information (i.e., the news anchor overstated the amount donated to local public schools) or making flawed extrapolations from accurate information (i.e., thinking that the unemployed can easily apply for and get those unskilled labor positions).

Or, the different assessments could be detached from evidence and based instead on blind faith, or a lack thereof. Intimately related to desert and almost as powerful is another social institution: the *public lie*. Both citizens were brought up believing that America is that land of opportunity, that hard work is a guaranteed path to a comfortable living. Believing otherwise is tantamount to sacrilege, with the hefty internal costs that accompany doubt. Moreover, believers would impose external costs on the unbelievers in their communities.[3] Their fellow conservatives, who are especially devout in celebrating the American Dream narrative, may be a particularly uncomfortable clan from which to break rank. For the first citizen, the tale may constitute sacred doctrine: Either the message stuck, or the costs for denying it are too great. She has no inclination

[3]Remembering back to Chapter 2, these internal and external costs for norm violation are Crawford and Ostrom's (1995) internal and external deltas. Additional, more formal costs may also attend the denial of a public lie if it its observance is a rule, with an "or else" clause.

to gather evidence as to the deservingness of her neighborhood's poor, and any evidence that comes her way will be casually dismissed as heretical. Instead, she takes it as a given. The second citizen, conversely, is unconvinced and willing to shoulder the costs of her doubt. Skeptics like the second citizen can be swayed by evidence.

In addition to social scientists' role in vetting that evidence and ensuring it is used to formulate coherent expectations, we can do a better job determining who is open to it, who is not, and why. Understanding the public lies that persist is an important part of that obligation. That might mean investigating the public lie itself in manageable research questions, and doing so might undermine dominant definitions of desert and lead to new ones. Does hard work guarantee a comfortable financial existence? We may find that it does not. Academic pedigree may be uncovered as a much better predictor. Do we have access to equitable schooling, or can dedicated study secure us entry to prestigious schools? Probably not, so what does influence our educational trajectory, and are those factors affected by personal decisions or structural factors? Repeated enough times and we may eventually arrive at an answer to a bigger question: Is it reasonable to expect that we have control over our financial wellbeing and ought we be judged as if we do?

This cascade of questions starts with and comes back to the idea of desert. Addressing them systematically, we can do a better job of determining what aspects of peoples' worldviews are misguided, rather than dismissing the belief in justice itself as misguided if it exists in the presence of a wealth and income gap. Such gaps, however troubling, may be the product of just processes. We would do well to spend less time harping on the growing gap between haves and have-nots and spend more time figuring out whether everyday people's definitions of desert has been satisfied. Justice, I will say again, it is not about the shape of economic distribution, but causes that formed it.[4] It's pursuit can be messy and lead us down roads we would rather leave untrod. The "right" thing to do may not seem practical or appealing. And sometimes expediency tempers or trumps our moral concerns. But we cannot succeed or fail in our moral duty until we have some notion of what it is.

[4] And as we learned from Chapter 4, the magnitude of inequity may not be proportional to the anger people feel toward it.

7.3 Can desert be rewarded? And what if it cannot?

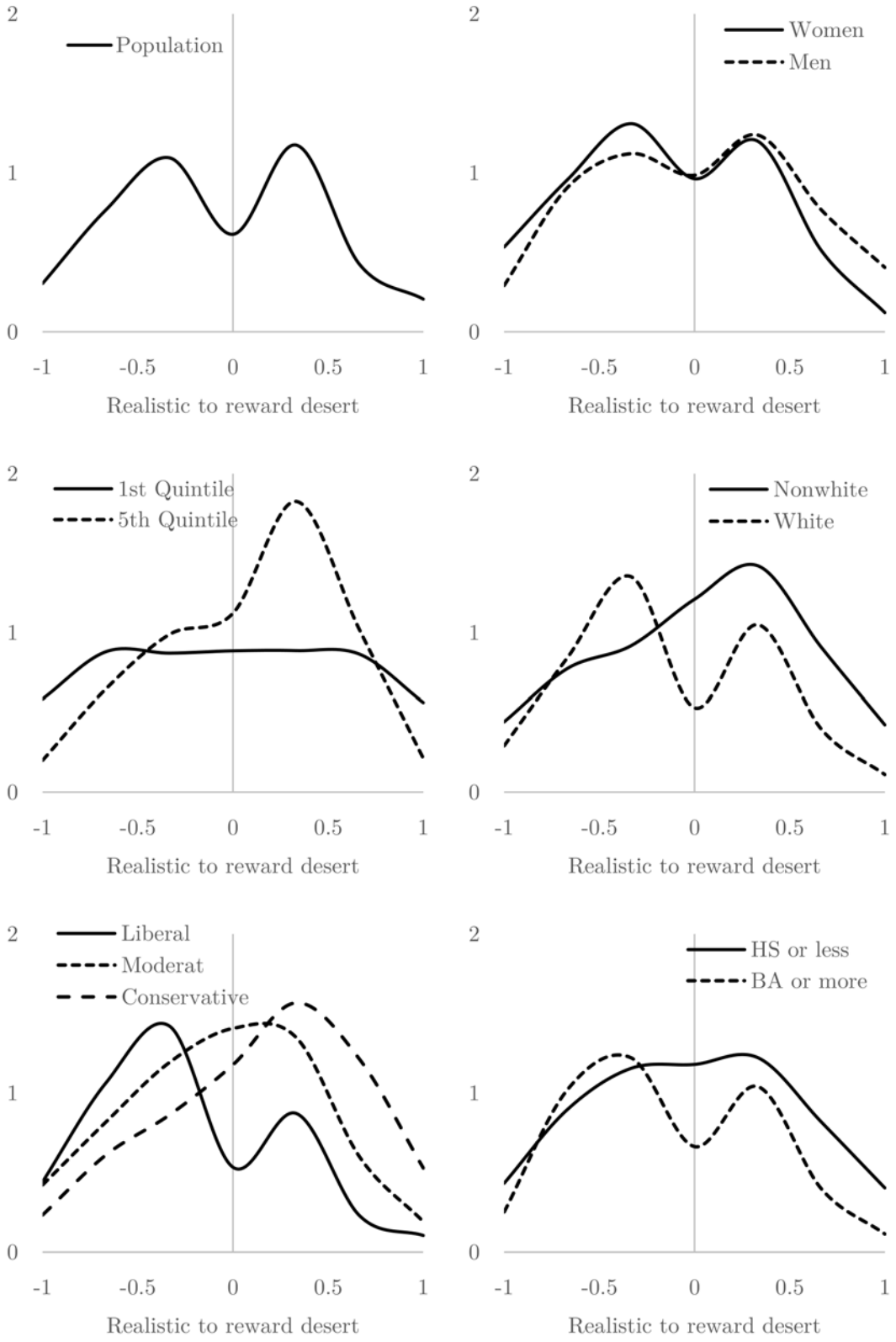
Before leaving you to the appendices and bibliography, I will speculate regarding an important aspect of economic desert we have hitherto not discussed: Do we think it can actually be rewarded? An individual's answer to that query, I suspect, will be of utmost importance to the specific manner of redistribution they support, if any.

As you can see in the density plots of Figure 7.1, different segments of the population have very different beliefs about the practicality of rewarding economic desert. Respondents in my large-N survey answer the following question: "Some people think that it would be quite easy to ensure that people get the economic position they deserve. Others think it would be quite difficult. What about you? How realistic is it to expect that people will get what they economically deserve?" Positive responses approaching 1 indicate the respondent believes the proposition "very realistic", and negative responses approaching -1 indicate the respondent believes it is "very unrealistic". Responses are centered about 0, which means the respondent thinks the proposition is "neither realistic nor unrealistic". The results displayed in Figure 7.1, which are weighted to reflect the demographic breakdown of the US population, show clear differences across demographic variables. For example, high income earners and conservatives are more likely than their poor and liberal countrymen to believe that rewarding desert is a goal which we can sensibly aspire.

These preliminary findings may seem a minor addition to those presented in Chapters 5 and 6, wherein I model individual determinants leading people to believe that desert *is* rewarded and show that that influences redistributive policy. What I am arguing here is subtler. At a base level, you may think the entire attempt to reward desert folly, an impractical and unwieldy endeavor. You acknowledge the randomness that undergirds each of our lives: Some people will be born with or trained to develop this set of qualities, others other qualities; some people will be born with or come to covet this set of resources, others other resources. And all of this set to change with time, location, personality, etc. Sorting responsibilities and resources according to desert is a truly herculean task.

Suppose you are of that persuasion—that our best efforts to discern and repay desert will inevitably miss the mark—and let us take note of a few things. First, you are still able to assess, however imperfectly, the state of economic justice. You may have some evidence that Person A

Figure 7.1: Density graphs showing the likelihood of different populations to believe that economic desert can realistically be rewarded.



gets her economic due, though you may not overly trust that evidence. When asked if Person A got what she deserved you can respond affirmatively, but indicate meager confidence in that assessment (which respondents in my experiments and survey often did). People, that is, build into their evaluations of justice the quality of their evidence. And this act of assessing desert's reward is distinct from the level to which they think rewarding desert realistic; indeed, the two are not correlated to any great degree, as you can see in Table 7.1, the data behind which is taken from my large-N survey and allows for appropriate weights. This is important to appreciate because it means that nothing I am about to say undermines any of my previous findings, but stands to add to them if investigated empirically.

Table 7.1: Correlation between respondents' (i) belief that rewarding desert is realistic and (ii) assessments of justice.

	Realistic endeavor	Overall justice	Rich deserve	Average deserve	Poor deserve
Realistic endeavor	1.0000				
Overall justice	0.4187	1.0000			
Rich deserve	0.4775	0.6278	1.0000		
Average deserve	0.3708	0.4633	0.4469	1.0000	
Poor deserve	0.2512	0.3528	0.3739	0.3731	1.0000

Second, your cynical outlook leaves you with a motley assortment of policy prescriptions meant to address inequalities. For example, out of your disenchantment arise two perfectly serviceable distribution schemes that seem very much at odds. The first has you continually redistribute resources equally among everyone.[5] Unable, in your opinion, to reliably sort out deservingness, better to play it safe and dole out what there is equally. While this scheme is functionally equivalent to an egalitarian one, the impetus is wholly different. Egalitarians have at the core of their policies a broad desert base—personhood. Your decision to distribute equally is not grounded in any desert base, but in the apparent impracticality of identifying and rewarding such bases.[6] The second

[5] Or, for reasons of administrative and technical feasibility, all adult humans residing in a particular state or nationality.

[6] To see why identifying a desert base so ostensibly clear-cut as personhood is actually rather difficult, refer back

scheme has you redistribute nothing at all, ever. Convinced that policies meant to define, identify, and reward desert are unworkable, you instead let the chips fall where they may. Chance is an unavoidable force. We will each be under-, over-, and properly compensated at different times, though the errors in any one life do not necessarily cancel out. Some people will have an easier time of it than others. Rejoice in what good there is, and accept the bad.

Everyday political observers would classify the aforementioned distribution policies as liberal and conservative, respectively, though both can conceivably stem from a common root: Embracing stochasticity. People more comfortable with the notion of randomness, I posit, will be less inclined to judge merit, less inclined to fit people into moral boxes. This quality has something of a mystical character. As with all institutions, the origins of economic desert lie in repeated human interactions and they develop through an evolutionary process. For many of us, the proper reward of desert seems a more or less workable goal; one that, at the very least, our social interactions compel us to pursue. But the moral language in which desert institutions are couched imbues them with a higher quality, transcending a social covenant and assuming a quasi-religious stature. The pursuit of economic justice, then, may seem inevitable to some. For others it will appear forever beyond our reach, a "shining city on a hill" too grand to actually construct. Where in this spectrum you fall has important implications for the present state of policy and for future you would have us pursue.

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to footnote 1 from this chapter and see the citations therein.

A | Translating Desert into Institutional Statements

There are a few practical matters to consider when translating desert statements into institutional statements that did not comfortably fit in the main body of the dissertation. I include them here in a series of four notes. Some of these notes reference desert and institutional statements first introduced in the main text, and I reprint those here:

- ▸ **DS$_2$** People who labor (B_1, B_2, S) deserve at least enough money to cover basic needs (O).
- ▹ **IS$_{2a}$** People [labor] [must] [possess enough money to cover basic needs] [ ].
- ▹ **IS$_{2b}$** People [labor] [may] [possess more than enough money to cover basic needs] [in peacetime].

- ▸ **DS$_3$** People who labor exceptionally hard (B_1, B_2, S) deserve fantastic wealth (O).
- ▹ **IS$_{3a}$** People [labor exceptionally hard] [must] [possess fantastic wealth] [ ].
- ▹ **IS$_{3b}$** People [do not labor exceptionally hard] [may] [possess fantastic wealth] [ ].

Now on to the practical advice.

First, many norms may reside latent within a single, ostensibly straightforward, desert statement. Clever wording might allow the translator to represent several institutional statements as one, but at a cost. For example, IS$_{2a}$ and IS$_{2b}$ can be combined:

- ▹ **IS$_2$** People [labor] [must] [possess at least enough money to cover basic needs] [ ].

Breaking IS_2 into IS_{2a} and IS_{2b} serves an explicatory function, making clear a "may" deontic otherwise hidden in an obligatory "must".

Second, it may seem odd to mention personhood as a basis of desert and specify "people" as the group in an institutional statement. You might be inclined, for example, to rephrase DS_2 and its corresponding institutional statements thusly:

- ▸ **$DS_{2'}$** Laborers (B, S) deserve at least enough money to cover basic needs (O).
- ▹ **$IS_{2a'}$** Laborers [ ] [must] [possess enough money to cover basic needs] [ ].
- ▹ **$IS_{2b'}$** Laborers [ ] [may] [possess more than enough money to cover basic needs] [in peacetime].

Here we have abridged "people who labor" into "laborers", with little apparent influence on the thrust of our moral argument. But in a strict sense, there are plenty of non-human actors that labor. Do pack animals deserve, and must they be guaranteed, money to cover their daily essentials? Perhaps, although few mules have mastery of their finances. The point: Humans are by no means the sole subjects of desert (McLeod 2013), and being human is frequently an unstated basis in our everyday statements of desert. Better to be exhaustive rather than leave relevant bases implied. (See, however, note four below.)

Third, it may be tempting to record a desert basis as an institutional condition, but this is inadvisable. Institutional conditions are meant to restrict the scope of the shared strategy, norm, or rule. The group and attributes listed in an institutional statement similarly set parameters on the applicability of strategies, norms, and rules, but they correspond nicely to the concepts of desert subjects and bases in a way that institutional conditions do not. In desert statements, deserving subjects are things that are entitled to some deserved object, and desert bases are facts about those subjects (Feinberg 1970; McLeod 2013). In institutional statements, the group and attribute components are facts about the subjects who are prescribed some action or outcome. Conditions, on the other hand, pertain not to subjects of the institution, but to the when, why, and how of the institution (Crawford and Ostrom 1995).

There are two bases of desert in DS_3 (being a human and working exceptionally hard) and all things that meet those bases (exceptionally hard-working humans) are subjects who deserve

fantastic wealth. Rearranging IS_{3a} such that the second basis appears in the conditions component rather than the attributes component produces the following statement:

▷ **$IS_{3a'}$** People [ ] [must] [possess fantastic wealth] [when they labor exceptionally hard].

The difference between IS_{3a} and $IS_{3a'}$ is not as innocuous as it may initially appear. According to DS_{3a} and IS_{3a}, humans who are particularly industrious deserve fantastic wealth. According to $IS_{3a'}$, humans deserve fantastic wealth *when* they are especially industrious, as if the norm springs into action when this temporal stipulation is met.

Fourth, the group specified in an institutional statement should indicate the most inclusive desert basis, and can be modified by additional bases included in the attributes component. For example:

▸ **DS_5** American males who labor exceptionally hard (B_1, B_2, B_3, S) deserve fantastic wealth (O).

▷ **IS_5** Americans [male, labor exceptionally hard] [must] [possess fantastic wealth] [ ].

Here we can dispense with our explicit mentioning of "people" as only people can be American citizens. Were we to begin IS_5 with "males" or "exceptionally hard laborers", personhood would not be implicit as non-humans can be males and can labor. Not all Americans, however, are males, and not all Americans are especially diligent in their work. Accordingly, these bases appear as attributes in our institutional statement, and Americans comprise the group.

B | Other Explanations of Conflicting Preferences

Political scientists, economists, sociologists, social psychologists, and everyday folks have proposed several solutions to the confusing public opinions regarding inequality introduced in Chapters 1 and Chapter 6. How is it that a majority of Americans can simultaneously oppose economic inequality and the programs meant to reduce it? The various accounts can be condensed into five general explanations. The first two explanations posit an American public that—be it ill-informed, self-centered, misled, or delusional—is unable to make an accurate assessment of economic policy. The second two explanations go in quite the opposite direction and posit an American public that is financially forward-looking, if not outright shrewd and calculating. The fifth and final explanation ignores this debate and focuses instead on citizens' preferences for equality of opportunity and their corresponding aversion to government intrusion.

B.1 Americans are confused about economic policy.

Tax forms are frustratingly complex; tax policy is damnably so. Much of the actual negotiating of tax law is conducted outside of the public's view and in highly technically language. It may be that Americans simply do not fully grasp tax incidence (Page and Jacobs 2009, chapter 4; Slemrod 2006; Bartels 2006, 2005), and their policy preferences are backward because of it. The uniformity and longevity of American opposition to progressive tax rates, however, suggests there is more to the story than mere misunderstanding (Page and Shapiro 1992, 166), and recent empirical investigations indicate that ignorance does not well account for an individual's tax preferences (Krupnikov et al. 2006; Lupia et al. 2006).

Perhaps people fail to bring their egalitarian views to bear when appraising aspects of economic policy. American's perception of macroeconomic trends trumps personal pocketbook consideration

when inside the voting booth (Gomez and Wilson 2001; Markus 1992; Kinder and Kiewiet 1981), but affect toward certain tax policies displays the opposite tendency. Opinions about tax cuts are far more influenced by an individual's attitude about their own tax burdens than that individual's attitude toward the tax burden borne by the wealthy (Bartels 2008, 163).

Or perhaps public opinion has been manipulated, the general population hoodwinked into supporting self-detrimental policies (Page 1983, 1979). Vigorous propaganda campaigns have been waged to generate favorable public opinion toward regressive tax policies. "Supply-side" tax cuts, reduction of capital gains taxes, and encouragement of "capital formation" have been the goals of targeted, prolonged political and media promotions (Martin 1991). Contemporary political discourse vilifies any attempt to exact a fair share from so-called "job-creators" (e.g., Krugman 2011; Thompson 2011). Popular egalitarian values may have been sufficiently silenced or warped so as to coexist with these decidedly in-egalitarian policies (Page and Shapiro 1992, 166).

B.2 Americans exhibit symptoms of "just world" theories.

Self-delusion is another possibility. An influential set of psychological models collectively known as "just world" or "system justification" theories postulate a universal human need to believe in the fairness of outcomes; that people get what they deserve and vice versa (Lerner and Miller 1978). The basic notion is that "living in an uncontrollable, and capriciously unjust world would be unbearably threatening, and so we cling defensively to the illusion that the world is a just place" (Jost, Blount, Pfeffer and Hunyady 2003, 58; Lerner 1980). This reaction is apparently facilitated through conscious and non-conscious means (Kay and Jost 2003; Hafer 2000) and holds whether the mentally-insufferable transgression is directed at one's self or others generally (Lipkis, Dalbert and Siegler 1996; Rubin and Pelau 1973). Integration of various strains of the just world formulation provide a fascinating account of Americans' perplexing juxtaposition of egalitarian and reactionary values (Jost, Glaser, Kruglanski and Sulloway 2003).

Recent political science findings may lend credence to just world theories underlying Americans' seemingly bizarre attitudes towards tax policy and economic fairness. When surveying politically knowledgeable citizens, self-identified conservatives respond very differently than liberals to normative and factual questions regarding economic inequality (Bartels 2008, chapter 5; Verba et al.

1987; Hochschild 1981). Political ideology has long been posited as a mediator between "perceptions of fact and assessments of value in the realm of inequality" (Bartels 2008, 149; Jost, Federico and Napier 2009; Jost, Blount, Pfeffer and Hunyady 2003; Jost, Glaser, Kruglanski and Sulloway 2003; Rasinski and Tourangeau 1991; Rasinski 1987; McClosky 1958). There are, however, two compelling accounts for this empirical finding, and only one relies on just world theories.

On the one hand, conservatives' relatively unsympathetic posture toward economic have-nots may be a matter of personality. Conservatives, the thinking goes, are "especially sensitive to the stresses of an unpredictable, uncontrollable environment—and thus especially strongly motivated to deny its threatening features" (Bartels 2008, 149). Under this view, people espouse a conservative ideology because of this feature of their psychology, or upbringing in a conservative environment embeds this feature in their consciousness. If this is the case, just world theories have great explanatory power in the realm of public opinion toward wealth redistribution.

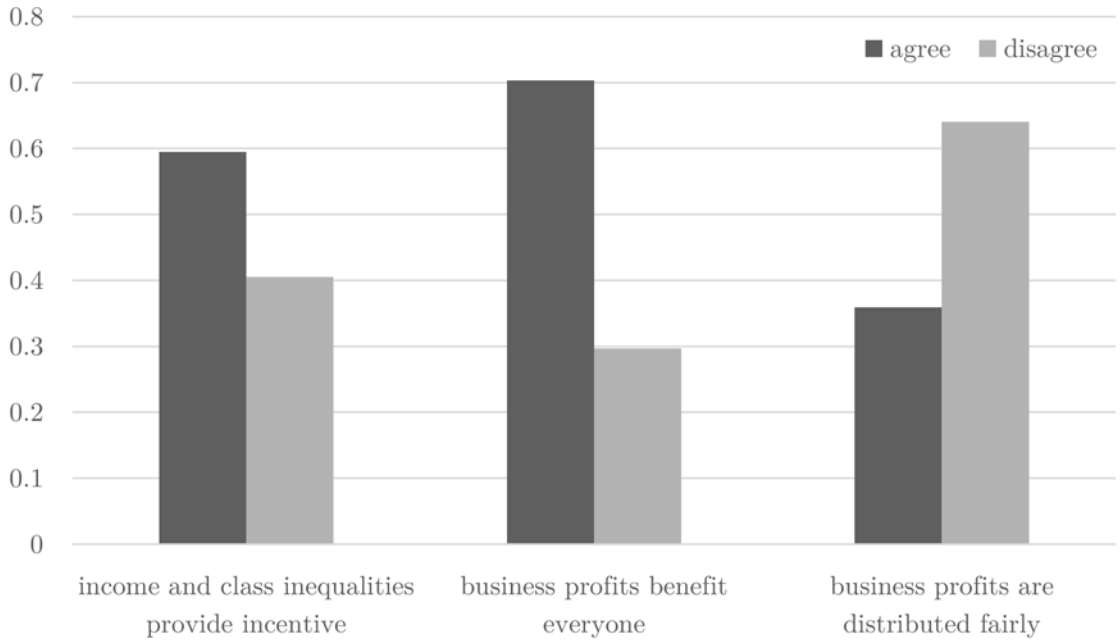
On the other hand, some deeply rooted dread of uncertainty may have nothing to do with conservative attitudes toward redistribution. Rather, it is ideological loyalty and a commitment—conscious or not—to the belief in the justice and efficacy of the prevailing system that drives political opinion on the matter. Conservatism in the American experience is, after all, a "prototypical system-justifying ideology, in that it preserves the status quo and provides the intellectual and moral justification for maintaining inequality in society" (Jost, Blount, Pfeffer and Hunyady 2003, 63).

The contending theories are observationally equivalent and both are valid explanations of the empirical findings mentioned earlier (Bartels 2008, 149). Just world theories very probably describe an actual psychological phenomenon. They simply do not seem to be a motivating force in American attitudes toward government redistribution policy, for the same reason that confusion, ignorance, and manipulation are unsatisfactory. As Table 6.1 attests, the simple truth is this: Americans understand that the current tax structure, and the prevailing economic system generally, favors the already well-to-do. And while there is evidence that people can rationalize an interpersonal arrangement as fair *ex post facto* a la motivated reasoning, numerous experiments show player-described "fair" outcomes usually qualify as just under broader notions of stability and fairness that either evolved over the course of the experiment or were held by the subjects *ex ante* (Binmore 2011, 73–75).

B.3 Americans are forward-looking proponents of growth.

Far from being confused, it may be that the ostensibly misguided tax preferences of Americans attest to their understanding of and belief in neoclassical economic theory (Page and Shapiro 1992, 165–166). Promoters of the neoclassical intellection argue that progressive tax structures create disincentives to work, save, and invest. Economic growth requires such behavior to be widespread. Americans, in wanting to spur economic growth, voluntarily pursue tax law that may be personally uncomfortable in the short-term but theoretically leads to economic gains in the long run.

Figure B.1: American disposition toward neoclassical economics.



Source: Calculations based on data from the 1984 General Social Survey (N = 1,415).

If ever the American public was to take a "right turn" in their economic policy leanings, it would have been at the height of Reaganomic rhetoric. A cursory evaluation of data from 1984—smack in the middle of Reagan's presidency—does lend credence to this suspicion. Looking at Figure B.1, over 59% of the population agreed that sizeable differences in income and social standing are *necessary* to motivate economic productivity among individuals. Over 70% concurred that all citizens are better off when businessmen enjoy high profits. These figures, however, are misleading.

While trickle-down economics did seem to enjoy widespread support in the mid-1980s, that support was tenuous and short-lived. Just as a vast majority of Americans recognized the potential

universal boon of large corporate earnings, an almost equal number decried the unfair distribution of those earnings. Figure B.1 shows nearly 65% of folks upset by the distribution of business profits. Popular support for the wider conservative economic agenda of deregulation was similarly fragile. Aggregate American opinion was quick to revert to its traditional pro-regulation stance by the end of decade (Page and Shapiro 1992, 159; Dunlap 1985).

More importantly, even if Americans by and large did hold or currently hold "trickle-down", "supply-side" preferences, it is improbable that these preferences originate in some far-sighted financial cunning nascent in the collective American psyche. V. O. Key, Jr. (1966, 7) insists that "voters are not fools." Probably so, but neither are they exactly forward looking when it comes to economic policy. Quite the contrary, voters and citizens more generally have repeatedly exposed themselves to be myopic both in their assessment of politicians' past economic performance (e.g., Bartels 2008, chapter 4) and in their ability to forecast the future payoffs of current economic policy (e.g., Healy and Malhotra 2009). We had best look elsewhere to understand Americans' simultaneously egalitarian and reactionary economic predilections.

B.4 Americans anticipate future wealth.

The most popular explanation for Americans' aversion to progressive economic policy combines elements of the confusion and forward-looking explanations. Why don't Americans want the wealthy to face a higher tax rate? Because individual Americans are confident that they will one day be wealthy. Or so many political observers claim (e.g., DeParle 2012; Blakeley 2011; Winship 2011; Zakaria 2011; Brooks 2005). If Americans are optimistic about their personal chances for affluence, far-sighted folks will not want to jeopardize future gains by criticizing the system for not delivering gains here and now. This account of Americans' unwillingness to engage in class warfare is adequately pervasive in coffee houses and campus hangouts that it demands serious academic treatment. No such treatment exists to my knowledge; an extended introduction in is therefore warranted.

Upward social mobility, so critical a part of the American Story, is largely just that—a story. As has been amply documented, it is exceedingly unlikely that any given individual will significantly advance or retreat along the income distribution within his or her lifetime. This truth is intergener-

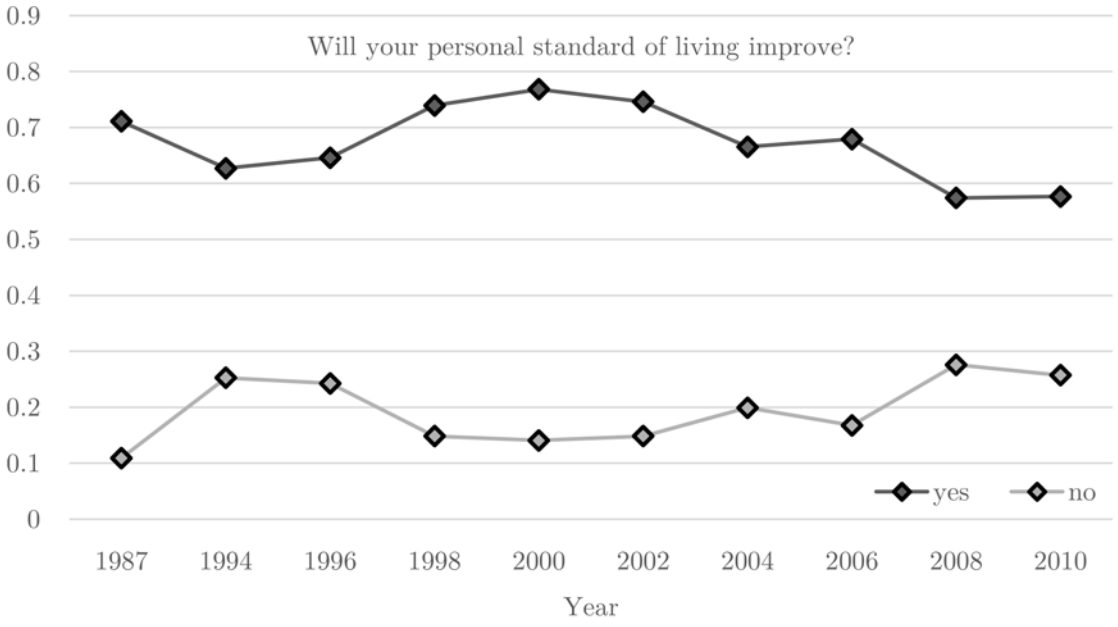
ational, though until fairly recently economists generally believed that "low earnings as well as high earning are not strongly transmitted from fathers to sons" (Becker 1988; Becker and Tomes 1986). This finding, reassuring as it was, turned out to be an artifact of various measurement errors (Solon 1992; Zimmerman 1992; Atkinson, Maynard and Trinder 1983; Bowles and Nelson 1974; Bowles 1972). Today, economists confidently report that there are "quite strong tendencies" for parents at the bottom of the income distribution to rear children who will spend their lives on that same rung of the economic ladder. High wage earners similarly rear high wage earners (Bowles, Gintis and Groves 2005, 1; Mazumder 2005; Gottschalk and Smeeding 2000; Gottschalk 1997).

Economic fact, however, does not always translate into popular belief. Figures B.2 and B.3 show a perennially optimistic median American. In the first graph, a sizeable majority of Americans—about 58% in 2010, despite the economic downturn—proclaim their conviction that they and people like them have "a good chance of improving [their] standard of living." In the second graph, a similarly healthy majority of employed Americans—67% in 2011—confide that they either currently earn or will at some point earn wages sufficient to "lead the kind of life [they] want." But nine percent of Americans were unemployed that year; what about them? When widening the sample to represent the entire population, a smaller albeit robust 61% of Americans either admit to living the life they desire or predict that rosy future.

Americans, then, do seem to share a widespread sense of optimism as regards their personal financial situation. That optimism, however, does not extend very far into the future. Examine the left three-quarters of Figure B.4. Even as 37% of Americans admit to living the life they want and another 24% prophesize eventually living that life, a formidable 62% of Americans in 2011 assert that today's youth will not enjoy a better standard of living when grown. Nor will the next generation have an easier time improving their financial lot in life. 71% of respondents expect that their children will find it more difficult to "move up the income ladder." If Americans are sanguine about their own futures, they are not overly so about their children's.

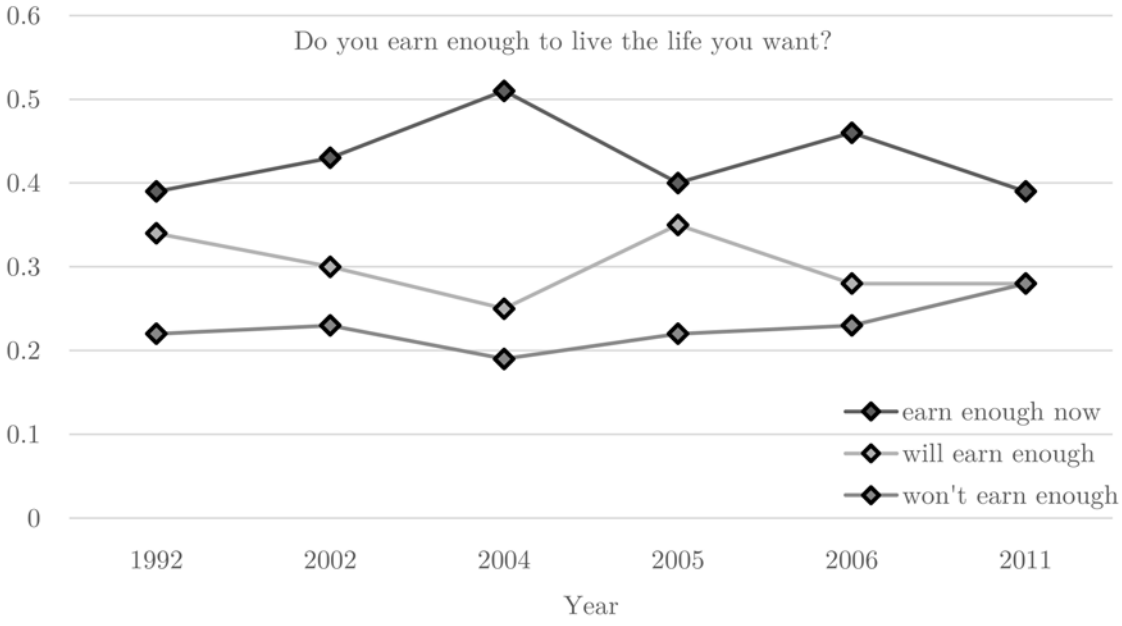
More to the point, nothing in the proceeding analysis suggests that Americans anticipate or even want great wealth. "Wealthy" and its various synonyms are, of course, subjective terms. Its definition changes with region and perspective, and for many it implies a relative position in a distribution rather than a finite cash value. Although there is no official counterpart to the poverty-line, government regulations provide a place to initially set our "affluence-line". Individuals and

Figure B.2: American optimism regarding personal standard of living.



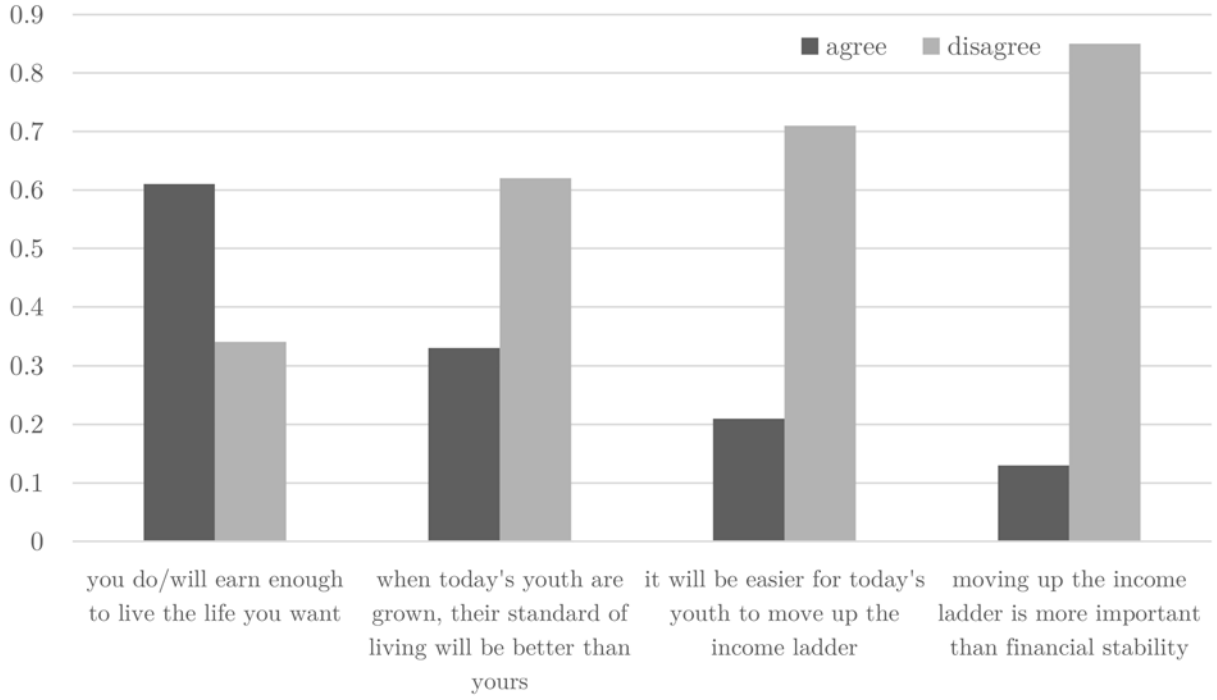
Source: Calculations based on data from the 1972-2010 General Social Survey dataset (N = 15,112).

Figure B.3: American optimism regarding the life they want to live.



Source: Calculations based on data from the 1992-2011 Pew Economic Mobility Survey dataset.

Figure B.4: American greed and optimism?



Source: Calculations based on data from the 2011 Pew Economic Mobility Survey (N = 2,000).

married couples enter the federal government's top tax bracket upon earning $379,000 or more annually. A more conservative figure is found in the political arena. When weighing in on the Congressional debate over extending the so-called "Bush tax cuts," President Obama reasoned that families earning under $250,000 a year qualify as "middle class"—the intended beneficiaries of the extension (Sorkin 2011). The approximately 2.6% of households earning more than that are supposedly denizens of the upper class. What matters in the end, however, is what Americans as a collective conceptualize as "rich."

Americans tend to be modest in their conceptions of wealth. They are certainly less grandiose than elected officials. Table B.1 summarizes the findings.[1] The median annual income citizens report as likely to make them feel rich is $150,000. Almost 11% of households net that salary,[2] already more reasonable than the working political definition of upper-crust. 29% guess they would need more than $300,000 per year, but 30% would consider themselves well-to-do earning less than $100,000 in income. In terms of assets, $1 million is the median net worth American's eye as the

[1] See also Jones (2011).

[2] Calculations are based on data from the U.S. Census Bureau's 2010 Current Population Survey, Annual Social and Economic Supplement.

start of affluence. As with income, however, there is quite a range for this elusive category. 26% of people estimate that $1 million in assets is insufficient, while 22% think a net worth of $100,000 qualifies the owner as rich.

Table B.1: What it means to be "rich" in America.

Annual income needed to feel rich	% mentioning	Net worth needed to feel rich	% mentioning
less than $60,000	18	less than $100,000	13
$60,000 to $99,999	12	$100,000	9
$100,000 to $149,999	23	$100,001 to $299,999	6
$150,000 to $299,999	18	$300,000 to $999,999	21
$300,000 to $999,999	14	$1,000,000	24
$1,000,000	11	$1,000,001 to $4,999,999	12
more than $1,000,000	4	$5,000,000 or more	14
median response	$150,000	median response	$1,000,000

Source: Calculations based on data from the Nov. 28-Dec. 1, 2011 Gallup poll N = 2,024 . About 10% of respondents did not provide dollar estimates.

None of this is to say that the U.S. does not have its fair share of dreamers. They just happen to be somewhat accurate dreamers. About two in ten Americans believes they will be millionaires[3] within the next ten years (Associated Press 2011), thus qualifying as rich as far as the median American is concerned. Millionaires have constituted between 7% and 12% of households in the U.S. over the past decade (Indiviglio 2011; Deloitte 2011). That 20% of the U.S. population should be millionaires in ten years' time may seem farfetched. But a recent report published by Deloitte and Oxford Economics (2011, 13 and 27) predicts that the number of millionaire households in the U.S. will double between 2011 and 2020 to over 20.5 million, which when divided into the Census Bureau's (2000) population estimate of nearly 325 million for that year equals 20%. There is no way of knowing whether the 20% of Americans that predicted future millionaire status will actually constitute the 20% of American who will be millionaires in 2020 (supposing the Deloitte and Oxford study is at all prescient). It is nonetheless noteworthy that aggregate American opinion and cutting edge financial research are so closely aligned in their predictions.

So Americans have more or less reasonable definitions of wealth and more or less reasonable expectations of wealth. Most important to the question at hand: Americans are not overly concerned

[3]That is, they will have a net worth of at least $1 million.

with achieving wealth. Returning to Figure B.4, this time focusing on the right-most quarter, Americans rate financial security as more important than moving up the income ladder by a ratio of over 6.5:1. Put differently, 85% of Americans consider financial security more important than economic advancement. Considering that the real median household income of $49,500 is well below the generally agreed upon rich household's income of $150,000, a fair bit of economic advancement would be in order for the vast majority of American families were wealth a primary objective.[4]

All told, the aforementioned statistics depict most Americans as level-headed surveyors of the broad financial landscape. Greed and optimism do not account for most Americans' dislike of progressive taxation and general economic redistribution.

B.5 Americans are "conservative egalitarians."

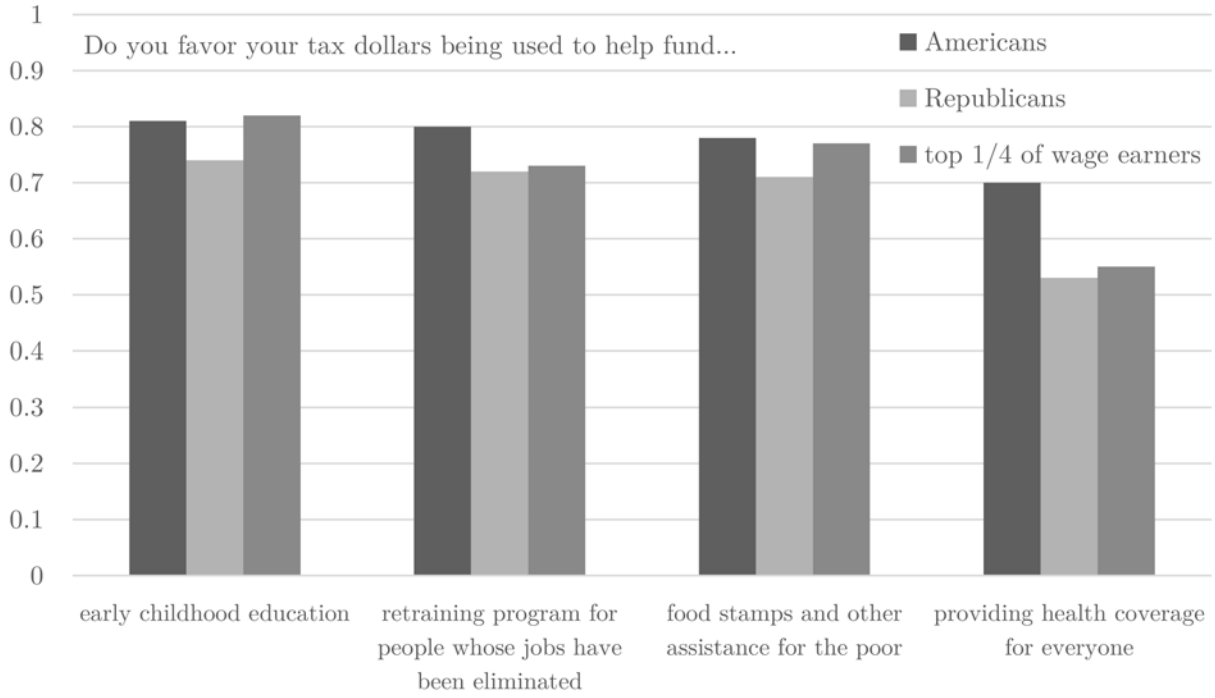
Despite the confusing public opinion on tax incidence and its apparent incompatibility with American's zeal for egalitarianism, there is evidence that Americans have for decades held and continue to hold stable, internally consistent views regarding economic inequality and ways to address it. In toto, these views "fit together into backing for individualism and a limited, but substantial, welfare state" (Page and Shapiro 1992, 169).

Americans are against outright redistribution of wealth and are generally mistrustful of government action. They want opportunities to succeed, and it is in maintaining those opportunities that they see a role for government. That is how to combat inequality. Concrete government programs designed to sustain individual opportunities, such as childhood education, job training for the newly unemployed, and basic health coverage, are widely popular. Americans' abstract wariness of taxation dissipates when government spending is specifically linked to these efforts, as you can see in Figure B.5 (Page and Jacobs 2009).

Page and Jacobs (2009, 97) summarize their observations by labeling the average American as a "conservative" or "pragmatic" egalitarian. This label is meant to convey three pairs of countervailing inclinations that are supposedly present in most Americans' psyches: (i) belief in the importance of individual self-reliance but dislike of economic inequality; (ii) distrust of government but a willingness to rely on government to foster equality of economic opportunity; and (iii)

[4]That target paycheck gets ever more difficult to attain. Real median household income has declined 7.1% from its peak of $53,252 in 1999 (DeNavas-Walt, Proctor and Smith 2011).

Figure B.5: Acceptable uses for tax dollars.



Source: Calculations based on data from Page and Jacobs's (2009) Inequality Survey (N = 608).

opposition to taxation but an acceptance of the need for tax revenue.

None of this information provides an explanation for our public opinion inconsistency, per se. Pervasive conservative egalitarianism neither accounts for Americans' suspicion of progressive taxation specifically, nor does it illuminate the origins of Americans' tremendous trust in the current economic arrangement. It does, however, offer one important insight. Unlike the previous theories examined in this appendix, this one goes beyond an analysis of economic outcomes and addresses the factors that go into economic success or failure. In American minds, the appropriate intersection of government and market is more or less confined to matters of opportunity. Citizens want U.S. officials to tamper with the economic playing field, not the final score.

C | Survey and Experiment Sampling

Many experiments in economics and psychology can be successfully tested on random samples of individuals recruited through student subject pools and convenience samples. Although moral notions like justice and desert seem to be standard features of human cognition (Haidt and Joseph 2004), understandings of and adherence to moral norms are likely to vary with an individual's demographic characteristics. If we are to appreciate how the broader American public defines and acts on their understandings of economic desert, we require a sample that representative of that population.

Before moving to this more costly sample, I tested my survey, survey experiments, and experimental game on cheaper, more traditional samples. Each was evaluated by faculty and graduate students from Indiana University's (IU) departments of economics and political science, and then played by several hundred subjects recruited through IU's Political Science Experimental Subject Pool. Data gathered from these trial runs were encouraging, but such student samples suffer from well documented biases (Druckman and Kam 2011; Sears 1986). The game was then tested on a few hundred Amazon Mechanical Turk users, who are a good deal more representative of the general population than most convenience sample recruits, but still biased with respect to a variety of demographic factors, most notably age and ideology (Berinsky, Huber and Lenz 2012). As before, this trial produced some interesting results. Promising, but an externally valid testing of my theory requires a more nationally representative sample.

Internet-based panels such as SocialSci and Qualtrics provide the best balance between cost and sample representativeness. National-probability samples—the most externally valid—cost upwards of $25,000. SocialSci and Qualtrics, on the other hand, can assemble a sample that meets Census quotas based on income, education, and race/ethnicity for a few dollars per subject. I hired SocialSci

to field my large-N survey (introduced in Chapter 1 and I hired Qualtrics to recruit subjects for my experiment game (introduced in Chapter 3. The actual sampling strategies employed by these firms are proprietary, explained in detail in their corporate documentation, and regularly updated on their websites. Both companies provide large, diverse, carefully managed, and externally audited panels from which samples are drawn. Enrollment in a panel and participation in surveys and experiments is remunerated in a way that attracts even hard-to-reach groups within the population (seniors, low-income ethnic minorities, etc.). As always, however, there may be some latent variable common to people willing to volunteer for survey and experiment participation that makes then different from the broader population.

A three-stage randomization procedure helps to ensure a representative sample of the target population (in this case, the American adult population). Panel members are randomly invited to participate in an upcoming survey or experiment. A set of profiling questions is randomly selected for them to answer and, upon completion, panel members are matched with a random selection of surveys and experiments for which they are likely to qualify. Table C.1 shows the demographic breakdown of large-N survey sample. Table C.2 shows the demographic breakdown of the sample from economic experiment, and Tables C.3–C.5 show the demographic breakdown for the specific conditions therein. These figures are compared to demographic estimates of the U.S. population. Estimates of the gender, racial, educational, and income breakdowns in the U.S. population come from the Census Bureau's 2012 projections. Estimates of partisan breakdowns come from the Pew Research Center for the People and the Press (Pew Research Center for the People and the Press 2012). Information on response rates and subject compensation can be found in section 1.1 of Chapter 1 and section 3.4 of Chapter 3.

Table C.1: Demographic breakdown of survey sample.

	Sample N	Sample %	US pop %	Sample% − US pop%
Gender				
Female	586	0.59	0.51	0.08
Male	406	0.41	0.49	−0.08
	992	*1.00*	*1.00*	*0.00*
Race				
White	701	0.71	0.64	0.07
Black	93	0.09	0.12	−0.03
Latino	52	0.05	0.16	−0.11
Asian	111	0.11	0.05	0.06
Other	35	0.04	0.03	0.01
	992	*1.00*	*1.00*	*0.00*
Education				
High school or less	118	0.12	0.43	−0.31
Some college	330	0.33	0.29	0.04
Bachelor's degree	351	0.35	0.17	0.18
Graduate degree	193	0.19	0.11	0.08
	992	*1.00*	*1.00*	*0.00*
Household income				
<$25k	192	0.19	0.25	−0.06
$25k–$49k	247	0.25	0.25	0.00
$50k–$74k	210	0.21	0.18	0.03
$75k–$99k	141	0.14	0.12	0.02
$100k–$149k	137	0.14	0.12	0.02
$150k+	65	0.07	0.08	−0.01
	992	*1.00*	*1.00*	*0.00*
Political party				
Republican	68	0.07	0.24	−0.17
Lean Republican	79	0.08	0.16	−0.08
Independent	264	0.27	0.12	0.15
Lean Democrat	284	0.29	0.16	0.13
Democrat	297	0.30	0.32	−0.02
	992	*1.00*	*1.00*	*0.00*

Table C.2: Demographic breakdown of Agency experiment sample.

	Sample N	Sample %	US pop %	Sample% − US pop%
Gender				
Female	105	0.54	0.51	0.03
Male	89	0.46	0.49	−0.03
	194	*1.00*	*1.00*	*0.00*
Race				
White	148	0.76	0.64	0.12
Black	19	0.10	0.12	−0.02
Latino	14	0.07	0.16	−0.09
Asian	11	0.06	0.05	0.01
Other	2	0.01	0.03	−0.02
	194	*1.00*	*1.00*	*0.00*
Education				
High school or less	48	0.25	0.43	−0.18
Some college	81	0.42	0.29	0.13
Bachelor's degree	49	0.25	0.17	0.08
Graduate degree	16	0.08	0.11	−0.03
	194	*1.00*	*1.00*	*0.00*
Household income				
<$25k	31	0.16	0.25	−0.09
$25k–$49k	49	0.25	0.25	0.00
$50k–$74k	53	0.27	0.18	0.09
$75k–$99k	31	0.16	0.12	0.04
$100k–$149k	19	0.10	0.12	−0.02
$150k+	11	0.06	0.08	−0.02
	194	*1.00*	*1.00*	*0.00*
Political party				
Republican	32	0.16	0.24	−0.08
Lean Republican	19	0.10	0.16	−0.06
Independent	57	0.29	0.12	0.17
Lean Democrat	24	0.12	0.16	−0.04
Democrat	62	0.32	0.32	0.00
	194	*1.00*	*1.00*	*0.00*

Table C.3: Demographic breakdown of sample randomly assigned to the Low Agency condition.

	Sample N	Sample %	US pop %	Sample% − US pop%
Gender				
Female	26	0.50	0.51	−0.01
Male	26	0.50	0.49	0.01
	52	*1.00*	*1.00*	*0.00*
Race				
White	39	0.75	0.64	0.11
Black	4	0.08	0.12	−0.04
Latino	4	0.08	0.16	−0.08
Asian	5	0.10	0.05	0.05
Other	0	0.00	0.03	−0.03
	52	*1.00*	*1.00*	*0.00*
Education				
High school or less	11	0.21	0.43	−0.22
Some college	21	0.40	0.29	0.11
Bachelor's degree	13	0.25	0.17	0.08
Graduate degree	7	0.13	0.11	0.02
	52	*1.00*	*1.00*	*0.00*
Household income				
<$25k	7	0.13	0.25	−0.12
$25k–$49k	9	0.17	0.25	−0.08
$50k–$74k	15	0.29	0.18	0.11
$75k–$99k	6	0.12	0.12	0.00
$100k–$149k	11	0.21	0.12	0.09
$150k+	4	0.08	0.08	0.00
	52	*1.00*	*1.00*	*0.00*
Political party				
Republican	10	0.19	0.24	−0.05
Lean Republican	6	0.12	0.16	−0.04
Independent	13	0.25	0.12	0.13
Lean Democrat	5	0.10	0.16	−0.06
Democrat	18	0.35	0.32	0.03
	52	*1.00*	*1.00*	*0.00*

Table C.4: Demographic breakdown of sample randomly assigned to the Medium Agency condition.

	Sample N	Sample %	US pop %	Sample% − US pop%
Gender				
Female	37	0.51	0.51	0.00
Male	36	0.49	0.49	0.00
	73	*1.00*	*1.00*	*0.00*
Race				
White	57	0.78	0.64	0.14
Black	5	0.07	0.12	−0.05
Latino	6	0.08	0.16	−0.08
Asian	5	0.07	0.05	0.02
Other	0	0.00	0.03	−0.03
	73	*1.00*	*1.00*	*0.00*
Education				
High school or less	15	0.21	0.43	−0.22
Some college	33	0.45	0.29	0.16
Bachelor's degree	19	0.26	0.17	0.09
Graduate degree	6	0.08	0.11	−0.03
	73	*1.00*	*1.00*	*0.00*
Household income				
<$25k	9	0.12	0.25	−0.13
$25k–$49k	22	0.30	0.25	0.05
$50k–$74k	18	0.25	0.18	0.07
$75k–$99k	16	0.22	0.12	0.10
$100k–$149k	5	0.07	0.12	−0.05
$150k+	3	0.04	0.08	−0.04
	73	*1.00*	*1.00*	*0.00*
Political party				
Republican	15	0.21	0.24	−0.03
Lean Republican	8	0.11	0.16	−0.05
Independent	21	0.29	0.12	0.17
Lean Democrat	8	0.11	0.16	−0.05
Democrat	21	0.29	0.32	−0.03
	73	*1.00*	*1.00*	*0.00*

Table C.5: Demographic breakdown of sample randomly assigned to the High Agency condition.

	Sample N	Sample %	US pop %	Sample% − US pop%
Gender				
Female	42	0.61	0.51	0.10
Male	27	0.39	0.49	−0.10
	69	*1.00*	*1.00*	*0.00*
Race				
White	57	0.78	0.64	0.14
Black	5	0.07	0.12	−0.05
Latino	6	0.08	0.16	−0.08
Asian	5	0.07	0.05	0.02
Other	0	0.00	0.03	−0.03
	69	*1.00*	*1.00*	*0.00*
Education				
High school or less	22	0.32	0.43	−0.11
Some college	27	0.39	0.29	0.10
Bachelor's degree	17	0.25	0.17	0.08
Graduate degree	3	0.04	0.11	−0.7
	69	*1.00*	*1.00*	*0.00*
Household income				
<$25k	15	0.22	0.25	−0.03
$25k–$49k	18	0.26	0.25	0.01
$50k–$74k	20	0.29	0.18	0.11
$75k–$99k	9	0.13	0.12	0.01
$100k–$149k	3	0.04	0.12	−0.08
$150k+	4	0.06	0.08	−0.04
	69	*1.00*	*1.00*	*0.00*
Political party				
Republican	7	0.10	0.24	−0.14
Lean Republican	5	0.07	0.16	−0.09
Independent	23	0.33	0.12	0.21
Lean Democrat	11	0.16	0.16	0.00
Democrat	23	0.33	0.32	0.01
	69	*1.00*	*1.00*	*0.00*

D | Policy Preferences with Additional Controls

Tables D.1 and D.2 are directly comparable to Tables 6.4 and 6.5 and they include three control variables not found in Alesina and Giuliano's (2011) basic model. A substantive interpretation of the results can be found in Section 6.3.1.

Table D.1: Support for government action to reduce the income gap ($Y_{gov_fix_gap}$) with **additional controls**.

Variable	Model 0	Model 1	Model 2	Model 3	Model 4
Definition		-0.466^{***}	-0.384^{***}	-0.445^{***}	-0.482^{***}
		(0.136)	(0.141)	(0.117)	(0.129)
Agency			-0.202^{***}		
			(0.052)		
Justice				-0.420^{***}	
				(0.050)	
Rich deserve					-0.370^{***}
					(0.059)
Avg. deserve					-0.132^{***}
					(0.047)
Poor deserve					-0.284^{***}
					(0.062)
Good life	-0.053^{*}	-0.018	-0.003	-0.003	0.016
	(0.032)	(0.032)	(0.031)	(0.027)	(0.028)
Gov. help	0.159^{***}	0.114^{**}	0.107^{**}	0.167^{***}	0.154^{***}
	(0.051)	(0.052)	(0.053)	(0.048)	(0.050)
Charity	-0.133	-0.185^{**}	-0.151^{*}	-0.052	-0.068
	(0.085)	(0.085)	(0.084)	(0.072)	(0.083)
Ideology	0.524^{***}	0.537^{***}	0.477^{***}	0.346^{***}	0.270^{***}
	(0.053)	(0.052)	(0.055)	(0.051)	(0.049)
Age	0.013^{**}	0.012^{*}	0.013^{*}	0.011	0.006
	(0.006)	(0.007)	(0.007)	(0.007)	(0.006)
Age^2	0.000^{**}	0.000^{**}	0.000^{**}	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female	0.024	0.042	0.022	0.000	0.029
	(0.028)	(0.028)	(0.028)	(0.026)	(0.023)
Nonwhite	0.059^{*}	0.042	0.052^{*}	0.055^{*}	0.051^{*}
	(0.032)	(0.032)	(0.031)	(0.028)	(0.027)
Married	-0.020	-0.027	-0.009	-0.018	-0.026
	(0.030)	(0.030)	(0.031)	(0.026)	(0.026)
Unemployed	-0.008	-0.020	-0.035	-0.027	-0.039
	(0.050)	(0.048)	(0.048)	(0.041)	(0.039)
Education	-0.017	0.008	0.004	-0.018	0.051
	(0.060)	(0.059)	(0.057)	(0.052)	(0.049)
Income	-0.199^{***}	-0.206^{***}	-0.190^{***}	-0.142^{***}	0.136^{***}
	(0.054)	(0.056)	(0.055)	(0.051)	(0.049)
Constant	0.204	0.606^{***}	0.655^{***}	0.804^{***}	1.093^{***}
	(0.132)	(0.191)	(0.195)	(0.176)	(0.168)
N	992	963	963	992	963
R^2	0.4629	0.4809	0.5006	0.5594	0.6020
adj-R^2	0.4284	0.4457	0.4662	0.5291	0.5736

All regressions control for state fixed effects. Robust SEs in parentheses.

All variables save *age* and age^2 standardize [0, 1].
* significant at 10%; ** 5%; *** 1%

Table D.2: Support for progressive taxation (Y_{prog_tax}) with **additional controls**.

Variable	Model 0	Model 1	Model 2	Model 3	Model 4
Definition		0.082	0.127	0.094	0.063
		(0.135)	(0.139)	(0.129)	(0.132)
Agency			−0.111**		
			(0.052)		
Justice				−0.249***	
				(0.058)	
Rich deserve					−0.289***
					(0.076)
Avg. deserve					−0.055
					(0.055)
Poor deserve					−0.138**
					(0.068)
Good life	−0.069*	−0.057	−0.049	−0.048	−0.031
	(0.040)	(0.040)	(0.040)	(0.038)	(0.037)
Gov. help	0.101*	0.085	0.081	0.117**	0.109**
	(0.054)	(0.053)	(0.053)	(0.053)	(0.052)
Charity	−0.183**	−0.234***	−0.215***	−0.155**	−0.153**
	(0.080)	(0.080)	(0.080)	(0.076)	(0.076)
Ideology	0.548***	0.572***	0.539***	0.459***	0.402***
	(0.048)	(0.047)	(0.050)	(0.057)	(0.056)
Age	0.011	0.009	0.010	0.009	0.007
	(0.007)	(0.007)	(0.007)	(0.007)	(0.006)
Age^2	0.000*	0.000	0.000*	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female	0.002	−0.010	−0.021	−0.034	−0.016
	(0.029)	(0.028)	(0.028)	(0.027)	(0.026)
Nonwhite	0.019	0.016	0.021	0.023	0.027
	(0.030)	(0.031)	(0.031)	(0.031)	(0.030)
Married	0.003	0.023	0.032	0.028	0.019
	(0.034)	(0.034)	(0.034)	(0.032)	(0.033)
Unemployed	−0.117**	−0.084	−0.092	−0.088	−0.095
	(0.056)	(0.059)	(0.059)	(0.058)	(0.058)
Education	0.090	0.091	0.089	0.076	0.107*
	(0.056)	(0.056)	(0.056)	(0.056)	(0.057)
Income	−0.151**	−0.082	−0.073	−0.044	0.039
	(0.065)	(0.064)	(0.064)	(0.061)	(0.064)
Constant	0.173	0.077	0.104	0.194	0.368**
	(0.143)	(0.181)	(0.182)	(0.176)	(0.170)
N	963	963	963	963	963
R^2	0.4071	0.4233	0.4297	0.4531	0.4778
adj-R^2	0.3689	0.3842	0.3904	0.4154	0.4406

All regressions control for state fixed effects. Robust SEs in parentheses.
All variables save *age* and *age*^{2} standardize [0, 1].

* significant at 10%; ** 5%; *** 1%

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Jacob S. Bower-Bir

CONTACT

Vincent and Elinor Ostrom Workshop in Political Theory and Policy Analysis
513 N Park Ave
Indiana University
Bloomington, IN 47405 USA

Phone: (317) 332-9073
E-mail: jbowerbi@indiana.edu
Website: jbowerbir.wix.com/jsbb

EDUCATION

Ph.D. Indiana University 2014
Fields: Public Policy, American Politics, Public Management
Committee: Elinor Ostrom (deceased), Edward Carmines, William Bianco, Stephen Benard, David Reingold, Bradley Heim
Dissertation: "What We Deserve: The Moral Origins of Economic Inequality and Our Policy Responses to It"

B.A. Indiana University 2007, summa cum laude, general honors
Majors: Political Science (honors), Economics, History
Minor: Near Eastern Languages and Cultures
Thesis: "When Schools Compete: Charter Schools and their Effects on Traditional Public Education"

FELLOWSHIPS AND GRANTS

John H. Edwards Fellowship, IU Graduate School	2013–14
Social Science Research Commons Research Grant	2013–14
Sustainability Development Research Grant, IU Office of Sustainability	2013–14
Ostrom Workshop Research Grant	2014
Katharine Greenough Fellowship	2011–14
Political Economy in Democratic Sustainability Fellowship	2009–11
Graduate Student Leadership Award, IU Dept. of Political Science	2009, '12
Sustainability Course Development Fellowship	2010
Indiana University International Enhancement Grant	2009
Ostrom Workshop in Political Theory and Policy Analysis Fellowship	2007–08
Stephen R. Patton Scholarship Award in Political Science	2007
James E. Moffat Scholarship Recognition Award in Economics	2007
Jacob and Lucy Listenfelt Memorial Scholarship Award in History	2006
Hutton Honors College Research Grant	2006
Indiana Scholars Award	2006–07
Indiana Residence Freese Scholarship	2006–07
Indianapolis Children's Museum Guild Scholarship	2004

ARTICLES (SELECTED)

"A Tool for All People but Not All Occasions: How Voting Heuristics Interact with Political Knowledge and Environment." With Nicholas D'Amico. *Under review.*

"A Moral Dimension to Voting? Evidence that Voters See More than Money at the Ballot Box." *Under review.*

"Estimating State and Sub-State Economic Effects of a Carbon Dioxide Tax Policy: An Application of a New Multi-Region Energy-Economy Econometric Model." With Sanya Carley, Kenneth Richards, Barry Rubin, David Warren, and Zach Wendling. *Revise and resubmit, Regional Science, Policy and Practice.*

"Predicting Majority Rule Outcomes: A Critical Test between the Uncovered Set and the Strong Point." With William Bianco, Nicholas D'Amico, Christopher Kam, Itai Sened, and Regina Smyth. *Revise and resubmit, Journal of Theoretical Politics.*

Working Papers (Selected)

"Just Deserts? American Bias and Optimism about Economic Justice."

"Production and Consumption of Public Goods: Rethinking Marginal Per Capita Return." With Ursula Kreitmair.

"Local and Long-Distance Scenarios in the Voluntary Contribution Mechanism: Heterogeneity in Group Marginal Per Capita Return." With Ursula Kreitmair.

"Mixed Signals: Conflicting Cues in Political Communication." With Nicholas D'Amico.

Conferences (Selected)

American Political Science Association annual meeting

"The Role of Morality in Economic Redistribution"	2014
"Heuristics and Sophistication in the Voting Booth"	2012

Midwest Political Science Association annual meeting

"Desert and Voluntary Redistribution"	2014
"Hail the Meritocrat: Faith & Fairness in the American Economy"	2013
"Heuristics and Sophistication in the Voting Booth"	2012
"Voting: See It Now in Two Dimensions"	2011

Workshop in Political Theory and Public Policy

What We Deserve: Economic Justice and Redistribution	2014
Constitutions & Education: Building & Burning Bridges in Burma	2008
Choosing Your Public: A Look at Charter Schools and Exclusion	2007

Association for the Advancement of Sustainability in Higher Education

"Constitutional Structure in Sustainable Collaborations"	2010

Jordan River Economic Conference

"When Schools Compete"	2007

Research Experience	GK Consulting	Governance Specialist	2014–
	Indiana State Environmental Modeling	Research Assistant	2012–
	Governance Commission of Liberia	Research Associate	2009
	William Bianco, Indiana University	Research Assistant	2007–13
	Liberian Collections Project	Research Assistant	2007–08

Teaching Experience	Statistical Analysis (V506)	IUPUI Adjunct Faculty	2013
	The Politics of Sustainability (Y200)	Instructor	2010–11
	The American Presidency (Y380)	Instructor	2011
	Analyzing Politics (Y205)	Associate Instructor	2010
	The Holocaust and Politics (Y352)	Associate Instructor	2009
	Introduction to American Politics (Y103)	Associate Instructor	2009, '12
	Politics of Gender and Sexuality (Y353)	Associate Instructor	2008
	Introduction to Microeconomics (E201)	Undergraduate Intern	2005–07

Service	Reviewer, *Political Behavior*	2014
	IU Parking Operations and Monetization Committee	2012–14
	Bloomington Campus Bicycle Steering Committee	2012
	la Biennale di Venezia, Indianapolis Museum of Art	2011
	Student Sustainability Council, Indiana University	
	Logistics Chair	2010–11
	Advisory Chair	2010
	Graduate and Professional Student Organization, Indiana University	
	Sustainability Officer	2010–13
	Co-Chair, Graduate Student Remuneration Committee	2008–09
	Awards Committee	2007–10
	IU Transportation Policy Advisory Committee	2010–
	Political Science Graduate Student Association, Indiana University	
	Co-President	2009–10
	Public Policy Chair	2010–12
	Bloomington Campus Traffic Safety Taskforce, Indiana University	2010
	Campus Sustainability Advisory Board, Indiana University	
	Executive Committee	2010–
	Academic Initiatives Working Group	2010–12
	Student Transportation Board, Indiana University	2009–12
	History and Philosophy of Science Working Group	
	Coordinator	2009–12
	Governance Commission of Liberia	2009
	Bloomington Commission on the Status of Black Males	2008
	Center for Democracy in Plural Societies	2005–07
	Big Brothers Big Sisters of South Central Indiana	2004–09
	Saint Thomas Aquinas Food Pantry	2000–04
	The Children's Museum of Indianapolis	1997–04