Redistribution by the Rich: Information, Perceptions, and Preferences

by

Asli Cansunar

Department of Political Science
Duke University

Date: ________________
Approved:

_____________________
Timur Kuran, Co-Supervisor

_____________________
Pablo Beramendi, Co-Supervisor

_____________________
David Siegel

_____________________
Daniel Stegmueller

Dissertation submitted in partial fulfillment of the requirements for the degree of
Doctor of Philosophy in the Department of Political Science
in the Graduate School of Duke University
2018
Abstract

Redistribution by the Rich: Information, Perceptions, and Preferences

by

Asli Cansunar

Department of Political Science
Duke University

Date: __________________

Approved:

____________________
Timur Kuran, Co-Supervisor

____________________
Pablo Beramendi, Co-Supervisor

____________________
David Siegel

____________________
Daniel Stegmueller

An abstract of a dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the Department of Political Science in the Graduate School of Duke University 2018
Abstract

What determines the significance of support among high-income individuals for tax and transfer policies? Most political economy arguments begin with the assumption that people exclusively pursue their material self-interest. In making decisions, following this tradition, the canonical political economy model of redistribution posits that an individual’s relative economic position determines whether she benefits or loses from redistribution (Meltzer and Richard, 1981). According to this model, the rich should oppose redistributive tax and transfer policies.

An enduring question in political economy literature is whether the redistributive preferences of high-income earners are consistent with the Meltzer-Richard prediction. Surprisingly, there is ample evidence of strong support for welfare policies among high-income individuals. A recent wave of studies has attempted to fill the gap between theory and evidence. Yet, no parsimonious agreement has emerged from this extensive theoretical and empirical discussion.

In this dissertation, I put forward a novel theory of imperfect economic information to understand the determinants of high income earners’ support for progressive tax and transfer policies. Although the notion that voters are poorly informed is now widely accepted in political science, the implications of widespread economic illiteracy is seldom a consideration in the models of redistributive preferences. Most accounts assume, incorrectly, that people use factual information about income inequality and their own relative economic position in determining their expected benefits and losses
from prospective taxation. My dissertation challenges this common assumption. I thus investigate the micro-mechanisms through which high-income individuals make decisions about welfare policies in the absence of perfect information.

I argue that individuals use social comparison and cognitive heuristics when they lack precise knowledge of the extent of economic inequality and their relative economic position. These generated perceptions, in return, form the basis of their calculation of potential benefits and losses due to tax policies. I develop a theoretical model and show empirically that individuals perceiving a significant income gap between themselves and high-income earners are more likely to support higher tax rates. In survey data, I find ample evidence that the amount and substance of information available to individuals may be more important than actual data in predicting and shaping political behavior. Remarkably, my results evince that individuals tend to judge the level of inequality proportionally to the degree of inequality they perceive.

I further demonstrate that the effect of misperceptions on one’s willingness to contribute to the welfare system depends on the political institutions that control the amount and scope of information available to their citizens. My analysis of the preferences of Ottoman elites provides an example for this phenomenon. The Ottoman Empire represents an authoritarian setting in which class differences are highly institutionalized and there are no informational asymmetries. In such an authoritarian setting, decisions of elites are not affected by distributional misperceptions. In Ottoman Istanbul, I find that, rather than using their institutional power to lower the structural inequalities between ethno-religious groups, elites choose to invest in public goods that maximize their own group’s benefit. Thus, they contribute to the persistance of social and economic inequalities.
To my parents, Fatma Nuray Cansunar and Murat Cansunar; and to my grandparents, Yıldız Egemen and Derviș Egemen.

Annemle babama; ve anneannemle dedeme.
# Contents

Abstract

Acknowledgements

1 Introduction

1.1 Motivation

1.2 Intellectual Context

1.2.1 Progressivity, Social Insurance and Self-Interest

1.2.2 Altruism, Inequality Aversion and Fairness Considerations

1.3 The Argument

1.4 Macro implications of “micro-level information gap”

1.5 Outline of the Dissertation

2 A Formal Model of Distributional Misperceptions

2.1 The Argument

2.1.1 A Model of Tax Preferences Under Perfect Information

2.1.2 A Model of Tax Preferences Under Heuristical Perceptions

2.1.3 Conclusion

3 Class-Based Preferences over Progressive Taxation: Roles of Perceptual Biases

3.1 Introduction
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2</td>
<td>Theoretical Framework</td>
<td>59</td>
</tr>
<tr>
<td>3.3</td>
<td>Empirical Strategy and the Survey Experiment</td>
<td>62</td>
</tr>
<tr>
<td>3.3.1</td>
<td>Evidence from the ISSP Social Inequality Survey</td>
<td>63</td>
</tr>
<tr>
<td>3.3.2</td>
<td>The Experiment</td>
<td>67</td>
</tr>
<tr>
<td>3.3.3</td>
<td>Dependent and Independent Variables</td>
<td>72</td>
</tr>
<tr>
<td>3.3.4</td>
<td>Results from the Survey Experiment</td>
<td>74</td>
</tr>
<tr>
<td>3.3.5</td>
<td>Misperceptions of Income Distribution, Inequality, and Income Groups</td>
<td>75</td>
</tr>
<tr>
<td>3.3.6</td>
<td>Experimental Results</td>
<td>81</td>
</tr>
<tr>
<td>3.4</td>
<td>Conclusion</td>
<td>86</td>
</tr>
<tr>
<td>4</td>
<td>Unconstrained Elites, Ethnic Diversity, and Redistribution</td>
<td>89</td>
</tr>
<tr>
<td>4.1</td>
<td>Motivation</td>
<td>89</td>
</tr>
<tr>
<td>4.2</td>
<td>Introduction</td>
<td>91</td>
</tr>
<tr>
<td>4.3</td>
<td>A Theory of Ethnic Diversity and Targeted “Public” Goods</td>
<td>97</td>
</tr>
<tr>
<td>4.4</td>
<td>History of Water Provision in Istanbul</td>
<td>99</td>
</tr>
<tr>
<td>4.5</td>
<td>Data Description</td>
<td>104</td>
</tr>
<tr>
<td>4.5.1</td>
<td>Fountains Data</td>
<td>104</td>
</tr>
<tr>
<td>4.5.2</td>
<td>Demographic Data</td>
<td>106</td>
</tr>
<tr>
<td>4.6</td>
<td>Empirical Results</td>
<td>112</td>
</tr>
<tr>
<td>4.7</td>
<td>Alternative Explanations</td>
<td>116</td>
</tr>
<tr>
<td>4.7.1</td>
<td>Rigidity of the neighborhood composition</td>
<td>116</td>
</tr>
<tr>
<td>4.7.2</td>
<td>Clustering analysis</td>
<td>121</td>
</tr>
<tr>
<td>4.8</td>
<td>Conclusion</td>
<td>123</td>
</tr>
<tr>
<td>5</td>
<td>Conclusion</td>
<td>126</td>
</tr>
<tr>
<td>5.0.1</td>
<td>The Road Ahead</td>
<td>130</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>‘Who is Rich, Anyway?: Distributional Misperceptions and Tax Preferences</td>
<td>132</td>
<td></td>
</tr>
<tr>
<td>Bibliography</td>
<td>136</td>
<td></td>
</tr>
<tr>
<td>Biography</td>
<td>146</td>
<td></td>
</tr>
</tbody>
</table>
# List of Tables

3.1 Independent Variable: ln Perceived Top Decile Threshold ............................. 67
3.2 Questions about income distribution for single-person households ............. 72
3.3 Perceived Thresholds-Summary Statistics ....................................................... 79
3.4 Independent Variable: ln Perceived Top 10th Percentile Threshold ............. 80
3.5 Treatment Effects on the Assessment of Inequality and Demand for Progressive Taxation ................................................................. 83
3.6 Dependent Variable: Inequality is a Problem ....................................................... 84
3.7 Dependent Variable: Progressive ................................................................. 85
4.1 Social status of individuals enjoying piped water in their residence:
  titled and untitled .................................................................................................. 103
4.2 Title distributions of the benefactors ............................................................... 104
4.3 Negative Binomial Regression: Incidence Rate Ratios ........................................ 116
A.1 Balance Table .................................................................................................... 132
A.2 Percentage of Respondents Overestimated & Underestimated the Thresholds .......................................................... 133
A.3 Observed vs. Perceived Income Groups ............................................................ 133
# List of Figures

1.1 Preferences over Progressive Taxation - Above Median Households . . 5  
1.2 Preferences over Progressive Taxation - Below Median Households . . 6  
1.3 Highest and Lowest Bracket Tax Rates of OECD Countries . . . . . . 9  
1.4 Average misperceptions and income slopes . . . . . . . . . . . . . . 27  
1.5 Income gap regarding progressive taxation . . . . . . . . . . . . . . 28  
1.6 Income gap regarding redistributive preferences . . . . . . . . . . . 29  
2.1 Income vs. how much you think the rich makes a year . . . . . . . . . . 35  
2.2 Timing of Decision-Making . . . . . . . . . . . . . . . . . . . . . . . . 41  
2.3 Distribution 1 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 49  
2.4 Distribution 2 . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 50  
2.5 Preferences for Progressive Taxation by Income and Perceived Threshold Levels . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 53  
3.1 Distribution of observed and perceived own-income group . . . . . . . 68  
3.2 Distribution of observed and perceived own-income group . . . . . . . 68  
3.3 Distribution of observed and perceived own-income group . . . . . . . 69  
3.4 Distribution of observed and perceived own-income group . . . . . . . 69  
3.5 Distribution of observed and perceived own-income group . . . . . . . 76  
3.6 Respondents’ Perceived Thresholds . . . . . . . . . . . . . . . . . . . 79  
3.7 Respondents’ Perceived Thresholds . . . . . . . . . . . . . . . . . . . 79
4.1 Ottoman Istanbul ............................................. 101
4.2 Intra Muros Istanbul and Eyüp: Distribution of fountains .......... 107
4.3 Distribution of fountain count per neighborhood. ..................... 108
4.4 Titles of the founders ........................................... 109
4.5 Titles of the founders ........................................... 110
4.6 Distribution of the royal fountains. Purple points indicate the foun-
tains built by the members of the Imperial family. ...................... 111
4.7 Incidence of fountains in neighborhoods with different ethno-religious
characteristics. Green points represent Muslim neighborhoods, red
points represent non-Muslim neighborhoods. Circle sizes indicate house-
hold number per neighborhood. ...................................... 112
4.8 Construction of neighborhoods. Green areas represent the Muslim
areas in the city, orange areas represent the non-Muslim areas recon-
structed by the Thiessen procedure and the historical records. Crosses
indicate churches, stars indicate synagogues. .......................... 113
4.9 Incidence of fountains in neighborhoods with different ethno-religious
characteristics. Green points represent Muslim neighborhoods, red
points represent non-Muslim neighborhoods. Circle sizes indicate num-
ber of fountains per neighborhood. ...................................... 114
4.10 Hot-spot analysis pertaining to the spatial distribution of fountains in
Ottoman Istanbul. .................................................... 117
4.11 Geographical distribution patterns of fountains in Istanbul: Clustering
analysis ................................................................. 123

A.1 Screen shot of the survey question asking for the poverty threshold . 134
A.2 Screen shot of the information treatment .............................. 135
Acknowledgements

It takes a village to write a dissertation. In this particular case, it took encouragement and support from a whole community of different people from various parts of the world. I feel extremely fortunate to have had so many people who believed in this dissertation; at times, more than I did. I am forever grateful.

During my years at Duke, I was blessed with terrific advisors who genuinely cared about my work. Timur Kuran not only read many versions of this dissertation with neverending enthusiasm but also taught me how endless interest in learning could lead to an excellent scholarship. Timur Hocam, her sey icin çok teşekkürler. Pablo Beramendi has been a crucial source of encouragement and support. He made sure that I had endless opportunities to grow as a scholar. His work and ideas have an important influence on my own work, and this is apparent throughout this dissertation. Daniel Stegmueller, David Siegel, Herbert Kitschelt and Bahar Leventoglu who have offered valuable help and insights throughout this journey.

I have a great deal of luck having friends from home, who supported and com-
forted me during the hardest moments of the Ph.D. I am grateful to Gozde Corekcioglu - having a best friend who knows what you are going through was invaluable. Kerem Tinaz was always there to make me smile whenever I needed him. I would also like to thank Ali Yururer, Ecem Kalkavan, Sena Muderrisoglu, Kezban Gunesdogdu, Pelin Gul, Dikmen Arin and Berkcan Ibili. I always felt your love and support, although we were thousands of miles away from each other. Sometimes you gave me reasons to cheer up, at other times you provided a shoulder to cry on. Thank you.

Writing a dissertation is an interesting experience. While it almost inevitably guarantees an endless state of solitude, it also increases the probability of connecting and bonding with some extraordinary people. One such person is Luis Enrique Candelaria. This dissertation is written with your encouragement and support. Luis, thank you. Your love for research inspires me every day to become a better scholar.

Vasco Botelho - thank you for always being there for me. I know you do not like to praise, but you deserve more than I could fit in this paragraph. You were a constant source of love and friendship in the last six years. I feel incredibly fortunate to be your friend. You are the best!

Another person who helped me immensely is Irem Altan. Every happy memory in Durham involves her presence. I learned a lot from her witty personality. Irem, I love you. I am thankful that you ended up here at Duke. After all these years
together, you are family to me.

I felt utterly blessed when Fatih Serkant Adiguzel came into our department and my life. Although he joined this journey rather late, his presence and support were so strong that I feel he was always here. Serkant, it was such a pleasure to have you with me - I am looking forward to a future full of you - as a coauthor, as a comrade, and as a dear friend.

Another heartfelt thank you goes to Necdet Emir Demirtas. I am grateful for your endless support in the last months. For many years, I felt like a drowning cat in Durham. And yet, with your presence, I started to feel like a thirsty fish. You brought fun and magic into our lives. You won the lottery, yet we received the biggest prize!

I would also express my gratitude to Deniz Sanin. Dezo, you were a sister to me, you turned Durham into a home. You provided sanity, fun, and endless encouragement.

I also would like to thank Amy Clayton and Jennifer Becker for helping me when I most needed it. Thank you.

The last, but not the least, I want to thank my beautiful family. My mother Nuray Cansunar and my father Murat Cansunar worked as hard as I did for the completion of this dissertation. My grandmother Yildiz Egemen has been a constant
inspiration. This dissertation is dedicated to them, for they have provided unlimited support, love, and encouragement. Thank you.
1

Introduction

1.1 Motivation

The determinants of support for welfare provision have been one of the fundamental themes in political science for many years now. This centrality seems emblematic of Harold Lasswell’s famous definition of politics as a process of determining “who gets what, when, and how?” (Laswell, 1936) Although it has not received as much scholarly attention, of equal importance is “who pays what, when, and how?”. The size of the welfare budget and the number of recipients both depend on the revenue that the government raises through taxation. “Who gets?” and “who pays?” are not rival but complementary lines of inquiry for the size and the feasibility of the governmental provision of antipoverty programs, direct transfers, public services, and social insurance. It is the disjunction between the receivers and payers, as well as the
net transfers between these groups, that define both the progressivity of the welfare system and the intensity of class conflict. Indeed, throughout history, politics has been a battleground between groups aspiring to maximize their own benefits while simultaneously trying to minimize what they pay.

In most fiscal systems, the current position of an individual in the income distribution determines the amount of taxes she is responsible for paying and types of benefits to which she is entitled. The link between income and welfare-related gains as well as losses becomes even more significant when societies have progressive statutory tax regimes. When the marginal tax rate increases with the income level, the individual’s income bracket becomes a preeminent determinant of the economic interest from the welfare institutions. For the most part, governmental provision of welfare has maximum income requirements. Thus it is no coincidence that most scholarly works on preferences over redistribution treat personal income as the main driver of preferences over redistribution (Meltzer and Richard, 1981). To put it differently, the starting point of the canonical political economy models is that an individual will prefer policy X over policy Y if her expected income is higher under X than under Y. Hence, in most of these models individuals choose a tax rate that would maximize their material interest, given their income and the level of inequality. The optimal tax rate chosen by the individual affects her net benefits through
numerous channels, including after-tax income, direct welfare transfers, and benefits from certain public services.

Given its prevalence, the assumption of income-maximizing individuals has two major empirical implications for patterns of political behavior. First, according to this simple formulation, individuals with similar income levels should have similar views on redistribution and taxation. If their income levels are identical, under a given level of inequality, the same policy will maximize their benefits. Provided that political preferences are motivated primarily by material self-interest considerations, it is clear that if \(X\) is more beneficial than \(Y\) for one individual, then it will be the same for another individual with the same income. In this case, both of these citizens will prefer \(X\). Because this pattern is analytically convenient, most theoretical work in political economy focuses on the political behavior of income groups composed of individuals with identical incomes, rather than on whole populations with a range of incomes.

A second implication that emerges from this assumption is that rich and poor should have polarized political preferences pertaining to progressivity of the tax system. To maximize their economic self-interest, the rich should oppose purely redistributive welfare policies and a progressive tax code (Beramendi and Rehm, 2016). Instead, they should express support for government spending on social insurance
policies, as well as a flat or a regressive tax schedule. Conversely, the poor should support a progressive tax code and demand more poverty relief. It also follows that, since material interest is the main consideration, people with similar incomes should hold the same preferences on “who gets what” and “who pays” (Lipset, 1960; Brooks and Manza, 1997; Shayo, 2009). In a similar vein, the level of income inequality should impact the intensity of the political disagreement over redistribution between different income classes (Iversen and Soskice, 2001, 2015; Svallfors, 2004; McCarty et al., 2006). The rich have more to lose and the poor have more to gain from an equalizing government reallocation of resources as the income gap between low-income and high-income individuals increases. This differential impact might be expected to show up in public opinion surveys, revealing a much greater support for redistribution by the poor than by the rich.

Yet, this line of theoretical research has encountered many objections. While agreeing that the Meltzer-Richard model and its derivatures have captured a core insight about one of the main drivers of redistributive preferences, most scholars find that it conflicts critically with evidence. For one thing, political conflict between income groups need not grow as inequality increases. For another, there is significant variation in the redistributive preferences of individuals with similar incomes. Quite obviously, there is theoretical need for revising the workhorse model of redistribu-
tion. Returning to Lasswell’s famous definition of politics, why do some people let others become the ones “who get”? In other words, why do some rich people support redistribution and support progressive tax rates? Why do some high-income individuals complain about the inequality level, while others do not? What shapes their preferences for factors other than own personal income?

![Figure 1.1: Preferences over Progressive Taxation - Above Median Households](image)

Based on ISSP Social Inequality 2009. Preferences for progressive taxation: “Do you think people with high incomes should pay a larger share, the same share, or a smaller share?” (1. Much smaller share, 2. Smaller share, 3. The same share, 4. Larger share, 5. Much larger share). Answers of “Larger share” and “Much larger share” were coded as support for progressive taxes. The horizontal axis shows countries, and the vertical axis shows percentage of respondents supporting progressive taxation.
Surprisingly, the rich and the poor do not necessarily hold polarized views about the optimal level of progressivity in the welfare system. An even more peculiar finding is that, in most countries, the below-median and above-median citizens do not differ appreciably on progressive taxation. For example, Figure 1.1, which plots the average percentage support of among above-median households in the International Social Survey Program Social Inequality Survey for the idea that “people with high incomes should pay a larger/much larger share of their incomes in taxes than those
with low incomes” (ISSP, 2009). Similarly, Figure 1.2 plots the percentage of respondents with below-median household income supporting progressive taxation. The two figures show that in countries like Italy and Korea an overwhelming majority of the population wants tax rates to increase with income level, independent of the household income levels of the respondent. In all countries, more than fifty percent of the respondents above the median income support a progressive tax schedule.

Furthermore, notwithstanding their clarity and versatility, the workhorse models of redistributive preferences are poorly suited to analyze the political behavior of citizens where statutory taxes are progressive. Most existing studies model the redistributive decision making of individuals as choosing a single tax rate that will apply to all taxpayers. With a few notable exceptions, extant studies of redistributive preference do not allow for variation in statutory marginal tax rate imposed on different tax brackets. Although the main predictions of these models can be informative about how different groups will act in multidimensional tax systems, little has been explored about how these predictions have played out in practice. The above-mentioned questions become even more interesting in the presence of welfare states with progressive tax schedules; and, in most countries, marginal and average tax rates increase with the level of income (Cukierman and Meltzer, 1988). Figure 1.3 shows that progressive taxation prevails in many democracies. Why, then, do
some rich people agree to pay a higher share of their income in taxes? Why do they volunteer to be the ones “who pay”?

One answer, of course, is that people care about things other than material self-interest. A number of recent and influential contributions to the comparative politics literature have taken up the challenge of amending the utility function of the canonical model of redistribution. In particular, they include a source of utility other than income in the individual’s utility function. These revisionist studies posit that people’s decisions, along with material self-interest, are affected by altruism (Dimick et al., 2016), religion (De La O and Rodden, 2008; Stegmueller, 2013), beliefs about what is fair (Alesina and Angeletos, 2005), group loyalty (Shayo, 2009), and distaste for inequality (Lü and Scheve, 2016) to name a few.

In this dissertation, I will pursue an alternative revisionist agenda and introduce a different approach. Why, I ask, are the preferences of the rich pertaining to progressivity of the welfare system not significantly disparate from those of the poor? Why do a significant share of high-income individuals support progressive taxation? In answering such questions, I add a cognitive dimension to existing models of preference formation over redistributive policies.

The dissertation thus analyzes the extent to which the informational environment affects the preferences of the rich over the size and progressivity of the welfare state.
The main assumption on which I am building is that the rich are self-interested, so their preferences over redistributive policies depend directly on their potential gains and losses from the welfare state. Since a mental calculation of potential gains and losses requires information about economic position and the income distribution, I claim that the amount and nature of citizens’ information shapes preferences, and consequently the economic policies. An implication of this hypothesis is that even very wealthy people may support redistributive policies when inequality is high and the fiscal state is progressive, simply because they are misinformed about these
Of course, I am not the first analyst to argue that information has important consequences for political choice. The mismatch between the informational requirements of democracy and most people’s ability to meet these requirements has attracted much attention from political scientists. There has been an ongoing debate about whether democratic processes are destined to turn into a “tyranny of the experts” (Dahl, 1967) or whether reasoned choice can be made without full information, through the ability to predict consequences of actions (Lupia and McCubbins, 1998). In their seminal work, Lupia and McCubbins (1998) identify the specific conditions under which people with limited information can make reasoned democratic choices. However, little empirical testing has been done to evaluate if citizens are able to meet these specific conditions to make informed decisions about redistributive policies.

But the purpose of this dissertation is not to reach normative conclusions about democratic governance and delegation under imperfect information settings. Rather, I advance the idea that information has important implications for the demand and supply sides of the welfare politics. As shown with the recent experimental studies, if citizens change redistributive preferences when supplied with factual economic information, it follows that the assumption of “complete information” no longer holds in many models of political economy. Also, given that political actors control the
information, especially before elections, it is evident that information will be used as a tool to shape electoral perceptions in line with politicians’ strategies. Hence, this dissertation not only attempts to understand the micro-foundations of redistributio nal preferences but it also tries to illuminate how existing political institutions can shape the perceptions which then affect these preferences.

1.2 Intellectual Context

This dissertation brings together two highly disconnected political literatures: political economy of redistribution and political behavior. I delve into these literatures to examine the ways that knowledge mediates the effect of income on preferences over tax and transfer policies. Although both literatures provide fundamental insights in understanding political and economic decision-making, I claim that this disconnect has important theoretical and empirical consequences that should be taken seriously. Also, the variation and the inconsistency in the channels proposed by different scholars to explain the reasons behind the support of the rich for higher taxes and more redistribution leaves much to be desired.

I now turn to a brief description of the recent political economy literature that addresses why some high-income individuals support welfare policies and progressive taxation. I will emphasize the shortcomings of these accounts on two grounds: first,
their ability of explaining the redistributive preferences and second, the incoherence of their assumptions pertaining to human behavior.

1.2.1  Progressivity, Social Insurance and Self-Interest

Under what conditions do the rich get material benefits from the redistributive system? The interaction between individual’s position in the income distribution and the design of the fiscal state matters for determining who benefits and who loses from tax and transfers policies. Moene and Wallerstein (2001) argue that the affluent may be willing to pay higher taxes if the fiscal system is oriented more towards insurance than redistribution. Beramendi and Rehm (2016) contribute to this discussion by pointing out that “by determining who gives and who gains, the design of the tax and transfer system shapes citizens’ expected net benefits and mediates the impact of income on preferences for redistribution.” The common basic insight from these studies is that the fiscal setting in which voters operate has potent effects in shaping their redistributive preferences. The rich can support tax and transfer policies when they are the net beneficiaries of the system due to the design of the welfare state.

Although these are valuable contributions, their claims rest on informational requirements that only unrealistically sophisticated agents might satisfy. Gingrich (2014) shows that almost forty percent of citizens in Portugal, Ireland, Italy and Spain choose the “Don’t know” option in the Eurobarometer survey when asked the
“If you were to be laid-off, how much do you think the unemployment insurance and welfare system will compensate you for the loss of income during the first six months as a percentage of your current income”? Other recent evidence shows that citizens have misperceptions about the level of income inequality (Gimpelson and Treisman, 2015), Most importantly, individuals also err in predicting their positions in the income distribution (Cruces et al., 2013; Fernández-Albertos and Kuo, 2018). In light of these empirical results, it is unrealistic to assume that citizens can calculate expected benefits and losses

1.2.2 Altruism, Inequality Aversion and Fairness Considerations

Perhaps, the most conspicuous conclusion of the literature that investigates the rich’s willingness to contribute to the welfare system disproportionately is that altruism, inequality aversion, and social justice considerations all matter. A large and thriving literature focuses on such “other-regarding” behavior to explain why redistributive policies are often supported by individuals who stand to lose from such policies. Dimick et al. (2016), for instance, show that “income-dependent altruism” affects redistributive preferences, asserting that an increase in macro inequality will increase support for redistribution in general, and that the magnitude of increase will be larger for the rich than the poor. This result builds on the assumption that individuals not only care about their own welfare but also about that of others. A similar insight
emerges from the line of work on inequality aversion that is based on the premise that individuals are interested in the fairness of their own outcome relative to others. This framework assumes that individuals incur losses when others have relatively lower incomes than they do which might induce the high-income voters to agree to higher tax rates (Fehr et al., 2006; Lü and Scheve, 2016). Alesina and Angeletos (2005) posit that rich will support redistributive policies to the extent that they believe the need for these policies are generated by luck, not variation in individual effort and hard work.

While these contributions have certainly expanded our comprehension of the origins of the disconnect between the rich’s income position and redistributive preferences, there are several reasons why this conclusion requires further examination. Most of the studies that build on the assumption of altruistic preferences mattering for redistributive decisions rely on the evidence from the actions of the agents who play strategic interaction games in laboratory settings. The most prominent example is the dictator game, where an individual, “the dictator”, gets to allocate a certain amount of money between herself and her partner, “the receiver”. It turns out that a significant number of “dictators” give a positive amount to the receiver, although the game-theoretical best response would be to offer nothing to the other person (Camerer, 2003). The theoretical interpretation of this generosity by scholars has
been that individuals are intrinsically averse to unequal outcomes and care about others’ welfare (Fehr et al., 2006; Andreoni and Miller, 2002)

Recent work in behavioral and experimental economics, however, has challenged this interpretation, revealing that a person’s behavior, whether altruistic or self-interested, depends on whether it is observed by those who are directly affected by it (Dillenberger and Sadowski, 2012). Dana et al. (2006) show that when “the dictator” is given the option of exiting the game before the recipient learns about the instructions and the identity of “the dictator” at a small cost, the level of other-regarding behavior declines significantly. The conclusion is that “experiments demonstrate an illusory preference for fairness” because the results indicate that decreasing transparency in these experiments always produces more self interested behavior. The theoretical interpretation is that individuals suffer from showing selfish behavior where they clearly had the chance to act pro-socially. People are “ashamed to appear selfish” (Dillenberger and Sadowski, 2012). Since many of the laboratory experiments in question are conducted with college students who potentially know each other, the effect of shame due to selfish behavior is presumably stronger than political settings in which preferences over taxes and transfers are not public. Taken together, these findings render the assumption that altruism and inequality aversion engender support for redistribution precarious.
1.3 The Argument

This dissertation’s main argument builds on and extends the recent surge of research that has highlighted the important factors different than income that matter for preferences over welfare policies, including social insurance considerations (Moene and Wallerstein, 2001), progressivity of the fiscal state Beramendi and Rehm (2016), religion (Stegmueller, 2014), inequality aversion (Fehr and Schmidt, 1999; Lü and Scheve, 2016), and altruism (Dimick et al., 2016). I refer to these studies as utility function approaches to redistributive preferences, since they posit that when tax and transfers change, individual utility is affected through factors that include more than changes in income. Even though this line of research has provided the field with much needed analysis of the micro-mechanisms that govern decision making process over redistributive policies, these accounts have rarely tested the validity of the informational assumptions. This dissertation introduces an informational approach to redistributive preferences. I put forward the idea that informational assumptions of the utility function based accounts should be revisited, and informational channels that affect the decision-making processes should be incorporated into the models of political economy of redistributive preferences.

My approach takes off from the political behavior literature that postulates voters who are uninformed about politics. Although the notion of badly informed citizens
is now a widely accepted concept in political science, there is an ongoing discussion about the political consequences of voter ignorance (Lupia, 1994). Lupia and McCubbins (1998) argue that “limited information need not prevent people from making reasoned choices”, emphasizing that voters often rely on informational shortcuts such as cues, heuristics, and political parties to overcome their knowledge shortfalls. The extent to which this assertion is valid depends on whether the citizens change preferences when they receive information about the policy or the problem that is in question. For instance, if an individual is uncertain about the details of a proposed policy, but is able to overcome this uncertainty by the use of informational shortcuts, then she will not change her initial decision is she receives new information. In this case, her decision is an accurate measure of her preferences and a utility-function based approach is suitable to study the determinants of her preferences. In contrast, if the individual changes her behavior with new information, then the correspondence between the theoretical determinants of her decision and her revealed preference is less clear. I argue that, if it is the case that a significant number of citizens change their decisions over welfare policies when they are presented new information about the fiscal system, economic inequality and their own economic position, then an informational approach to study redistributive preferences is imperative.

In line with the conclusion that voters lack political information in many contexts,
a small but growing literature has carefully demonstrated that individuals also know little about income inequality, where they are located on the income distribution and the fiscal system. These studies present evidence that citizens have misperceptions about the shape of the income distribution (Gimpelson and Treisman, 2015), the welfare system (Gingrich, 2014), the level of inequality (Gimpelson and Treisman, 2015; Norton and Ariely, 2011), and their perceived income decile (Cruces et al., 2013). More importantly, there is ample evidence that illustrates that individuals change preferences about redistributive policies when they are presented with information on their own economic position (Cruces et al., 2013) and income inequality in general. Given the indication that different levels of information generate different kinds of redistributive demands, understanding the relation between information and support for the welfare system is a compelling next step.

My intent is to advance the debate on micro-foundations of redistributive preferences by identifying the channels through which the lack of information mediates the effect of income on decisions about welfare policies. In developing the model of informational approaches to redistributive politics, I introduce informational assumptions about the process of political decision-making that naturally follows from the well-known conclusions in the political behavior literature: citizens do not always have perfect information or can use informational shortcuts effectively to estimate facts.
Naturally, political decisions are shaped by political and economic information.

My theory of preference formation extends the social insurance and progressivity literature. It posits that welfare policy preferences are significantly shaped by an individual’s pre-tax income as well as the design of the tax and transfer system. Specifically, I assume that individuals intend to maximize their incomes by the selection of the welfare policies, relying on the information they have about the crucial parameters in this decision-making process. Under this framework, individuals need information pertaining to i) their own economic position, ii) the distribution of income, and iii) the structure of the welfare state. Very intuitively, the individual’s mental conclusion of the benefits or losses that will be incurred from under different tax levels will depend on these factors. I argue that the difference between information about indicators and the real levels will affect the extent of the relation between income and redistributive demands. More specifically, I will focus on the emergence, persistence, and the consequences of micro-level information gap.

I define the micro-level information gap to be the difference between what an individual knows about the economy and the reality. In the context of welfare politics, very intuitively, I focus on the information pertaining to own economic position, the income distribution, and the design of the welfare system. My main aim is to identify the effects of the micro-level information gap on the correspondence between
an individual’s income and her redistributive preferences.

Why do people fail to get needed information to make reasoned redistribute choices? In particular why do the rich, who have more resources to invest in learning, stay uninformed about politics? Downs (1957) claims, in his famous work *An Economic Theory of Democracy*, that “it is irrational to be politically well-informed because the low return from data simply do no justify their cost in time and other resources”. Thus, people will rely on informational shortcuts to gather needed information to make mental calculations of expected benefits and losses from welfare policies. In the chapters of the dissertation, I claim and show that informational shortcuts do not always lead to factual information. I hypothesize that cognitive heuristics, such as the representativeness and the availability heuristic, induce errors in evaluation. Finally, I claim that the political and economic institutions affect the amount of information that is available to the rich, and hence affect their redistributive preferences. I argue that that *micro-level information gap* will be at a minimum level when the rich is informed about the design of the fiscal system and the society is clearly segregated into rigid groups. To test this claim empirically, I analyze the elite behavior in the Ottoman Empire. I show that when the rich are not constrained by democratic institutions and have significant information about the fiscal state, they are willing to contribute to the “welfare” system.
Are widespread misperceptions about one’s relative economic position universal and invariant to time? Not at all. In this dissertation, I offer evidence that such misperceptions are considerably less significant in certain political systems. Chapters 2 and 3 illustrated how information and misperceptions are generated as well as how they affect redistributive preferences in modern democracies. By contrast, Chapter 4 focuses on the revealed preferences of the rich in an authoritarian setting that allows them to control the welfare system. While the traditional literature on the welfare state concentrates on studying the individual-level determinants of redistributional preferences in democracies, examining elite political behavior under the authoritarian regimes proves useful for two reasons. First, presumably there exists a lower discrepancy between the private preferences and publicly revealed preferences of the rich in authoritarian environments since they are not constrained by democratic institutions. Second, under authoritarian regimes the welfare system tends to be elite-created. An elite-created welfare system has important advantages to study the redistributive preferences of the rich. A welfare system that is designed and controlled by the elites will minimize the micro information gap of the rich pertaining to potential gains and losses from fiscal policy. More importantly, the progressivity or the regressiveness of welfare policies will provide evidence for the competing claims describing the rich’s political behavior: altruistic or self-interested.
Many studies try to delineate the impact of informational asymmetries on redistributive preferences by attempting to provide information on levels of economic inequality (Kuziemko et al., 2015), prospects for social mobility (Alesina et al., 2018) or placement on income distribution to individuals in experimental settings (Cruces et al., 2013; Fernández-Albertos and Kuo, 2018). Chapter 3 of this dissertation follows a similar approach. While this approach has certainly proved useful in showing that the presentation of factual information has a significant impact on redistributive preferences, we have little evidence on how, and even whether, this effect influences real-life political behavior persistently.

An ideal context to test the real determinants of the redistributive preferences of the affluent would be a system in which there is no room for misperceptions about either rankings in the income distribution or expected net benefits from the fiscal system. In a setting where the rich know that they are indeed rich and the consequences of contributing to the welfare system are clear, the affluent should contribute to inequality-reducing measures and policies if she has other-regarding preferences. But if they are unconcerned with overall social utility or the level of inequality, they should contribute to policies that will only benefit themselves. One of the novel contributions of this dissertation is employ such a research design. It empirically tests the claim just made using original data from Istanbul, the capital
of the Ottoman Empire, between 1565 and 1800.

Although this dissertation focuses on the effects of (poor) information on the redistributional preferences of the rich, the framework is generalizable to other areas of concern in political economy. Hence, the ideas put forward in this dissertation constitute constructive criticism of economic models that aim to describe political behavior with strong informational assumptions. In explaining political behavior, many of these models assume that parameters pertaining to the economy or political institutions are either i) known perfectly, ii) perceived almost exactly as the real level with the help of informational shortcuts and heuristics, or iii) deducible from the realized equilibrium. Yet, as I have pointed out, there exists abundant empirical evidence of misinformation about the parameters that plays important roles in individual decision-making process regarding distribitional matters. When citizens’ perceptions about political institutions and economic indicators deviate from reality, the assumption that revealed preferences emerge from the true state of the world is empirically and theoretically problematic.

1.4 Macro implications of “micro-level information gap”

This dissertation contributes to a political economy literature that deals with conflicting findings at the micro-level. Thus, its main focus is on the informational
and cognitive mechanisms that affect individual level decision-making. However, a dominant view in political science, and in comparative politics in particular, treats the institutional arrangements as the main determinants of government spending. Institutions treated as critical include the type of electoral system (Persson and Tabellini, 2002; Austen-Smith, 2000; Iversen and Soskice, 2006), the labor market, wage bargaining institutions (Beramendi and Rueda, 2014), as well as federalism and decentralization of political power (Amat, 2014; Beramendi, 2012). Such institutions are said to shape, among the other variables, the size of the welfare state.

The main conclusion of these influential contributions is that welfare outcomes are driven primarily by institutions. Surprisingly, this approach disregards individuals’ preferences. An indirect implication of this neglect is that differences in citizens’ preferences across countries and time periods have no impact on changes and differences in the provision of welfare policies (Rehm, 2016).

However, as V. O. Key puts it, “Unless mass views have some place in the shaping of policy, all the talk about democracy is nonsense.” (Key, 1964) The relationship between public opinion and political outcomes is indeed central to the normative expectations about how democracies should work. And clearly, public opinion is the aggregation of individual preferences, the mechanisms through which preferences are formed matter for understanding why political outcomes differ across policy domains.
and time. Understanding changes in individual preferences may thus help to demystify the variance of welfare systems around the world. This is why this dissertation pays close attention to individual preferences.

Yet, highlighting the importance of citizen preferences does not automatically refute the claim that institutions matter for political outcomes. On the contrary, as formalized in Charles Plott’s fundamental equation of politics,

\[
\text{Preferences} \times \text{Institutions} \times \text{Feasible Set} \rightarrow \text{Outcomes.}
\]

In other words, institutions filter and aggregate preferences, directly impacting the political outcomes that get selected out of the feasible set. This equation implies, as Hinich and Munger (1997) claim, “If preferences change, outcomes can change, even if institutions remain constant.” In line with this observation, I argue that changes in preferences cannot be grasped fully without a deeper understanding of what kind of inputs and mechanisms citizens use to form them. Henceforth, studying the micro-mechanisms through which citizens generate views on redistributional matters is a compelling step.

A related question is whether micro information gaps affect average public opinion regarding welfare policies? Do average levels of misperceptions about relative economic positions influence the link between income, on one hand, and attitudes
toward redistribution and taxation, on the other? Do the rich want more redistribution when they underestimate their relative positions?

As a motivating illustration, Figure 1.4 plots income coefficients when predicting support for government action to reduce inequality and progressive taxation, against average levels of misperception in different countries\(^1\). Figure 1.4 reveals that, as average misperceptions increase, the predictive power of income for redistributive preferences decreases. This accords with my theoretical framework.

\(^1\) ISSP (2009) asks respondents the following question: “In our society there are groups which tend to be towards the top and groups which tend to be towards the bottom. Where would you put yourself now on this scale? I take this as a proxy for which income decile the respondents roughly thin they are located at the income distribution. Misperception of an individual is calculated as the difference between the actual income decile of the respondent’s households and the self placement of the respondent on a 10-point scale. The resulting variable takes values from negative nine to positive nine. I take absolute value of misperceptions to calculate average misperceptions levels for each country.
Figure 1.4: Average misperceptions and income slopes

Based on ISSP Social Inequality 2009. Preferences for redistribution: “On the whole, do you think it should be the government’s responsibility to reduce income differences between the rich and poor?” (1. Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4. Agree, 5. Strongly agree)

Preferences for progressive taxation: “Do you think people with high incomes should pay a larger share, the same share, or a smaller share?” (1. Much smaller share, 2. Smaller share, 3. The same share, 4. Larger share, 5. Much larger share). Controls are education, gender, and age. Sample is restricted to respondents for whom all the variables are present.

Figure 1.5 and Figure 1.6 reveal two interesting patterns. First, on average, the rich tend to underestimate their rankings while the poor tend to overestimate.

Second, as levels of underestimation rise, the rich tend to demand more redistribution and increasingly progressive taxation. By contrast, the greater the overestimation of
the poor, the less demand for redistribution and rich paying a higher share of their income in taxes.

Figure 1.5: Income gap regarding regarding progressive taxation

Based on ISSP Social Inequality 2009. Preferences for progressive taxation: “Do you think people with high incomes should pay a larger share, the same share, or a smaller share?” (1. Much smaller share, 2. Smaller share, 3. The same share, 4. Larger share, 5. Much larger share). Misperception: the difference between the actual income decile of the respondent’s household and the self placement of the respondent on a 10-point scale. The resulting variable takes values from negative nine to positive nine. Positive values imply underestimation of one’s own rank, where as negative values imply overestimation. Poor is the group of respondents whose household income is in the bottom three income deciles, rich is the group of respondents whose household income is in the top three income deciles.

These figures provide evidence that misperceptions affect public opinion, and, hence, political outcomes. All of this motivating evidence has major implications for enduring puzzles in political science. So they should be examined on a deeper level.
This dissertation takes this task.

**Figure 1.6**: Income gap regarding redistributive preferences

Based on ISSP Social Inequality 2009. Preferences for redistribution: “On the whole, do you think it should be the governments responsibility to reduce income differences between the rich and poor?” (1. Strongly disagree, 2. Disagree, 3. Neither agree nor disagree, 4. Agree, 5. Strongly agree). Misperception: the difference between the actual income decile of the respondent’s household and the self placement of the respondent on a 10-point scale. The resulting variable takes values from negative nine to positive nine. Positive values imply underestimation of one’s own rank, where as negative values imply overestimation. Poor is the group of respondents whose household income is in the bottom three income deciles, rich is the group of respondents whose household income is in the top three income deciles.

1.5 Outline of the Dissertation

The rest of the dissertation consists of four chapters. Chapter 2 lays the theoretical groundwork. I introduce a formal model of distributional misperceptions to illustrate
the decision-making process over tax rates in a progressive system when individuals do not possess perfect information. I focus on two important mechanisms that affect the above-mentioned decision-making process. First, in the absence of factual information, how do people create (mis)perceptions about the income distribution and their own economic position? Second, how do those (mis)perceptions affect preferences over tax rates? When they lack precise knowledge of the extent of economic inequality and their position on the income ladder, individuals rely on social comparison and cognitive heuristics, I argue. These generated perceptions, in return, form the basis of their calculation of potential benefits and losses due to tax policies.

In Chapter 2, I develop a theoretical model and show empirically that individuals perceiving a significant income gap between themselves and high-income earners are more likely to support higher tax rates.

Chapter 3 is designed to explore how mistakes in economic self placement affect preferences over progressive taxation. Using (ISSP, 2009) data, I test the effect of an individual’s misperceptions pertaining to her relative economic standing on the preferences over progressive taxation. Also, testing all the implications of the formal model introduced in Chapter 2 requires a detailed micro dataset that contains information on individuals’ level of information on income groups and their tax preferences. Yet, evidence on perceptions of inequality and income distribution
remains limited in existing surveys. In this chapter, I use an original survey to show that individuals make systematic mistakes in identifying the income levels of certain groups. As we shall see, the mistakes in question reveal the weaknesses of widely used survey questions in the data sets that shape most of the work in the literature of income inequality and redistribution preferences.

A related goal of Chapter 3 is to assess whether individuals revise and update misperceptions once they receive additional information about income distribution. Bartels (2005) argues that voters fail to connect inequality and policy. Intuitively, if individuals fail to connect information and optimal policies, then it is futile to argue that non-optimal redistributive preferences are consequences of the imperfect information setting in which agents operate. Moreover, the notion that individuals change political preferences by acquiring information would have important implications for their political parties’ strategies. In a similar vein, available datasets are not analytically useful to interrogate if information can induce changes in preferences over redistributive policies. Given these limitations, I rely on an original survey experiment to test the empirical claims introduced earlier.

Chapter 4 looks at water provision by the elites of Ottoman Istanbul in the 17th and 18th centuries. This chapter demonstrates that the micro-level information gap is minimal in certain institutional settings. It also argues that this affects the
redistributive preferences of the rich. This focus of the chapter is to analyze the
determinants of elite’s preferences of welfare contributions to show that in environ-
ments in which class differences are highly visible, levels of misperceptions will also
be minimal and the rich will be expected to act with observable utility-maximization
strategies.
In early December 2015, Tamil Nadu, a South Indian state, faced the worst floods in over hundred years. An estimated 188 people died, and over 100,000 people were displaced due to the heaviest rainfall in over a century and poor civil infrastructure. Many observers raised questions concerning the slowness of the government’s relief efforts and its effects on the severity of the disaster. One such criticism came from Kamal Haasan, a famous Indian film actor who resides in Chennai, the capital of Tamil Nadu. In an interview to an Indian news website, the actor said, “It’s a
nightmare for the poor and the middle class. The rich should feel guilty. I am not so rich and yet I feel guilty when I look outside my window and see how people in my city are suffering.” Complaining about the government’s lack of willingness to end social inequality, he added: “I love my people truly. All this drama of rich and poor is a farce, though. The politicians don’t give a damn about social equality as long as they remain in power.”

Perhaps it is unsurprising that citizens complained about the government services and relief efforts, especially if they believed that if the government had taken timely and appropriate action, the storm would have done less damage. What is surprising here is that Kamal Haasan, one of India’s most prominent and richest actors, remarked that he is not “so rich.” Further, he urges the rich to feel guilty about the unequal consequences of the flood and summons them to take action. However, with a net worth over one hundred million dollars and a recent agreement to be paid over 2 million dollars for hosting the Tamil-language version of Big Brother, Kamal Haasan is indeed among the India’s very affluent elite.

There are many more examples of the affluent people exclaiming “Me? I am not rich!” from all over the world. In 2015, New Jersey governor Chris Christie, whose annual household income was about $700,000 in the previous year, replied to

a reporter asking if he considered himself a wealthy man: “I don’t consider myself a wealthy man. Listen, wealth is defined in a whole bunch of different ways and in the end my wife and I have worked really hard, we have done well over the course of our lives, but, you know, we have four children to raise and a lot of things to do. So no, I don’t consider ourselves, and I don’t think most people think of me that way.” However, an annual income of $700,000 puts the Christie family in the top one percent in the American household income distribution.

The stories of the Indian actor and the New Jersey governor are not isolated anecdotes. Few affluent people consider themselves rich. For example, a Pew survey

of 2011 confirms that only 1% of Americans identify themselves as “upper class”, although about 21% would actually be defined as “upper-income”. Data also show that many Americans define “rich” as anyone who earns more than they do\textsuperscript{3}. Evidence from Pew Research Center’s survey about income inequality presents interesting evidence about the direction and magnitude of this regularity in the United States. First, every income group, on average, thinks that a household has to make more than $300,000 a year to be considered rich - an amount that puts it in the top five percent of the income distribution. Second, as the income of the respondent rises, so does her prediction about how much the rich make a year. On average, most of people think “the rich” make significantly more than what themselves earn.

Theoretically, the curious cases of Kamal Haasan, Chris Christie, and the other misperceivers should not strike political scientists as either surprising or implausible. Many studies have carefully documented that citizens are poorly informed about political facts. In particular, a plethora of recent studies have demonstrated that people misperceive both the level of income inequality and their position on the income distribution. Furthermore, individuals also make significant mistakes about how much certain groups make a year. While this expanding literature offers ample evidence that there are misperceptions in how individuals assess the state of the economy and

\textsuperscript{3} https://www.people-press.org/2014/01/23/most-see-inequality-growing-but-partisans-differ-over-solutions/
make decisions about policies, we know little about how these misperceptions emerge and how they affect policy preferences.

On the face of it, these numbers introduce a simple yet a compelling regularity: for most citizens “being rich”, it seems, is a fuzzy concept that is hard to define. As a result, everyone - high income and low income individuals alike - think that the rich consist of others, perhaps the Bill Gates or the Mark Zuckerbergs of the world; or the owners of the nicest house on the block. Or, perhaps, it is an unknown person who lives on the Upper East Side in Manhattan, shops from Saks Fifth Avenue, drinks champagne for brunch, and takes exotic vacations in French Polynesia. Who do you have to be to be rich? Do high-income and low-income citizens have systematic differences in who they think is rich? This may seem like a frivolous inquiry, but it is in fact a crucial one when it comes to the preferences over redistributive policies.

This chapter lays the theoretical groundwork for this dissertation. I study the following questions: Why are citizens misinformed about facts about inequality? How do they generate information pertaining to income distribution to choose redistributive policies when they are imperfectly informed about the relevant statistical facts? Do these shortcuts generate misperceptions about income distribution and income class identification? And, if so, in what ways do these misperceptions affect redistributive preferences?
The main contribution of this chapter is to illustrate that in the absence of perfect knowledge of the facts, informational shortcuts can cause misperceptions, which in turn alter preferences over welfare policies. My aim is to shed new light on the mechanisms through which individuals form perceptions about income inequality and income distribution. I offer a synthesis between two largely disconnected literatures - one on political information, the other on preferences over redistributive policies - by introducing a model of perceptions and demand for progressive taxation. My explanation for the emergence of perceptions in the absence of information links the effects of social comparison and the use of cognitive heuristics to describe the mechanisms by which the individual apperceives the state of the economy. I also show how misperceptions of different direction and magnitude result in distinct levels of redistributive demands by the individuals.

2.1 The Argument

Much theoretical work in political economy models political decisions as solutions to optimization problems solved by well-informed individuals, where as most of the work in political behavior literature posits that voters do not possess necessary information to make informed decisions. While some scholars view this as a threat to congruence of the democratic process and the citizens’ cognitive capabilities, others
claim people need not be fully informed about statistical facts to make reasoned choices. Many scholars have concluded that people use simpler substitutes to statistical information to arrive at the same conclusions as had they had full information about the parameters of the optimization problem regarding a policy choice. As Lupia and McCubbins (1998) argue, “Reasoned choice does not require full information; rather, it requires the ability to predict the consequences of actions.” Gigerenzer (2007) calls this ability “the intelligence of the gut feelings”, positing “trusting your gut” can get you out of trouble.

In spite of this rich and influential literature, there is another line of research that focuses on how heuristics cause biases, which in turn lead to the mistakes that citizens make in judgment and choice. Tversky and Kahneman (1974) argue that although sometimes effective, heuristics also lead to systematic errors in perceptions and judgments. They emphasize the importance of a deeper understanding of these mechanisms and the biases they lead, in order to better predict human behavior under imperfect information settings.

In this chapter, I will remain agnostic as to the ability of individuals to arrive at “good enough” understanding of the political and economic environment to make reasoned decisions about tax rates. My intention here is demonstrate the differences in policy choices of individuals who are i) well-informed and not-informed, as well as
of those ii) who can successfully use heuristics and those who cannot.

Figure 2.2 summarizes the main channels in my theoretical formulation. An individual can be either informed or informed about income inequality. If she is informed, her optimization problem is similar to the canonical models in the literature. If not, she tries to predict the level of income inequality by looking at a selected sample of individuals from the population. If this reference group has the same characteristics as the population, her choice of an optimal tax rate will be the same optimal rate she would have chose under perfect information. If not, the composition of the reference group, and its difference from the population will determine the size and the direction of misperception pertaining to her income-group identification. The size and the direction of the misperception, in turn, will affect the preferences over optimal tax rates.

Thus, starting with a model of decision making with informed individuals, I extend the model to include uninformed individuals to highlight the difference between the two cases.

2.1.1 A Model of Tax Preferences Under Perfect Information

The basic premise of my model is that individuals only care about their material pay-off from redistributive policies. There is a finite set of individuals, \( N \), who compose
Figure 2.2: Timing of Decision-Making

For simplicity, I assume that there are two income groups: high-income individuals, denoted by $H$, and low-income individuals, denoted by $L$. I further assume an exogenously determined threshold income, $y_t$, such that individual $i$ belongs to group $L$ if $y_i \leq y_t$, and otherwise belongs to $H$. Let $\bar{y}_H$ be the average income of the high-income group and $\bar{y}_L$ be that of the low-income group.

I deliberately begin with supposing that individuals have perfect information on $N$, $Y^N$, and $y_t$. This implies that individuals are informed about the income distribution and the threshold income that separates income groups. Individuals

---

4 Here, I use multisets instead of sets to allow for multiple instances of an element. Observe that, definition of a set does not allow for multiple entries of the element. To account for the possibility that there might be more than one individual with the same income, I use the concept of multiset to allow for individuals with same income.
use this information to calculate the average income of the high-income group, $\bar{y}_H$, and the average income of the low income group, $\bar{y}_L$. This provides a benchmark against which the results can be compared when the imperfect information case is introduced.

Also, there exists a set of possible tax policies $T = T^H \times T^L$, such that $T^H = [0, 1]$ is the set of all possible tax rates that can be chosen for the high-income individuals and, similarly, $T^L = [0, 1]$ is the set of all tax rates that can be chosen for the low-income individuals. In other words, I assume a model of redistribution by two different rates of linear taxation to allow for a progressive system. Now, I extend the theoretical framework of Lü and Scheve (2016) to formulate the individual utility from taxes and transfers. The utility of an individual $i$ is given by:

$$u_i = T(i) + F - C$$  \hspace{1cm} (2.1)

Where $T(i)$ is defined as the post-tax income of the individual $i$, $F$ is the amount of transfers, and $C$ denotes the costs of taxation. In particular, I assume that the individual $i$ who belongs to the low-income group - that is, has pre-tax income $y_i < y_t$ - has a post-tax income of:

$$T(i) = (1 - \tau_L)y_i$$
By the same token, an individual \( i \) who belongs to the high-income group has a post-tax income of:

\[
T(i) = (1 - \tau_L)y_i + (1 - \tau_H)(y_i - y_t)
\]

Observe that, according to this formalization, high-income individuals only pay the tax rate of \( \tau_H \) for the part of their income that exceeds the threshold that separates the two income groups.

Additionally, \( F \) is defined as:

\[
F = \tau_L\bar{y}_L + \left[ \tau_Ly_t + \tau_H(\bar{y}_H - y_t) \right]
\]  

Finally,

\[
C = \sum_{j=L,H} \alpha \tau_j^2
\]

denotes the costs of taxation, i.e. the deadweight loss, where \( \alpha > 0 \) is a constant such that \( \tau_L, \tau_H \leq 1 \).

In the perfect information case the calculation of benefits and losses is straightforward. The optimal tax rates for an low-income individual is:

\[
\tau_L^* = \frac{\bar{y}_L + y_t - y_i}{\alpha}
\]  

43
\[ \tau_H^* = \frac{\bar{y}_H - y_i}{\alpha} \]  

(2.4)

Where as, the optimal tax rates for a high-income individual is:

\[ \tau_L^* = \frac{\bar{y}_L}{\alpha} \]  

(2.5)

\[ \tau_H^* = \begin{cases} \frac{\bar{y}_H - y_i}{\alpha} & \bar{y}_H \geq y_i \\ 0 & otherwise \end{cases} \]  

(2.6)

This optimization has two important implications. First, it dictates that low income individuals always demand progressive taxation, i.e. the optimal \( \tau_H \) is greater than 0. In addition, high income individuals whose personal income exceeds average income of the high income group will oppose progressive taxation.

### 2.1.2 A Model of Tax Preferences Under Heuristical Perceptions

I now define the building blocks of the proposed model of redistributive preferences under imperfect information. Consider an informational variation on the above maximization problem in which the assumption of perfect information relating to the economic variables in the model is relaxed. An individual may or may not be fully informed about \( y_t \). If the individual is informed, the decision-making process is similar to the case discussed above.

If the individual \( i \) is not informed, she draws a sample \( N_i \) from \( N \) to estimate the
income distribution, the threshold income \((y_t)\) and the average income of the income groups \((\bar{y}_H\) and \(\bar{y}_L)\).

I build on the social comparison and status-seeking literature to formulate how individuals categorize themselves and others into income groups in the absence of perfect information pertaining to \(y_t\), \(\bar{y}_L\), and \(\bar{y}_H\). Recent papers in economics and the other social sciences have established that individual decisions and concepts of welfare depend on relative rather than absolute levels of income (Immorlica et al., 2017). I rely on the concept of perceived distance from social groups to characterize individuals’ income categorization decisions about themselves and other people. Although there are many possible ways to operationalize perceived distance (Shayo, 2009), perceived income distance is the most appropriate measure for our purposes here. I build on the social comparison model of Immorlica et al. (2017) to operationalize this argument. The absolute level of individual income is not the only variable explaining decisions pertaining to income group identification and prediction. Both positional and cardinal considerations can play a role in self-categorization.

**Definition 1** (Perceived Distance from the High-Income). *The perceived income distance function of individual \(i\) from the group of individuals with higher incomes,
Definition 2 (Perceived Distance from the Low-Income). The perceived income distance function of individual $i$ from the group of individuals with lower incomes, $S_L^i : [0, \infty)^N \to \mathbb{R}$, is:

$$S_L^i(y) = \sum_{j \in N} \beta_{ij} \max(y_j - y_i, 0)$$

I further assume that each individual $j$ has the same normalized weight in the social distance function, that is, $\beta_{ij} = \frac{g_{ij}}{|N_i|+1}$ for all $i, j \in N$. $g_{i,j} = 1$ is interpreted as indicating that individual $j$ is in the reference group of individual $i$. I define $N_i = \{j \in N | g_{ij} = 1\}$ as individual $i$’s reference group.

Due to this specification, an individual’s perceived distance from the group high(low) income depends not only on the cardinality of the set of individuals that she thinks earn more(less) than her, but also by her degree of conviction. To substantively depict this mechanism, it is important how many people individual $i$ thinks live in a relatively nicer house, but it also makes a difference for her categorization process whether those houses are only recently renovated houses on her block or big oceanfront mansions.
I can now proceed to formulate definitions of perceived income class identification functions.

**Definition 3** (High-Income Identification). Given the reference group $N_i$, income distribution of her reference group $Y_i = \{y_j\}_{j=1,2,...,N_i}$ and own income $y_i$, the individual $i$ is said to identify with the high-income group if $S_H^i < S_L^i$.

In other words, an individual identifies with the high-income group if her perceived distance from higher-income individuals is smaller than her perceived distance from lower-income individuals.

**Definition 4** (Low-Income Identification). Given her reference group $N_i$, income distribution of her reference group $Y_i = \{y_j\}_{j=1,2,...,N_i}$, and her own income $y_i$, individual $i$ is said to identify with the low-income group if her perceived distance from the individuals with higher income is larger than her perceived distance from the individuals with lower incomes i.e. $S_H^i \geq S_L^i$.

Similarly, an individual identifies with the low-income group if her perceived distance from lower-income individuals is smaller than her perceived distance from higher-income individuals.

**Definition 5** (Perceived Threshold Income). Let there be $||N_i||$ individuals in the reference group of the individual $i$, $N_i$, indexed by $j \in \{1,2,...,||N_i||\}$. Individuals
are distinguished by their pretax income level, \( y_j \) where \( y_j \leq y_k \) for \( j < k \). \( y^i \) is the income threshold such that for all \( y_j > y^i \), \( S^H_j \leq S^L_j \) and for all \( y_j < y^i \), \( S^L_j \leq S^H_j \).

Put simply, \( y^i \) is the threshold for individual \( i \)'s reference group that separates the high-income group and the low-income group. Thus, \( i \) perceives the low-income groups mean income as:

\[
\bar{y}^L_i = \frac{\sum_{j \in N_i} y_j \mathbb{1}[y_j < y^i]}{\sum_{j \in N_i} \mathbb{1}[y_j < y^i]}
\]

Similarly, \( i \) perceives the high-income groups mean income as:

\[
\bar{y}^H_i = \frac{\sum_{j \in N_i} y_j \mathbb{1}[y_j > y^i]}{\sum_{j \in N_i} \mathbb{1}[y_j > y^i]}
\]

Figure 2.3 contains simulations that show how the reference group’s income distribution affects self-placement into income groups and the assessment of these groups’ income levels. Individual \( i \) has the same income in both simulations, but different reference groups with distinct income distributions. If individual \( i \)'s reference group has the income distribution illustrated in Figure 2.3(a), she associates herself with the low-income group. However, in Figure 2.3(b), although she has the same income, she will identify with the high-income group. Observe that the two groups’ average income levels are also substantially different in the two simulations. In Figure 2.3(a),
the reference group of individual $i$ is mostly people whose incomes are higher than hers. In Figure 2.3(b), however, there are more lower-income individuals, which creates the illusion that she belongs to the high-income group.

![Distribution 1](image)

**Figure 2.3: Distribution 1**

As theorized above, perceptions of income groups and individual location will affect the choice of optimal tax rates. In this framework, the maximization problem of individual $i$ becomes:

$$\max_{\tau_L, \tau_H} u_i = T(i) + F - C$$

(2.7)

$T(i)$ is defined to be the post-tax income of individual $i$. $F$ is the amount of transfers,
where,

\[ F = \tau_L \bar{y}_L i + \left[ \tau_L y_L i + \tau_H (\bar{y}_H i - y_t i) \right] \]  \hspace{1cm} (2.8)

where individual \( j \) in the reference group of \( i \) and classified as a low-income individual, is thought to have the post-tax income:

\[ T(j) = (1 - \tau_L) y_j \]

Additionally, an individual \( j \) who was categorized as high-income by the individual
\[ T(j) = (1 - \tau_L)y_i + (1 - \tau_H)(y_j - y_i) \]

Finally \( C = \sum_{j=L,H} \alpha \tau_j^2 \) denotes the cost of taxation.

In accordance with this formulation, the self-categorization of individual \( i \) affects how she perceives redistributive policies to shape her expected income. In other words, individual \( i \) thinks her post-tax income will be \((1 - \tau_L)y_i\) if she identifies with the low-income group, but \((1 - \tau_L)y_i + (1 - \tau_H)(y_i - y_i)\) if she identifies with the high-income group. Observe that expected post-tax income is not the only channel by which perceptions about income distribution could affect the maximization problem. The biased reference group also affects the assessment of the expected transfers through redistribution, through the parameters \( \bar{y}_H^i, \bar{y}_L^i, y_i \).

Consequently, the optimal tax rates for an individual \( i \) who identifies with the low-income group are:

\[
\tau_L^* = \frac{\bar{y}_L^i + y_i - y_i}{\alpha} \tag{2.9}
\]

\[
\tau_H^* = \frac{\bar{y}_H^i - y_i}{\alpha} \tag{2.10}
\]

In the same vein, the optimal tax rates for an individual \( i \) who identifies with the
high-income group will be:

\[ \tau_L^* = \frac{\bar{y}_L^i}{\alpha} \]  

(2.11)

\[ \tau_H^* = \begin{cases} \frac{\bar{y}_H^i - y_i}{\alpha} & \bar{y}_H^i \geq y_i \\ 0 & \text{otherwise} \end{cases} \]  

(2.12)

The model of utility maximization based on perceived income distribution has the following properties:

**Proposition 1.** 1. The preferred level of progressive taxation by individual \( i \) who identifies with either income group, denoted by \( \tau_H^* \), is increasing in \( \bar{y}_H^i \).

2. An individual who identifies with the low-income group will demand progressive taxation independent of her income level.

3. A low-income individual will not demand positive levels of progressive taxation if she identifies with the high-income group and the perceived average income of the high-income group is sufficiently low.

4. An individual \( i \) who identifies with the high-income group will demand a positive progressive tax if the perceived average income of the high-income group is sufficiently high.

Figure 2.5 illustrates the consequences of misperceptions of income distribution for redistributive preferences. A high-income individual who misperceives her income
group can support progressive tax policies. Even if the individual correctly predicts her income group, overestimating the average income of the high-income group can still induce a high-income individual who associates with her observed income group to support progressive taxation.

\[ \frac{\bar{y}_H - \bar{y}_i}{\alpha} \]

\[ \bar{y}_H \text{ under overestimated high-income} \]
\[ \bar{y}_H \text{ under full information} \]

**Figure 2.5:** Preferences for Progressive Taxation by Income and Perceived Threshold Levels

### 2.1.3 Conclusion

Taken together, these findings suggest that individual preferences regarding progressive taxation depend on the composition of the individual’s reference group and its (expected) income distribution. The theory has huge implications for the manipulation of public perceptions concerning distribution. Proponents and opponents of tax code changes need not argue about the merits of the changes themselves. They can just spread information or misinformation on the distribution of income and
wealth. In most advanced capitalist countries, these misperceptions are created and reinforced through democratic processes.

Hence, in the next chapter, I derive empirical implications of Proposition 1. First, I present evidence that there exist distributional misperceptions. Second, building on the results of the theoretical formulation, I will argue that the magnitude and the direction of the misperceptions matter for redistribution.

Chapter 3 and Chapter 4 also reveal that the decision-making sequence depicted in Figure 2.2 holds in many different political settings. Chapter 3 will present evidence that when there are informational corrections, the individuals correct their misperceptions, and their preferences change. Chapter 4 presents evidence that when there is no misinformation about income distribution in the society, the individuals need not go through the estimation process. In those cases, their redistributive preferences mostly are shaped by their income levels.
Let me tell you about the very rich.
They are different from you and me.

F. Scott Fitzgerald

3.1 Introduction

In this chapter, I empirically test how misperceptions pertaining to own economic standing affects views on inequality, as well as preferences over progressive taxation. The formal model in the previous chapter suggests that perhaps people like Haasan and Christie compare themselves with the ultra rich, like Haasan’s colleagues in Hol-
lywood and Christie’s campaign contributors. The model demonstrates that this comparison ultimately causes them to believe “they are not rich by the current standards.” The model also predicts that misperceptions will alter how individuals make decisions about tax rates. This chapter will attempt to empirically validate certain implications of the model introduced in the theoretical chapter. To what extent do individuals have misperceptions relating to their own standing in the economy? How do these misperceptions affect citizens’ redistributive preferences? Is there a difference between the policy choices of two individuals with the same income but different perceptions about where they stand in the income distribution? Do views and perceptions about individuals’ own position affect their evaluation of income inequality in their country? Do people change their preferences when their misperceptions are corrected by factual information?

This analysis makes two contributions to political economy. First, it draws attention to the necessity of testing the empirically validity of the micro-foundational models by considering what agents think about the values of the variables, as opposed to what these values are. I argue, for the case of redistributive preferences, that an individuals’s perception of her economic rank in the distribution, as well as what she thinks about the incomes of the rich and the poor are at least as relevant as statistical realities. Consider the widely used survey question, “Do you think people
with high incomes should pay a larger share of their income in taxes than those with low incomes, the same share, or a smaller share?” (ISSP, 2009). From the answers alone, the progressivity of people’s tax preferences cannot be identified, because the crucial information of where individuals draw the line between “high” and “low” incomes is ambiguous. Nor, in this case, can we assign a causal interpretation to the association between a given respondent’s income and her level of support for progressive taxation. Simply put, without information on how respondents define “low income” and “high income”, one cannot identify whether an individual supports progressive taxation because of altruism or because she expects redistributive benefits from such a policy by virtue of belonging to an income group well below the super-rich.

Second, this chapter shows “the middle class bias”, in the almost every public opinion survey is not just statistical noise, or a sign that people fail to comprehend survey questions, that is empirically and theoretically irrelevant. Most scholars assume middle class remains individuals’ favored self-designation in survey responses. I show that this regularity can be theoretically explained, as well as its effects on policy preferences can be empirically tested.

The analysis leads to the following three main results. First, I find that individuals have significant misperceptions pertaining to their own economic standing. Second,
these misperceptions affect preferences over progressive taxation and evaluations of inequality levels. Moreover, misperceptions’ effects on policy preferences depend on the size and direction of the misperception, as well as on their interactions with the individual’s observed income level.

Finally, this chapter shows that supplying information may have significant effects on correcting misperceptions and assessments of income inequality. Following survey questions about income group thresholds, correct information about these thresholds is shown to a randomly selected subset of respondents. As we shall see, information provision as a treatment can alter individuals’ assessments of inequality and preferences regarding progressive taxation. These findings suggest that, when the information is easy to acquire, individuals will form redistributive preferences on the base of factual information about the economy as opposed to their misperceptions.

Of the four remaining sections to this chapter, the first presents the theoretical framework and provides some motivating information that underly the argument. Next section contains data description, followed by a section with empirical results.
3.2 Theoretical Framework

Under standard models of redistribution a minimum amount of information must be available for an individual to make an informed decision about the optimal tax rate. The individual should know about her personal income as well as her location relative to the median voter in the income distribution. Similarly, information about different income groups should also be available for the individual to predict not only how much she will contribute to, but also how much she will gain from welfare policies.

Much existing scholarship takes the notion of perfect information for granted. But, recent evidence showing that individuals misperceive their positions in the income distribution is rendering obsolete a central assumption of this literature (Cruces et al., 2013; Gimpelson and Treisman, 2015). Individuals have systematic biases that affect their self-placement in the income distribution. Thus, relying on an individual’s income to predict her support for redistributive policies without taking perceptions and biases into consideration will distort the findings.

In this chapter I pay close attention to the disconnect between the literature on political behavior, which takes voter illiteracy as a core assumption, and the literature on redistributive preferences, which posits perfect information. This disconnect has important empirical implications that merit analytic consideration. An individual will draw on her political and economic knowledge (which could differ from reality)
to appraise the set of possible redistributive policies. Any difference might induce behavior that is observationally disparate from the optimal choice that maximizes material payoff. This is true even if the individual strongly cares about benefits and losses from welfare policies. Additionally, if available information systematically differs from actual data, the redistributive outcome on the macro level will be distinctly different from the Meltzer-Richard predictions. Very intuitively, losses and benefits from alternative redistributive policies depend on an individual’s income and rank relative to others and on the average incomes of those who occupy different ranks on the income distribution. Specifically, in the context of multidimensional tax systems that levy different marginal tax rates on distinct income groups, individuals’ misinformation about other groups will significantly affect the political equilibrium that drives tax rates. Individual biases pertaining to the incomes of the rich might have important effects on preferences regarding progressive tax policies.

To be sure, one should not expect individuals to know the nuanced statistical properties of their society’s income distribution. Past research on misinformation about income distribution has worked with different definitions of misperceptions of income distribution. Gimpelson and Treisman (2015) define misperception as a respondent’s selection of a different “type of society” diagram in the (ISSP, 2009) survey that corresponds to a different Gini coefficient than the closest one to their
country among the options given. Cruces et al. (2013) operationalize the concept of misperception as respondents’ self-placement in an income decile that is different than their own in the *Survey of Distributional Perceptions and Redistribution*. This chapter uses some of these definitions and also introduces a different approach. I argue that, in order to determine “who should get” and “who should pay”, individuals should also have a general understanding and accurate information about income group boundaries. The validity of most models of redistributive policy preferences and of the survey questions that measure support for progressive tax policies depends on the accuracy of respondents’ knowledge about the identity of low- and high-income voters are and how much these groups make.

To sum up, this chapter uses a theoretical framework that conjectures that misperceptions matter for individual preferences for redistribution. From the theoretical discussion in the previous chapter and this theoretical discussion I derive the following set of hypotheses to be tested in the empirical analyses.

**Hypothesis 1.** *The magnitude and the direction of distributional misperceptions affect the levels of support for progressive taxation and evaluation of economic inequality.*

**Hypothesis 2.** *An exogenous manipulation of the magnitude and the direction of misperceptions affects levels of support for progressive taxation and evaluation of*
economic inequality.

3.3 Empirical Strategy and the Survey Experiment

The empirical analysis presented here is based on the evidence from International Social Survey Program’s (ISSP) Social Inequality module IV (ISSP, 2009) and an original survey experiment conducted in October, 2015 through Mechanical Turk. I analyze the ISSP Social Inequality Module IV to assess how misperceptions about own economic standings affect redistributinal attitudes to assess the correlational relation between misperceptions and redistributive preferences. Then, with a survey experiment, I measure what individuals think about specific income groups that are predominant discussion items in the United States and test whether presentation of information changes their preferences. The experimental setup allows me to test the informational mechanisms through which individuals change their perceptions about the economy and their decisions about tax policy.

There are numerous advantages of using evidence from a public opinion survey together with a survey experiment. One such advantage is that I am able to show that misperceptions matter for redistributive preferences and that this is a widespread international pattern. This finding matters tremendously for showing that what you know matters what you demand for experiments are commonly critiqued for lacking
external validity. Meanwhile, the survey experiment demonstrates that the citizens can and do use information to update their political preferences.

3.3.1 Evidence from the ISSP Social Inequality Survey

To explore whether perceptions pertaining to current income placement in the income distribution affect preferences over progressivity and evaluations of inequality levels, I employ the ISSP Social Inequality IV (ISSP, 2009). Demand for progressivity is measured by a standard survey question asking if people with high incomes should pay a larger share of their income in taxes than those with low incomes, the same share, or a smaller share. A respondent is classified as supporting progressive taxation if she answers “much larger share” or “larger share”. Evaluations of inequality are captured by a dummy variable for respondents who indicate that the “differences in income are too large” or “large”. As dependent variables, I use these progressivity and evaluation items.

The central micro-level hypothesis to be tested is that observed income level and perceptions about economic standing compared to the others in the economy meaningfully shapes individuals’ policy choices and views on inequality, controlling
for other important determinants. Thus, I estimate models of the following form:

\[
\text{Demand progressivity}_i = \beta_1 + \beta_2 \text{income}_i + \beta_3 \text{misperception}_i \\
+ \beta_4 \text{income}_i \times \text{misperception}_i + \beta_5 X_i + \sigma_i + \epsilon_i \tag{3.1}
\]

\[
\text{Views on Inequality}_i = \beta_1 + \beta_2 \text{income}_i + \beta_3 \text{misperception}_i \\
+ \beta_4 \text{income}_i \times \text{misperception}_i + \beta_5 X_i + \sigma_i + \epsilon_i \tag{3.2}
\]

where demand for progressivity and views on inequality are binary measures of redistributional preferences and evaluations for an individual \(i\); \textit{income} and \textit{misperception} are key independent variables of interest; \(X_i\) is a set of characteristics of individual \(i\); and \(\sigma_i\) is a set of country dummies.

How is \textit{misperception} measured? The concept is about the difference between where people think they are situated in the income distribution. Most people make their calculations about a policy’s expected benefits based on their estimation of relevant variables. For some individuals, these values could be close to the levels of what is observed. However, for some other individuals these values will significantly differ from each other.

ISSP Social Inequality IV survey includes the following question: “In our society there are groups which tend to be towards the top and groups which tend to be
towards the bottom. Where would you put yourself now on this scale?”, and the respondents were asked to chose a rank. I take the respondents’ answers as a proxy for which income decile roughly they think they are located at the income distribution. I calculate their actual income decile in their countries based on their self-reported household income and compare the results to their perceptions. *Misperception*, the key explanatory variable, is operationalized as the difference between the actual income decile of the respondent’s household and her self-placement on this 10 point scale. The resulting variable ranges from -9 to 9. Positive values indicate that the respondent is underestimating her relative income, and negative values that she is overestimating.

Table 3.1 presents logit estimates of two specifications of the model. The sample includes all the respondents in the ISSP survey for whom data was available on all the variables. The dependent variable in Models 1 and 2 is a dummy for progressive tax preferences; the dependent variable in Models 3 and 4 is a dummy for evaluation of inequality.

By and large, the results are as expected. Not surprisingly, the control variables perform roughly as could be expected from previous work. More importantly, this chapter’s key explanatory variables -income and misperceptions- turn out to be significant predictors of redistributional preferences. When there is no mispercep-
tions regarding own ranking, income significantly decreases demand over progressive taxation, it also decreases the probability to one agreeing to the statement: “The differences in income are large”. Most importantly, the coefficients of the variable of Misperception and the interaction term reveal that overestimation of one’s income rank causes decreases in the probability of supporting progressive taxation and admitting inequality is large. On the contrary, when respondents underestimate their position, in other words when Misperception takes positive values, the probability of supporting progressive taxation and agreeing that inequality is large increases.

To give a sense of these variables’ substantive effect, Figure 3.1 allows one to read off the changes in predicted probabilities when people overestimate their rank in the economy, based on various simulated changes in the explanatory variables. The figure shows that among low-income respondents, there is a significant difference between the probability of supporting progressive taxation, depending on the degree of overestimation. Similarly, Figure 3.2 plots the predicted probabilities of supporting progressive taxation of those individuals who underestimate their rank. The graph shows that among high-income respondents, the predicted probability of demanding progressive taxes increase significantly with an increase in misperception. This finding is broadly consistent with the Hypothesis 1: the direction and the magnitude of misperceptions affect redistributive preferences.
### Table 3.1: Independent Variable: In Perceived Top Decile Threshold

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household Income</td>
<td>-0.154***</td>
<td>-0.148***</td>
<td>-0.236***</td>
<td>-0.249***</td>
</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Misperception</td>
<td>0.145***</td>
<td>0.146***</td>
<td>0.202***</td>
<td>0.210***</td>
</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.02)</td>
</tr>
<tr>
<td>Income x Misperception</td>
<td>-0.009***</td>
<td>-0.010***</td>
<td>-0.004</td>
<td>-0.004</td>
</tr>
<tr>
<td></td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.00)</td>
</tr>
<tr>
<td>Female</td>
<td>0.037</td>
<td>0.236***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.03)</td>
<td>(0.04)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Church attendance</td>
<td>-0.035***</td>
<td>-0.057***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.01)</td>
<td>(0.01)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>0.001</td>
<td>-0.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.014***</td>
<td>0.005***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.00)</td>
<td>(0.00)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Union member</td>
<td>0.225***</td>
<td>0.351***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.04)</td>
<td>(0.04)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>0.050</td>
<td>0.051</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.04)</td>
<td>(0.04)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>0.080</td>
<td>0.016</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.07)</td>
<td>(0.08)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>1.467***</td>
<td>0.674***</td>
<td>2.059***</td>
<td>1.786***</td>
</tr>
<tr>
<td></td>
<td>(0.08)</td>
<td>(0.12)</td>
<td>(0.09)</td>
<td>(0.13)</td>
</tr>
<tr>
<td>Country dummies</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>N</td>
<td>31113</td>
<td>25112</td>
<td>31699</td>
<td>25541</td>
</tr>
</tbody>
</table>

Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1.

#### 3.3.2 The Experiment

The empirical analysis presented here is based on evidence from an original survey experiment conducted in October 2015 through Mechanical Turk with American respondents. The survey was designed to capture perceptions about the annual in-
comes of various income groups. It included background socioeconomic questions along with a standart battery of demographic questions. Respondents were also
Figure 3.3: Distribution of observed and perceived own-income group

Figure 3.4: Distribution of observed and perceived own-income group

asked about their assessments of the annual income thresholds for different income
groups: poor, low-income, high-income, and top-decile households. To minimize differences in interpretation, I personalized the questions based on the respondent’s household size. The battery of questions was followed by a randomly assigned treatment providing information on the real annual income thresholds defining the income groups in question. The treatment information was also normalized by household size. It was followed by questions about views on income inequality and tax policy preferences. The sample size was 560 U.S. residents.

The first part of the survey investigates the claim that Americans misperceive the income distribution, income group classification, and their own income group. An empirical implication of this claim is that individuals will give wrong answers to questions about the yearly income threshold for certain income groups. The goal of this exercise is not to show that respondents have difficulty in reporting the exact yearly income thresholds for different groups. Rather, it is to show that they often miss the mark by a huge margin. To test these claims, I devised questions that included a definition of a yearly income threshold and asked respondents to estimate annual income thresholds for the poor, low-income, high-income, and top-decile income groups. Two of these measures were taken specifically to minimize confusion.

---

1 I use Pew Research’s definition of income groups to determine the thresholds. Middle-income families are families whose size-adjusted income is between two-thirds and twice the median size-adjusted income. Low-income families have a size-adjusted household income less than two-thirds the median, and high-income families more than twice the median.

2 The survey questions are described in the appendix.
The survey defined “income threshold” in order to minimize respondents’ confusion about what exactly these thresholds mean. And, the questions were personalized according to the self-reported household size. Table 1 shows the questions posed to a respondent with a household size of 1 in order to ensure that respondents’ perceptions were identified with precision.

Research on income group identification has shown that in surveys highly disproportionate share of all individuals tend to place themselves into the middle class (Gimpelson and Treisman, 2015). One advantage of the design used here is that it enables the collection of information about perceived income groups without triggering the middle-income-class bias. Asking for thresholds rather than self-placement has a moderating effect on biased self-identification with income groups. I also asked respondents to suggest thresholds rather than selecting from a given list of annual income levels. Thus, respondents were not forced to select from a constrained menu of income levels. This feature of the survey design was meant to avoid anchoring bias. Additionally, this approach enabled to ascertainment of the respondents’ the income group identification.

For the second part of the survey, designed to test Hypothesis 2, I randomly selected a subset of respondents and presented them with the right answers to questions that they had answered in the previous section. The information was adjusted to the
Table 3.2: Questions about income distribution for single-person households

<table>
<thead>
<tr>
<th>Income Groups</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>The poverty threshold is the minimum annual income level below which a household is officially considered to lack adequate subsistence and to be living in poverty. What do you think the poverty threshold before taxes was for a household of 1 person in 2014?</td>
</tr>
<tr>
<td>Low</td>
<td>The low-income threshold is the minimum annual income level below which a household is officially considered to be a low-income household. What do you think the low-income threshold before taxes was for a household of 1 person in 2014?</td>
</tr>
<tr>
<td>High</td>
<td>The high-income threshold is the minimum annual income level above which a household is officially considered to be a high-income household. What do you think the high-income threshold before taxes was for a household of 1 person in 2014?</td>
</tr>
<tr>
<td>top-decile</td>
<td>The top 10 percent income threshold is the minimum annual income level above which a household is officially considered to make more than 90 percent of all the households in the United States in a year. What do you think the top 10 percent income threshold before taxes was for a household of 1 person in 2014?</td>
</tr>
</tbody>
</table>

respondent’s household size. The respondents could see their own responses as well as the correct thresholds. They thus had an opportunity to update their perceptions. Further details about this treatment is in the Appendix.

3.3.3 Dependent and Independent Variables

Demand for Progressive Taxation: I capture the demand for progressive taxation using a commonly used question: “Do you think people with high incomes should pay a larger share of their income in taxes than those with low incomes, the same share, or a smaller share?” Answers were reported on a five-point scale labeled with
the endpoints “Strongly agree = 5” and “Strongly disagree = 1.”

Inequality: Similarly, I asked respondents: “Thinking of income levels generally in the United States today, would you say that the gap between those with high incomes and those with low incomes is...?” Answers were recorded on a 5 point scale, with the end points “Much too large = 5” and “Much too small = 1”

High-Income Threshold: I measured the respondent’s reference group’s affluence by the answer to the following question: “The high-income threshold is the minimum annual income level above which a household is officially considered to be a high-income household. What do you think the high-income threshold before taxes was for a household of $X$ people in 2014?” where $X$ is the number of individuals in the respondent’s household. To eliminate the effect of household size on the answers, I then adjusted this number for a household of 4.

Top Income Threshold: I measured the affluence of the respondent’s prototypical rich person in her reference group by the answer to the following question: “The top 10 percent income threshold is the minimum annual income level above which a household is officially considered to make more than 90 percent of all the households in the United States in a year. What do you think the top 10 percent income threshold before taxes was for a household of $X$ people in 2014?” where $X$ is the number of individuals in the respondent’s household. To eliminate the effect of
household size on the answers, I then adjusted this number for a household of 4.

**Poverty Threshold**: I asked the respondents: “The poverty threshold is the minimum annual income level below which a household is officially considered to lack adequate subsistence and to be living in poverty. What do you think the poverty threshold before taxes was for a household of \( X \) in 2014?” to assess the perceived income of a prototypical poor person in their reference group.

**Perceived Inequality**: To imitate a widely used measure of inequality in the literature, I took the ratio of perceived income of the top-decile to the perceived poverty threshold to measure what respondents think the inequality level is.

**Controls**: *College* takes the value 1 if the respondent is a college graduate, *Male* takes the value 1 if the respondent is male, and *Unemployed* takes the value 1 if the respondent is unemployed. *Obama* takes the value 1 if the respondent reported that she voted, or intended to vote for, Obama in the last presidential election.

### 3.3.4 Results from the Survey Experiment

The survey experiment reveals the serious magnitude of misperceptions of income distribution and economic inequality. Evidently, individuals based decisions about redistributive politics on erroneous perceptions of the income distribution. This section presents several sets of results. The first captures respondents’ misperceptions and lack of knowledge about income groups and income inequality. The second shows
that the experimental treatment decreased the demand for redistributive policies and lowered assessments of inequality. The third set of results addresses more deeply the role of misperceptions in individuals’ decision-making processes. Finally, I show that the extent to which inequality is viewed as a problem is a function of perceived inequality rather than objective measures of inequality.

3.3.5 Misperceptions of Income Distribution, Inequality, and Income Groups

This section analyzes the perceptions of income groups based on the results of the online survey experiment. Recall that one implication of the theory is that people seriously misperceive certain income groups’ thresholds.

Figure 3.5 shows the distribution of respondents’ perceived income groups and objective income groups. Nearly 63 percent of the respondents accurately placed themselves in the correct income group. But 13 percent were poorer than they believed, and 24 percent were richer. Although 63 percent is fairly low, these respondents identified their income group more accurately than did earlier studies’ participants. Several factors might have contributed to the higher accuracy rate. The design of the survey questions — that is, asking respondents to report thresholds for income groups — was intended to minimize middle-class bias. Second, the survey required self-placement into broader categories than deciles. Finally, Mechanical Turk respondents tend to be better educated than a representative sample. Interestingly, almost
half the high-income respondents underestimated their income rank.

Figure 3.5: Distribution of observed and perceived own-income group

Figures 3.6 and 3.7 show respondents’ predictions about thresholds and the objectively measured levels to depict the magnitude of their misperceptions. Tables 3.3 show summary statistics for respondents’ income-group threshold predictions. One striking result of the survey is that most respondents misperceive the thresholds that define the given income groups. Almost all respondents made significant mistakes when predicting the thresholds. Responses for all the income group thresholds varied extremely. In all cases, the range of the answers was larger than $90,000. This range increased almost to $1,000,000 for the high-income threshold and even more for the top-decile threshold. Although respondents also gave a wide range of answers
for the poverty threshold and the low-income threshold, the magnitude of error was shockingly large for the high-income and top-decile thresholds. There is a better agreement between respondents about how much the poor and low-income households earn in a year. Evidently, individuals err more in making predictions about the income levels of the rich.

The central theoretical claim is that individuals use the representativeness heuristic when information is either unavailable or costly to acquire. For various reasons, it is natural for individuals to have less information about the incomes of the high-income and top-decile agents. First, there are fewer high-income individuals than low-income individuals, which makes it harder to make informed predictions about the former. Second, there are no constraints on the annual income of a prototypical top-decile individual, which leaves more room for overestimation. Finally, as recent work in the social comparison literature shows, people get more disutility from individuals who earn more than them than from those who earn less (Fehr and Schmidt, 1999; Immorlica et al., 2017). In this framework, since the “have-nots” will loom larger, people tend to exaggerate the income levels of the top income groups.

As already explained, the cause of the misperceptions is cognitive heuristics that individuals use when information is unavailable or costly to acquire. To illustrate the relevance of cognitive heuristics in categorizing people into income groups, Table 3.4
presents a series of regressions to test Hypothesis 1. The results suggest that there is a significant and positive effect of \( \ln \text{Household Income} \) on the \( \ln \text{Perceived Top 10}^{th} \) Percentile Threshold with the inclusion of individual controls and the Rich County variable, the effect of household income becomes positive and significant at the 5\% level. The coefficient of the Rich County, on the other hand, has no significant effect on the overestimation of the top decile threshold. Finally, Unemployment induces overestimation bias, whereas College is a significant and strong factor that decreases the perceived level of top-decile households’ yearly income.

These findings support my theoretical claims regarding the use of cognitive heuristics in the absence of the necessary information. When people are better informed, proxied in this empirical investigation by being a college graduate, they rely less on informational shortcuts to define income groups and are less likely to err. Additionally, living in a rich locality does not induce an increase in the predicted income thresholds of the top-decile. Evidently, misperceptions are not caused by the statistical errors of individuals who think that their local sample applies to the nation in general.
Table 3.3: Perceived Thresholds—Summary Statistics

<table>
<thead>
<tr>
<th></th>
<th>Poverty</th>
<th>Low-Income</th>
<th>High-Income</th>
<th>Top 10th</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean</strong></td>
<td>$27,224</td>
<td>$33,844</td>
<td>$137,853</td>
<td>$18,800,000</td>
</tr>
<tr>
<td><strong>Minimum</strong></td>
<td>$2,000</td>
<td>$1,414</td>
<td>$17,888</td>
<td>$13,416</td>
</tr>
<tr>
<td><strong>Maximum</strong></td>
<td>$100,000</td>
<td>$90,000</td>
<td>$1,000,000</td>
<td>$4,620,000,000</td>
</tr>
<tr>
<td><strong>Percentiles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25%</td>
<td>$20,000</td>
<td>$25,000</td>
<td>$80,829</td>
<td>$325,269</td>
</tr>
<tr>
<td>50%</td>
<td>$25,455</td>
<td>$33,941</td>
<td>$110,000</td>
<td>$566,392</td>
</tr>
<tr>
<td>75%</td>
<td>$32,526</td>
<td>$40,000</td>
<td>$160,000</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>90%</td>
<td>$40,000</td>
<td>$50,000</td>
<td>$240,000</td>
<td>$2,828,427</td>
</tr>
</tbody>
</table>

*Numbers are adjusted to reflect the threshold for a household of 4.

**The observed value for the Poverty threshold is $24,230, for the Low-Income threshold is $44,000, for the High-Income threshold is $132,000, and for the Top 10th threshold is $191,000.
Table 3.4: Independent Variable: ln Perceived Top 10th Percentile Threshold

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ln Household Income</td>
<td>-0.00861</td>
<td>0.00941</td>
<td>0.0482</td>
<td>0.155**</td>
<td>0.156**</td>
<td>0.160***</td>
</tr>
<tr>
<td></td>
<td>(0.0774)</td>
<td>(0.0779)</td>
<td>(0.0740)</td>
<td>(0.0633)</td>
<td>(0.0634)</td>
<td>(0.0617)</td>
</tr>
<tr>
<td>College</td>
<td>-0.317***</td>
<td>-0.289***</td>
<td>-0.332***</td>
<td>-0.335***</td>
<td>-0.325***</td>
<td>(0.111)</td>
</tr>
<tr>
<td></td>
<td>(0.111)</td>
<td>(0.111)</td>
<td>(0.120)</td>
<td>(0.120)</td>
<td>(0.124)</td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>0.701**</td>
<td>0.552*</td>
<td>0.546*</td>
<td>0.555*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.339)</td>
<td>(0.332)</td>
<td>(0.330)</td>
<td>(0.334)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rich County</td>
<td>-0.0786</td>
<td>-0.0762</td>
<td></td>
<td>-0.0660</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.154)</td>
<td>(0.154)</td>
<td></td>
<td>(0.157)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obama</td>
<td>-0.0833</td>
<td>-0.0493</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.129)</td>
<td>(0.136)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td></td>
<td></td>
<td></td>
<td>0.228</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.142)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td></td>
<td></td>
<td></td>
<td>-0.00834</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.258)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latino</td>
<td></td>
<td></td>
<td></td>
<td>0.131</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.239)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>12.61***</td>
<td>12.45***</td>
<td>11.98***</td>
<td>10.84***</td>
<td>10.90***</td>
<td>10.65***</td>
</tr>
<tr>
<td></td>
<td>(0.838)</td>
<td>(0.841)</td>
<td>(0.794)</td>
<td>(0.664)</td>
<td>(0.666)</td>
<td>(0.667)</td>
</tr>
<tr>
<td>Observations</td>
<td>555</td>
<td>555</td>
<td>555</td>
<td>484</td>
<td>484</td>
<td>484</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.000</td>
<td>0.006</td>
<td>0.024</td>
<td>0.028</td>
<td>0.029</td>
<td>0.034</td>
</tr>
</tbody>
</table>

Robust standard errors in parentheses.
*** p<0.01, ** p<0.05, * p<0.1.
3.3.6 Experimental Results

Table 3.5 presents estimates from the regression that tests Hypothesis 2. Column 1 shows that the information treatment causes a 0.2 decrease in the Inequality variable that measures respondents’ assessments of the magnitude of inequality. The effect of the treatment on the outcome variable Demand Progressive, on the other hand, is negative and significant at the 10 percent level when controls are included.

These results differ significantly from the experimental findings of previous studies. Kuziemko et al. (2015) find strong evidence that presenting actual information about economic inequality to survey respondents increases the share viewing inequality as a very serious problem. Here, I find that the negative effects of the treatment on Inequality Problem and Demand Progressive can be attributed to overestimation of the top decile income. With the information treatment, more than half the respondents learned that the top-decile income threshold is less than half of what they thought it was. For almost a quarter of the respondents, at least a $1,000,000 difference between their estimates and the actual threshold exists. Thus, it is unsurprising that the treated respondents updated their beliefs about the severity of income inequality in the United States.

The model predicts that respondents’ prior misperceptions and lack of information about income distribution and income inequality will affect their preferences.
regarding redistribution as well as their assessment of overall income inequality. Additionally, the treatment’s effects will depend on the degree and direction of the correction of these misperceptions.

Table 3.6 reports findings related to my empirical investigation of Hypothesis 1. The level of perceived inequality was significantly and positively associated with the assessment of the level of inequality, namely, the variable Inequality. The treatment decreases the negative assessment of the inequality level very significantly, especially for high levels of perceived inequality.

Table 3.7 shows results pertaining to demand for progressive taxation and perceptions of the high-income threshold. Hypothesis 1 suggests that as the perceived high-income threshold increases, the demand for progressive taxation should also increase, consistent with Proposition 1. Results confirm that the perceived high-income threshold has a positive effect on demand for progressive taxation, significant at conventional levels. However, in this specification, the treatment does not have a significant correction effect on misperceived high-income thresholds.

In sum, misperceptions affect people’s assessments of inequality and demand for progressive taxation. Additional information dwarfs the effects of misperceptions. Overall, there is strong evidence that providing correct information affects the assessment of inequality more than it affects the demand for progressive taxation. Several
Table 3.5: Treatment Effects on the Assessment of Inequality and Demand for Progressive Taxation

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1) Inequality</th>
<th>(2) Inequality</th>
<th>(3) Demand Progressive</th>
<th>(4) Demand Progressive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>-0.204***</td>
<td>-0.226***</td>
<td>-0.102</td>
<td>-0.129*</td>
</tr>
<tr>
<td></td>
<td>(0.0767)</td>
<td>(0.0700)</td>
<td>(0.0736)</td>
<td>(0.0660)</td>
</tr>
<tr>
<td>Constant</td>
<td>4.383***</td>
<td>4.607***</td>
<td>4.088***</td>
<td>4.081***</td>
</tr>
<tr>
<td></td>
<td>(0.0547)</td>
<td>(0.190)</td>
<td>(0.0525)</td>
<td>(0.179)</td>
</tr>
<tr>
<td>Observations</td>
<td>558</td>
<td>558</td>
<td>558</td>
<td>558</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.013</td>
<td>0.201</td>
<td>0.003</td>
<td>0.221</td>
</tr>
<tr>
<td>Controls</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
<td>YES</td>
</tr>
</tbody>
</table>

Standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1

Control variables: ln household income, Male, Age, White, Black, Latino, Married, Unemployed, Obama, Altruistic, College.

Factors might account for this unbalanced treatment effect. First, preferences regarding tax policies may be relatively inelastic and not easily changed by treatments in an online survey setting. Second, the unrepresentative sample of the Mechanical Turk respondents might have very sticky preferences for progressive taxation due to their socioeconomic standing.
Table 3.6: Dependent Variable: Inequality is a Problem

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
</tr>
<tr>
<td>Treatment</td>
<td>-0.185***</td>
<td>-0.174**</td>
</tr>
<tr>
<td></td>
<td>(0.0695)</td>
<td>(0.0691)</td>
</tr>
<tr>
<td>Perceived Inequality</td>
<td>7.48e-06***</td>
<td>6.01e-06**</td>
</tr>
<tr>
<td></td>
<td>(2.19e-06)</td>
<td>(2.47e-06)</td>
</tr>
<tr>
<td>Treatment*Perceived Inequality</td>
<td>-6.42e-06***</td>
<td>-5.26e-06**</td>
</tr>
<tr>
<td></td>
<td>(2.19e-06)</td>
<td>(2.46e-06)</td>
</tr>
<tr>
<td>Observations</td>
<td>558</td>
<td>555</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.017</td>
<td>0.040</td>
</tr>
</tbody>
</table>

Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1.
Table 3.7: Dependent Variable: Progressive

<table>
<thead>
<tr>
<th>VARIABLES</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>1.186</td>
<td>1.436</td>
<td>0.731</td>
</tr>
<tr>
<td></td>
<td>(1.528)</td>
<td>(1.522)</td>
<td>(1.427)</td>
</tr>
<tr>
<td>ln High Threshold</td>
<td>0.155*</td>
<td>0.219**</td>
<td>0.163*</td>
</tr>
<tr>
<td></td>
<td>(0.0871)</td>
<td>(0.0871)</td>
<td>(0.0840)</td>
</tr>
<tr>
<td>Treatment * ln High Threshold</td>
<td>-0.114</td>
<td>-0.135</td>
<td>-0.0745</td>
</tr>
<tr>
<td></td>
<td>(0.134)</td>
<td>(0.133)</td>
<td>(0.125)</td>
</tr>
<tr>
<td>ln Hh Income</td>
<td>-0.135***</td>
<td>-0.109**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0424)</td>
<td>(0.0493)</td>
<td></td>
</tr>
<tr>
<td>Hh size</td>
<td>-0.00766</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0282)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>0.0374</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0720)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>0.0718**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0327)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>0.0598</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.115)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>-0.142</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.178)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latino</td>
<td>0.221</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.156)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>0.0594</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0777)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>0.208*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.125)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obama</td>
<td>0.651***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0911)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Altruistic</td>
<td>0.120</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0867)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>College</td>
<td>0.0834</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.100)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>2.330**</td>
<td>3.027***</td>
<td>2.444**</td>
</tr>
<tr>
<td></td>
<td>(0.997)</td>
<td>(1.013)</td>
<td>(1.020)</td>
</tr>
<tr>
<td>Observations</td>
<td>558</td>
<td>555</td>
<td>555</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.008</td>
<td>0.023</td>
<td>0.141</td>
</tr>
</tbody>
</table>

Robust standard errors in parentheses.

*** p<0.01, ** p<0.05, * p<0.1.
3.4 Conclusion

This chapter challenges the core assumption of standard models of redistributive preferences by bridging two disconnected literatures: one on political behavior under conditions of imperfect information and another on preferences for redistribution. Mutually inconsistent theoretical accounts of the relationship between income and the demand for redistribution can be explained, I show, by a cognitive framework in which individuals make predictions about benefits and losses from redistributive policies. An individual’s own income contributes to the degree to which she demands for redistribution. However, her predictions about the affluence of the high-income population also shape her redistributive preferences. The difference between predicted and actual levels contribute to individuals’ decisions about progressive taxation that the prediction of the very influential Meltzer-Richard model.

Individuals are generally misinformed, even on concepts that are central to everyday political and economic discourse. They are strikingly unclear about the definitions of the income groups. In particular, they overestimate or underestimate annual income thresholds by large margins. Ample evidence has been given that in predicting and shaping political behavior the amount and substance of the information available to individuals are perhaps more important than actual data. On average, people judge the level of inequality in proportion to what they perceive. Similarly,
the demand for progressive taxation increases as the perceived income of the rich increases.

A growing literature has explored alternative mechanisms such as “other-regarding” preferences, inequality aversion, and fiscal system structures to investigate why income is not uniformly effective across income groups as a factor in decision making. I believe that these contributions to the Robin Hood paradox can be better situated by incorporating the cognitive mechanisms that affect agents’ economic and political decisions. Altruistic behavior of the rich depends on the degree of poverty they perceive. Similarly, the structure of the fiscal system affects their decisions insofar as their information is accurate.

Another important finding concerns the design of widely used survey questions. They may induce measurement error. In the literature on redistribution, most of the questions used in constructing dependent variables contain concepts such as “high-income individuals.” If respondents have different perceptions of this group’s composition, a natural implication is that the question fails to measure attitudes toward redistribution uniformly across individuals. Hence, incorporating informational assumptions into research on redistributive politics is not just relevant and important theoretically. It also has important empirical implications that require a revision of existing survey methodologies and measurement tools.
If the foregoing analysis is valid, misperceptions result from cognitive heuristics that individuals use to generate information and make informed decisions about policies in democratic settings. However, full causal identification of these cognitive mechanisms would require additional investigations beyond the scope of this chapter. The limitations of the online survey experiment point to the first of many worthwhile avenues for future research: the use of a field or a laboratory experiment to precisely assess the cognitive mechanisms by which individuals perceive the economic environment and income distribution.
4

Unconstrained Elites, Ethnic Diversity, and Redistribution

Whiskey is for drinking. Water is for fighting over.

Mark Twain

4.1 Motivation

This dissertation has thus far analyzed the effects of information scarcity and widespread misperceptions on support of redistribution on the part of the rich. The theory developed in this dissertation implies that the relation between income and preferences over redistribution should be the strongest when: i. individuals are perfectly informed about their current position on the income distribution, ii. they are aware
of the level of income inequality, and iii. they can correctly calculate the expected
benefits and losses from the welfare system. In order to assess the validity of the hy-
potheses posited in the theory chapter, I tested the preferences of survey respondents
in this environment by supplying factual information and avoiding informational
asymmetries about the economy, as described in Chapter 3.

Yet, all the presented empirical evidence relied on survey responses without direct
validation of the intended behavior. In particular, neither the ISSP survey nor the
online survey experiment attempted, or could attempt, to compare actual political
behavior with reported support for redistribution. In this chapter, I examine the re-
alized redistributive efforts of elites in a context involving a rigid division into social
classes consisting of ethno-religious groups. When ethno-religious boundaries openly
limit the economic opportunities of certain groups, the extent of “redistributive ef-
forts” of the privileged group is indeed informative about the micro-foundations of
the preferences of constituencies with unequal access to opportunities. As we shall
see, the politics of water distribution in Ottoman Istanbul is an ideal context for
analyzing how the structurally privileged behave when they have both perfect infor-
mation and absolute freedom to design welfare policies.
4.2 Introduction

The importance of effective and universal public good provisions on development is an important theme in discussions of comparative and historical political economy. There is a wide agreement that the state’s ability and willingness to provide equal access to public goods and services for all decreases inequality and promotes economic development. Historically, the inequalities in access to public utilities and goods between ethno-religious groups have been constituted political battlegrounds. The uneven geographic distribution of public services can create and reinforce both social and economic inequalities among geographically segregated ethno-religious groups.

It is widely recognized that ethnic diversity matters to the incidence and distribution of public goods (Fearon, 1999). Numerous studies document that homogeneous societies provide better basic infrastructure and government services than similar heterogeneous societies. Also, a wave of recent scholarship, on both developing and developed countries, has revealed that ethnically homogeneous regions generally have better access to local public goods and services than heterogeneous regions (Alesina et al., 1999; Miguel and Gugerty, 2005). However, these accounts deal primarily with democracies. More importantly, they examine how ethnic diversity affects the aggregate supply of public goods within a region but not whether goods are targeted towards at co-ethnics of the political elite.
Foremost among the reasons for studying how autocracies allocate public goods among different ethno-religious groups is that autocracy is a highly prevalent form of government. Authoritarian regimes ruled the majority of the world’s population until the 1990’s. As of 2017, over 40 percent of the world’s population is governed by non-democracies (Mulligan et al., 2004). There are also sound empirical reasons for studying how ethnic minorities fare under autocracy. As Fearon (2003) suggests, an average country has about five ethnic groups that exceed one percent of the population. Essentially, most of the world’s population currently lives, or has lived, in ethno-religiously diverse countries under non-democratic regimes. Yet, the relevant theoretical and empirical literatures cover only the mechanisms that operate in multi-ethnic democracies. In principle, the effect of ethno-religious fragmentation on aggregate public service supply could differ between democracies and non-democracies. But we cannot be sure without empirical analysis.

The goal of this chapter is to assess the effects of ethno-religious diversity on local public goods using an original dataset on water provision in Ottoman Istanbul between 1580 and 1800. This dataset is uniquely well suited to studying whether the political elites of autocracies allocate public goods selectively to groups which they themselves belong.

The existing literature suggests that in autocracies, ethno-religious fragmentation
has two opposing effects with respect to the provision of public goods to privileged groups. On one hand, authoritarian institutions mitigate the collective action problem and preference diversity that impede public services in multi-ethnic democracies (Habyarimana et al., 2007). They may also allocate public services more equally than democracies because of either ideology or fear of revolution (Acemoglu and Robinson, 2006), or perhaps concerns about economic growth (Gehlbach and Keefer, 2011). On the other hand, the concentration of power in the hands of a small group of elites might lead to the targeting of local services disproportionately to their own group. The basic reason is that the homogeneity of the ruling coalition facilitates collective action. In the absence of formal institutions of accountability, informal networks between elites and co-ethnic commoners may also fuel inequalities in the ethnic distribution of public goods (Tsai, 2007). In autocracies, the political elite can essentially choose their favored resource allocation. They may use that advantage in a way favorable to their own group.

The data set used to explore the extent of elite favoritism contains geographical information on the water fountains built in Istanbul during the period 1580-1800. It provides also the ethno-religious composition of the city’s neighborhoods. The main fault line in the population involved religion: one set of rules applied to Muslims and another to non-Muslims. Moreover, all non-Muslims were equal before the law,
provided they paid their taxes (Ercan, 2001; Davison, 1954; Göçek, 1993). For this reason, henceforth, I will speak of religious groups, ignoring the distinctions based on ethnicity.

The primary objective is to assess whether fountains were disproportionately built in predominantly Muslim neighborhoods compared to the neighborhoods inhabited mostly by Christians and/or Jews. What makes this a particularly good context to test for pro-Muslim bias is that, at least within the city walls, Istanbul had no local sources of drinking water. Also, rules instituted after Istanbul became the Ottoman capital in 1453 required drinking water to be supplied solely through the public fountains. Moreover, a fountain could only be built through a waqf, or “Islamic trust”. A waqf is an unincorporated trust established through the endowment of a living person for the provision of a designated service in perpetuity according to the founder’s stipulations (Kuran, 2001). The waqf’s endowment would cover both construction costs and the recurring costs maintenance. The institution of the waqf, which took shape between the years 800 and 1000, gave Muslims specific rights that it denied to Jews and Christians, who constituted roughly half of the city’s population in 1580-1800. Under the law of the waqf, a waqf founder must be a Muslim; and he or she must file a deed in an Islamic court (Kuran, 2001). Since the founder of the waqf was free to choose the fountain’s location, the geographic distribution of
fountains was shaped solely by the city’s Muslim political elite.

The chapter’s findings broadly support the hypothesis that in authoritarian countries political elites disproportionately favor their co-ethnics or co-religionists when providing public goods. On average, the predominantly Muslim neighborhoods of Ottoman Istanbul had twice as many fountains compared to non-Muslim neighborhoods. Given the importance of easy access to clean and safe drinking water to health outcomes, this result had far-reaching implications for the relative welfare of the Ottoman Istanbul’s ethno-religious populations.

The analysis in the chapter has major implications for four other distinct literatures. One involves the provision of public goods in regions governed under Islamic law. The insights in the extensive literature on the political and economic consequences of the waqf have not yet been tested. Formally, it indicates no legal barrier to including non-Muslims among the beneficiaries of a waqf (Kuran, 2001). Thus, it was possible under Islamic law for a wealthy Muslim resident of Istanbul to build a fountain in an overwhelmingly, if not exclusively, Christian or Jewish neighborhood. But this is the first study to analyze whether the dominant political elite, which was overwhelmingly Muslim, served their own group disproportionally.

The second literature concerns the sources of persistent urban inequalities. Surprisingly, in the political economy literature, investigations of urban redistributive
politics are in their infancy. Although political scientists routinely explore who gets what, how and why, such questions have rarely focused on cities as a whole, with the exception of some work in the urban politics literature. Yet, it is in cities that citizens face extreme inequalities, and where such inequalities have the greatest economic and political influence on specific identity groups.

The third literature involves an ongoing scholarly debate on whether to treat waqfs as an expression of religious altruism. This debate generally views waqfs as either the expression of pure charitable acts by high state officials and political elites to provide services to citizens at no cost (Singer, 2011, 2012; Yediyildiz, 1984; Yediyildiz, 1990) or primarily as a wealth shelter (Kuran, 2001, 2016). The two arguments thus differ in the main motive they ascribe to waqf founders. The former literature views the waqf as an expression of altruism. By contrast, the latter views it as motivated by self-interest, specifically, the preservation of property. Private property becomes more secure when endowed as waqf, because waqf-owned assets were considered sacred.

Although existing literatures provide valuable insights concerning the motivations behind waqf endowments, these theories are yet to be empirically tested. In this chapter, while I find evidence to support the self interest claim. I also add nuances to this claim. Specifically, I introduce an additional reason through which the Ottoman
elites used the waqf system to their own benefit. In identifying and quantifying inter-faith variation in public services, this chapter thus provides a novel perspective on the “universal charity” and the “wealth shelter” arguments. I show that the Ottoman elite allocated resources in a way that benefited them personally beyond wealth sheltering. Specifically, they ensured that their own households and community had the easiest access to abundant clean drinking water.

The remainder of this chapter is organized as follows. The next section develops a theory for understanding how the political elite of autocratic states allocate public services among their religious groups. Section 3 outlines the relevant historical and institutional context, with a focus on water provision and the religious composition of Istanbul between 1580 and 1800. Section 4 discusses the data set, followed by empirical analysis in Section 5. Finally, Section 6 presents conclusions and some further implications.

4.3 A Theory of Ethnic Diversity and Targeted “Public” Goods

A good is strictly public if it is both non-excludable and non-rivalrous: no individual can be excluded from consuming it, and no individual’s use reduces its availability to others. In line with this definition, most models of public goods provision rest on the assumption that public goods can effectively be enjoyed by an infinitely large
number of individuals. In practice, though, the size of the group able to enjoy the non-excludable and non-rivalrous services is limited. As Buchanan (1965) puts it, “while it is evident that some goods and services may be reasonably classified as purely private, even in the extreme sense, it is clear that few, if any, goods satisfy the conditions of extreme collectiveness.”

Many factors can limit the pool of beneficiaries able to consume non-excludable and non-rivalrous goods jointly. One such limitation is intrinsic to the service itself: a children’s hospital can only treat children; a public bath for men can only be used by men; and a library is of use only to the literate. By the same token, geography limits access to particular public goods. This is especially true for services that citizens use everyday: in principle, one can obtain a jug of water for one’s household from the closest public fountain that is 5 miles away, but in the absence of modern transportation the task could be prohibitively exhausting.

This chapter’s central hypothesis is that the identity group with privileges will use that advantage to maximize its material-self interest under two conditions. First, it should be aware that it possesses as a resource that the other identity groups lack. Second, it should be able to predict how using that resource would maximize what it “gets” while minimizing what it “pays”. In the present context, the advantaged identity group, the Muslim elite, enjoys the legal right to build fountains, which is
denied to other religious groups in the city. Recall that under Islamic law, only Muslims were permitted to establish a waqf. Why might Istanbul’s Muslims have wanted to deliver public goods disproportionately to Muslim neighborhoods? First of all, they might have been inclined to provide public goods where they and their family lived. Secondly, they might have received social or religious benefits from altruistic behavior toward their own groups. Finally, providing for their co-religionists, the politically powerful group in the society, might have helped to reduce potential threat of rebellions since throughout the history of the empire, Muslims were predominantly responsible for all rebellions in the capital and most of those in the peripheries (Sam, 2011). For all these reasons, one would expect the elites to have built fountains in predominantly Muslim neighborhoods.

Before describing the data and the findings from the analysis, the next section draws on the institutional and historical background of drinking water provision in Ottoman Istanbul to illustrate the main characteristics of the system.

4.4 History of Water Provision in Istanbul

For a city that serves as the capital of an empire, the supply of water is a first-order challenge. Because water is vital to human existence, it requires the construction of waterways and the development of distribution channels. Running water must
be delivered to residents for drinking, cleaning, cooking, gardening, raising animals, and fighting fires. Before the Industrial Revolution, few cities could survive without easy and convenient access to fresh water. Even in the 21st century, easy access to fresh and clean water remains a key determinant of urban location. Yet, unlike most ancient cities, Istanbul lacked easy access to drinking water. Istanbul was not built on a major river; it was surrounded by salty seas. To appreciate the special challenge involved, note that Rome was constructed on the Tiber, Cairo on the Nile, Baghdad on the Tigris, and London on the Thames (Kostof, 1992).

During the 17th and 18th centuries the majority of the citizens resided either in the walled city of Istanbul (henceforth intra muros Istanbul) or Eyüp. As in earlier times, the city depended entirely on outside water sources (Karakaş, 2013). The Byzantine Empire had coped with this challenge mainly by building cisterns to provide fresh and clean water to its citizens. It is estimated that intra-muros Constantinople contained more than 200 cisterns (Aynur and Karateke, 1995).

However, water in these cisterns became undrinkable soon after the Ottoman conquest of Istanbul because of neglect by the Ottoman officials. Hence, the Ottoman Turks stopped using the Byzantine cisterns for religious and hygienic reasons (Çeçen and Kolay, 1999), which made it necessary to find alternative mechanisms to distribute water to different neighborhoods. Meanwhile, Istanbul’s population grew
Figure 4.1: Ottoman Istanbul

sharply from 1453 to 1550. The rise in population, coupled with the idle cisterns, forced Ottoman rulers to seek alternative ways to provide drinking water to citizens.

In the Ottoman Empire, all public goods such as water, roads, bath houses, and soup kitchens were supplied, as noted above, through the Islamic institution of the waqf. All the water pipes that channeled fresh water from the vicinity of the city into intra muros Istanbul were endowed and controlled by a waqf, usually a waqf founded by members of the imperial family and the top state officials. Like water pipelines, fountains were founded and maintained through waqf endowments, which
meant that non-Muslims lacked rights to build fountains (Kuran, 2001).  

Fountains were diverse both in structures and water supplying capacities. Wall fountains were built into the walls of buildings, gardens or courtyards. They are also referred to as single-face or façade fountains. Corner fountains were mainly built on street corners mainly had two or three faces, they supplied more water than wall fountains. Freestanding fountains were located in public squares; usually they had four or more faces.  

Until the 1850s, the Ottoman government favored supplying water through public fountains rather than delivering water to houses for private use (Dinçkal, 2008). Individuals had to get permission from the court in order to connect water to their houses. In most cases the permission was granted after only an individual applied to build a fountain near his or her house (Kal’a, 2011). Indeed, waqf registers reveal that in the 152-year period between 1655-1807 only 462 homes were permitted to draw water from waqf-owned pipelines (Özkaya, 2011). Istanbul’s population during the time for my analysis was around 700,000, which corresponded approximately to 140,000 households. A rough calculation reveals that only around 0.3 percent of the residents had access to flowing water at their residences.  

Evidently, the vast majority of Istanbul’s households lacked connected water and

---

1 Only in the nineteenth century was the right to establish a waqf extended to members of the non-Muslim communities (Kuran, 2001).
Table 4.1: Social status of individuals enjoying piped water in their residence: titled and untitled

<table>
<thead>
<tr>
<th>Social Status</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titled</td>
<td>422</td>
<td>91.14</td>
</tr>
<tr>
<td>Ağa</td>
<td>158</td>
<td>34.13</td>
</tr>
<tr>
<td>Bey</td>
<td>12</td>
<td>2.59</td>
</tr>
<tr>
<td>Cavuş</td>
<td>2</td>
<td>0.43</td>
</tr>
<tr>
<td>Çelebi</td>
<td>10</td>
<td>2.16</td>
</tr>
<tr>
<td>Efendi</td>
<td>128</td>
<td>27.65</td>
</tr>
<tr>
<td>Efendizade</td>
<td>5</td>
<td>1.08</td>
</tr>
<tr>
<td>Hacı</td>
<td>17</td>
<td>3.67</td>
</tr>
<tr>
<td>Halife</td>
<td>3</td>
<td>0.65</td>
</tr>
<tr>
<td>Hanım</td>
<td>3</td>
<td>0.65</td>
</tr>
<tr>
<td>Hatun</td>
<td>7</td>
<td>1.51</td>
</tr>
<tr>
<td>Kadın</td>
<td>1</td>
<td>0.22</td>
</tr>
<tr>
<td>Kethüda</td>
<td>11</td>
<td>2.38</td>
</tr>
<tr>
<td>Muallim</td>
<td>1</td>
<td>0.22</td>
</tr>
<tr>
<td>Paşa</td>
<td>55</td>
<td>11.88</td>
</tr>
<tr>
<td>Paşazade</td>
<td>5</td>
<td>1.08</td>
</tr>
<tr>
<td>Seyyid</td>
<td>2</td>
<td>0.43</td>
</tr>
<tr>
<td>Sultan</td>
<td>2</td>
<td>0.43</td>
</tr>
<tr>
<td>Untitled</td>
<td>41</td>
<td>8.86</td>
</tr>
<tr>
<td>Total</td>
<td>463</td>
<td>100.00</td>
</tr>
</tbody>
</table>

were dependent on the neighborhood fountains for drinking water. Table 4.1 reveals a summary of who these people were. Observe that most people with water connection were titled individuals, belonging to the Muslim elite of government officials, religious authorities, and high-ranking army members. Only 8 percent of this group had no titles. This table also reveals another interesting fact: not one non-Muslim household had direct water connection to its home.

In the period under consideration, about 58.8 percent of Istanbul’s population was Muslim, 34.8 percent was Christian, and the remaining 6.4 percent was Jewish.
Table 4.2: Title distributions of the benefactors

<table>
<thead>
<tr>
<th>Benefactor Title</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titled</td>
<td>180</td>
<td>99.45</td>
</tr>
<tr>
<td>Ağacı</td>
<td>55</td>
<td>30.39</td>
</tr>
<tr>
<td>Bey</td>
<td>3</td>
<td>1.66</td>
</tr>
<tr>
<td>Efendi</td>
<td>29</td>
<td>16.02</td>
</tr>
<tr>
<td>Hacı</td>
<td>1</td>
<td>0.55</td>
</tr>
<tr>
<td>Halife</td>
<td>1</td>
<td>0.55</td>
</tr>
<tr>
<td>Hanım</td>
<td>3</td>
<td>1.66</td>
</tr>
<tr>
<td>Kadın</td>
<td>1</td>
<td>0.55</td>
</tr>
<tr>
<td>Kethûda</td>
<td>2</td>
<td>1.10</td>
</tr>
<tr>
<td>Paşa</td>
<td>54</td>
<td>29.83</td>
</tr>
<tr>
<td>Subaşı</td>
<td>1</td>
<td>0.55</td>
</tr>
<tr>
<td>Sultan</td>
<td>29</td>
<td>16.02</td>
</tr>
<tr>
<td>Valide Sultan</td>
<td>1</td>
<td>0.55</td>
</tr>
<tr>
<td>Untitled</td>
<td>1</td>
<td>0.55</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>181</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(Mantran, 1962). Given that non-Muslims were not permitted to form waqfs during this period, practically half the residents of Istanbul lacked the right to bring water into their neighborhoods on their own initiative.

4.5 Data Description

4.5.1 Fountains Data

There is abundant descriptive scholarship on the fountains of Ottoman Istanbul; the contributions provide information on the date of the endowment deed (vakfiye), the construction year, the name of the benefactor, and the location (Tanışık, 1943; Egemen, 1993; Aynur and Karateke, 1995; Özdeniz, 2015; Bulut, 2010). I also investigated the water permits from the archives of the Istanbul Water Administration.
identify fountains that were demolished to maximize the span of the data set. These sources yielded a dataset consisting of all the waqf-funded fountains built in Istanbul between the years 1565 and 1800. For each fountain, the dataset contains information on precise geographic location, benefactor name, benefactor gender, benefactor title, and benefactor profession.

Using ArcGIS, I geocoded these fountains to study the geographical spread and neighborhood coverage of water supply. The location of fountains demolished to pave way for modern constructions throughout the years were found through historical maps of Istanbul (Ayverdi, 1958a; Pervititch, 2000; Kubilay, 2010). Figures below offer summary statistics about the distribution and the benefactors of the fountains. Figure 4.2 shows the distribution of the 313 fountains built in Istanbul between 1565 and 1800. A pattern that jumps out at the reader is the uneven spatial distribution: whereas some areas are clustered with more fountains, others lack even a single fountain.

Figure 4.3 reveals that most neighborhoods had only one fountain, and also that a significant portion of the neighborhoods had none at all. A few neighborhoods had four or more fountains.

Most of the individuals who built a fountain carry an honorific title. Table 4.2 shows that, out of 181 identified founders, only one was untitled. The table reveals
that the most common titles were Paşa, Efendi, Ağa, and Sultan. Of these, Paşa was given to the very high-ranking government officials. Efendi were given to learned people and government officials, though not exclusively. Ağa was a term of respect generally reserved for military men. Finally, Sultan was exclusively reserved for the members of the royal family (Kuran and Rubin, 2018). Figure 4.4 shows the distribution of the most common honorific titles of the benefactors. It is surprising that Ağas, presumably the least powerful among the elites listed above, contributed the most to water distribution services, as measured by number of fountains founded. Figure 4.5 maps the geographic location of fountains according to title in greater detail.

Finally, Figure 4.6 shows the location of the fountains endowed by the ruling Ottoman family. The purple dots indicate the fountains endowed by a member of the imperial family, whereas the yellow dots indicate the fountains endowed by affluent people without any royal connections.

4.5.2 Demographic Data

This dataset also contains information on the spatial distribution and religious characteristics of Istanbul’s neighborhoods during the 18th century (Ayverdi, 1958a; Pervititch, 2000; Kubilay, 2010). I used Kara (2016) to identify and code the main religion of each neighborhood. In her study, Kara (2016) collects information on the
religious characteristics of Istanbul’s neighborhoods by analyzing the neighborhood of origin of the people who appeared in the city’s sharia courts between 1708 and 1730. In many instances, non-Muslim communities had both Jewish and Christian residents, and the Christians could be of Greek or Armenian origin. There were also a small number of other Christians such as Asyrians. But none of them dominated
For various reasons, although we can identify geographic centers, no historical record exists of the borders of Ottoman Istanbul neighborhoods. Another compli-
cation is that streets had no names until the early 20th century (Kuban, 2010). In the absence of street names and modern map techniques, a neighborhood typically consisted of a vaguely delineated area around some monument. In particular, every neighborhood was associated with a central mosque, church, or synagogue. In order to recreate the boundaries of the old neighborhoods, I geocoded these central religious buildings for each neighborhood in Kara (2016) and created Thiessen polygons around these centers.

2 Thiessen polygons are polygons whose boundaries define the area that is closest to each point relative to all other points. They are mathematically defined by the perpendicular bisectors of the lines between all points (Brassel and Reif, 1979).
Figure 4.8 illustrates the Thiessen polygons created with the information on central points and the religious composition of neighborhoods taken from Kara (2016), as well as the actual placements of the churches and synagogues that function in the time frame of interest. Green areas denote the neighborhoods identified as Muslim in Kara (2016), whereas the yellow areas indicate the non-Muslim neighborhoods. Observe that, for the most part, yellow areas and the churches coincide with each other. This shows that my estimates of the neighborhood characteristics and area

Figure 4.5: Titles of the founders
Figure 4.6: Distribution of the royal fountains. Purple points indicate the fountains built by the members of the Imperial family.

My dependent variable is the number of fountains per neighborhood. Merging the neighborhood data with fountains data, I counted the incidence of fountains per neighborhood. I also used household numbers for each neighborhood to test, if the elite’s supply of drinking water facilities corresponded to the biologically necessary amount of water needed in each neighborhood, which is proxied by the neighborhood population. I also use the area of the neighborhoods to control for the neighborhood
4.6 Empirical Results

I estimate the effects of ethno-religious composition of the neighborhoods on the number of the fountains per neighborhood using a negative binomial model. This is a suitable specification because the number of fountains constructed is a count variable. The objective is to assess the relationship between a neighborhood’s ethno-
Figure 4.8: Construction of neighborhoods. Green areas represent the Muslim areas in the city, orange areas represent the non-Muslim areas reconstructed by the Thiessen procedure and the historical records. Crosses indicate churches, stars indicate synagogues.

religious composition and the expected number of fountains constructed within it.

In Table 1, I report the incidence rate ratios under three different specifications. The first column describes a negative binomial regression that uses as covariates the intercept and a dummy variable that equals 1 if the neighborhood is non-Muslim and 0 otherwise. The second column shows the incidence rate ratios adding another independent variable, the number of households per neighborhood. The third col-

113
Figure 4.9: Incidence of fountains in neighborhoods with different ethno-religious characteristics. Green points represent Muslim neighborhoods, red points represent non-Muslim neighborhoods. Circle sizes indicate number of fountains per neighborhood.

The intercept represents the average number of fountains in Muslim neighborhoods. Thus, the average number of fountains in Muslim neighborhoods is 1.13 under the third specification. Furthermore, the estimates suggest that for non-Muslim
neighborhoods the fraction of fountains built decreases by 0.53. That is, the average number of fountains in non-Muslim neighborhoods is 0.6.

Also, although the number of the households in each neighborhood has a significant and positive effect on the number of fountains per neighborhood, the size of this effect is minimal. Evidently, in deciding where to locate the fountains, the Ottoman elite were unresponsive to neighborhood needs.

Figure 4.10 reports the “hot spot analysis” pertaining to the spatial distribution of fountains in Ottoman Istanbul. Hot spot analysis identifies statistically significant spatial clusters of high volume (hot spots) and low volume (cold spots). Red areas are the hottest spots, while yellow and blue represent chilly and cold spots, respectively. Observe that Christian and Jewish neighborhoods tend to fall in cold spots.

Overall, the analysis provides support for the chapter’s hypothesis. The Ottoman elite built fountains primarily in Muslim neighborhoods. Moreover, they were not particularly receptive to differences in expected demand; they did not respond to the needs of each neighborhood, measured by the area and the number of households. These results thus suggest that, at least in autocracies political elites are more likely to invest in services and goods of benefit to their own groups.
Table 4.3: Negative Binomial Regression: Incidence Rate Ratios

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>1.347***</td>
<td>1.138</td>
<td>1.13</td>
</tr>
<tr>
<td></td>
<td>(0.109)</td>
<td>(0.115)</td>
<td>(0.117)</td>
</tr>
<tr>
<td>Non Muslim</td>
<td>0.622***</td>
<td>0.53***</td>
<td>0.53***</td>
</tr>
<tr>
<td></td>
<td>(0.113)</td>
<td>(0.104)</td>
<td>(0.105)</td>
</tr>
<tr>
<td>Number of Households</td>
<td>0.002**</td>
<td>1.002**</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.0009)</td>
<td>(0.0009)</td>
<td></td>
</tr>
<tr>
<td>Control for Area</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Sample size</td>
<td>255</td>
<td>255</td>
<td>255</td>
</tr>
</tbody>
</table>

Note: Robust standard errors in parenthesis

4.7 Alternative Explanations

4.7.1 Rigidity of the neighborhood composition

In his seminal article on public goods, Tiebout (1956) posits that if citizens with heterogeneous preferences have free mobility and regions offer a variety of public goods and tax rates, citizens will sort themselves optimally among the regions. In other words, citizens will all receive optimal tax and public good combination.

In principle, non-Muslim neighborhoods might have received fewer fountains than Muslim neighborhoods because Istanbul’s residents sorted themselves into neighborhoods with different tax and public good combinations. The relevant sorting mechanisms fall into two categories. One involves Muslims settling in neighborhoods where it is relatively easier and cheaper to build fountains. The other possibility is that
Figure 4.10: Hot-spot analysis pertaining to the spatial distribution of fountains in Ottoman Istanbul.

Muslims moved into non-Muslim neighborhoods that then have fountains, interfering with the identity of that particular neighborhood and driving out non-Muslims. This section explores the possible contributions of these relocation mechanisms to the difference in the incidence of fountains observed in neighborhoods with different identities.

How did groups of different ethnicities settle in Istanbul? After its conquest
from the Byzantine Empire, Istanbul was almost an empty city. As a result of the Byzantine Empire’s economic and political decline Istanbul was in a destitute state at the time of its conquest (Kuban, 2010). The plunder that followed the conquest left the city not only deprived of its riches, and also of its residents: many left, and those who stayed were either enslaved or killed (Kafescioğlu, 2009).

One of the first order challenges faced by the Ottoman administration was to repopulate the city to its former glory (Nicol, 1993). The challenge was not merely to fill the city with people: the Ottomans had to make sure that certain political and economic motives were balanced. Especially, considering the need for labor to re-build an imperial city in ruins, a systematic recruiting of certain labor groups was of particular importance (İnalçık, 1969). Hence, to guarantee a sufficient labor force, along with balancing the presence of certain identity groups in the city, the Ottomans ordered permanent migration of groups of communities of all origins from different regions of the empire to settle in Istanbul (Freitag et al., 2010; İsm, 1999).

These new-comers did not find residence in the city haphazardly. Government officials strove to group together people from the same origin and the same identity groups (İncicyan, 1976; Eyice, 1964; Schneider, 1952)\(^3\). Most of these re-population efforts were carried out between 1453 and 1475, which was almost a century be-

\(^3\) For instance, Karaman, Çarsamba, and Kefeli neighborhoods of Istanbul consisted of individuals who were forcefully departed from these regions from Anatolia to Istanbul (Eyice, 1964; Başkan, 2012).
fore the new capital’s major waterways were built (Ayverdi, 1958b). Hence, the mismatch between the time of the re-population efforts and the construction of the major waterways works against the idea that the Muslim population sorted itself into neighborhoods with more public services.

Another possible explanation for the pro-Muslim bias in the provision of fountains is that the ethno-religious characteristics of neighborhoods changed over time. Muslims might have forced Christians and Jews to move into the neighborhoods with less fountains, or Muslims might have settled in neighborhoods with good water provision. However, the Ottoman Empire enforced strict rules pertaining to the organization of urban life. As a matter of practice, the residents of Istanbul were not free to move across neighborhoods at will.

One such rule concerned the characteristics of the buildings that each ethno-religious group were permitted to build. According to Islamic Law, Muslim residences had to differ from those of Christians and Jews both in height and color. Under Selim III (reigned 1789-1807), for instance non-Muslims were ordered to paint their houses black and Muslims to paint their houses in a color different from black to enable easy spotting of non-Muslims. The order also stated that the non-Muslim houses should not have windows facing the houses of Muslims. The height of the buildings was another distinctive pattern for religious distinction. According to a 1719 order, in
both intramural and extramural Istanbul, non-Muslims were prevented from building higher than two floors (Çokuğraş and Gençer, 2016). Thus, even though Muslims were the privileged group at the time, rules of construction would have prevented a Muslim from moving into a house that was previously inhabited by a Christian or Jew.

Moreover, it was forbidden for non-Muslims to settle in areas sacred to Muslims, and they would usually live in groups in certain neighborhoods. There are various court cases, in which the Muslim population of a certain neighborhood would complain about the non-Muslim settlers. These complaints usually involved the allegation that the non-Muslims harmed the Islamic values and traditions of the pious citizens. The following court case clearly demonstrates the inter-communal conflict that ensued whenever non-Muslim tried to move into Muslim neighborhoods.

Some Muslim residents of Istanbul’s Haraçbaşı İshak Bey neighborhood, which is situated near Kumkapı, appear in court, stating that customarily non-Muslims have not resided in their neighborhood. However, they add, following the 1660 fire, certain Muslims sold their plots and reconstructed houses near the neighborhood mosque to non-Muslims at excessive prices. The neighborhoods Muslim residents in court complain that since the arrival of non-Muslims, participation in mosque services has fallen and screaming in the streets by drunk non-Muslims has prevented Quran reading and praying in the mosque. Earlier they petitioned İbrahim Paşa, legal agent of the grand vizier, about their concerns. They received from him a buyuruldu document ordering a hearing of the case by the judge of İstanbul. The residents add that they hold an order
prohibiting non-Muslims from living in their neighborhood. The residents in court now request an examination of the documents and an investigation in their neighborhood. They also demand the evacuation of non-Muslims from the neighborhood. Experts report to the court that certain Muslim residents did indeed sell their property to non-Muslims and that other Muslim residents transferred waqf-owned properties with the permission of mutawallis. Consulting some trustworthy Muslims, they also report that before the fire the neighborhood was customarily a Muslims-only neighborhood. The court registers the experts report.\textsuperscript{4}

This case, and many similar cases found in the Islamic court registers show that neighborhood ethno-religious characteristics were rigid and not subject to change. Thus, the difference between water provision levels between neighborhoods of different religions demonstrate the difference in investment levels.

\textbf{4.7.2 Clustering analysis}

Another method to test if the Ottoman elites aimed at reducing inequalities in access to clean drinking water is to further investigate the spatial distribution of fountains. In theory, in a city center where there is not much variation in population density and settling patterns, one would expect that the fountains would be spatially uniformly distributed to ensure equal water access. A clustered distribution would mean that the elites favored certain areas of the city more than the other ones.

I examine the nature of clustering in fountain building sights in Ottoman Istanbul\textsuperscript{4}.

\textsuperscript{4} This case, Istanbul 9:226b/1(1662), is recorded in Kuran (2010).
The nearest neighbor statistic measures the average distance to the closest neighbor against the expected average distance. The expected average distance is the random distribution of the number of points (in this case fountains) within a particular area. If the nearest neighbor statistic is less than 1 then there is evident clustering, with clustering increasing as the statistic approaches zero. If the nearest neighbor statistic is greater than one, it signifies a dispersed, or uniform distribution (Oyana and Margai, 2015).

Figure 4.11 illustrates one of the striking observations of this chapter: the nearest neighbor ratio for Ottoman Istanbul’s fountains is 0.64, meaning that the distribution of fountains was very clustered. This result is very significant at a level of 0.05. Evidently, privileged Muslim benefactors endowed more fountains in certain areas than the others. This finding is consistent with the main results of this chapter.
4.8 Conclusion

The results presented in this chapter suggest that authoritarian political elites tend to favor their own ethno-religious groups when making allocational decisions about public goods. Insofar as the groups are segregated residentially, it becomes easier
for elites to identify and supply social services disproportionately to their own groups. In favoring their own ethno-religious group, political elites earn legitimacy in the eyes of their co-ethnics. That lowers the probability of a revolution.

Public goods entail non-excludable services. But geographic distance can keep potential beneficiaries from taking advantage of opportunities. Hence, political elites can use geography as a tool to direct social services to their own communities. This has far-reaching consequences, especially for autocracies. Scholars seek to explain the persistence of historical inequalities. The empirical relationship that I have uncovered in this chapter adds to this persistence literature. Underprovision of public goods and economic opportunities can impede the mobility prospects of traditionally underserved groups.

Beyond the contributions above, this chapter has implications for the literature on the role of the waqfs on provision of public goods. When elites are not constrained by democratic processes, they can use their legal and economic advantages to disproportionately serve their own groups. This chapter sheds light on the patterns of endowments of the waqf founders. The vast literature on waqfs has numerous times emphasized Ottoman elites’ altruistic motives for providing most all citizens with abundant public services (Singer, 2011, 2012; Yediyıldız, 1984). But the validity of these philanthropic and altruistic motives had never been empirically tested. If
the ongoing analysis is valid, my findings provide evidence that the waqf system disproportionately benefited Muslim citizens of the empire.
“You all just got a lot richer”

Donald Trump, to friends, referencing the tax reform.

In *The 18th Brumaire of Louis Bonaparte*, Marx (2008) writes,

“Insofar as millions of families live under economic conditions of existence that separate their mode of life, their interests, and their culture from those of the other classes, and put them in hostile opposition to the latter, they form a class. Insofar as there is merely a local interconnection among these small-holding peasants, and the identity of their interests begets no community, no national bond, and no political organization among them, they do not form a class. They are consequently incapable of enforcing their class interests.”
Implicit in this quote is the assumption that economic characteristics do not necessarily translate into political action that maximizes material benefits. This links back to Marx’s famous distinction of *Klasse an sich* (class in itself) from *Klasse für sich* (class for itself): Political action aimed at maximizing one’s own class interests requires class consciousness.

Along similar lines, this dissertation challenges the core assumption of standard models of redistributive preferences by bridging two disconnected literatures: one on political behavior under conditions of imperfect information and another on preferences for redistribution. Inconsistent empirical accounts of the relationship between income and the demand for redistribution can be explained, I show, by a cognitive framework in which individuals make predictions about benefits and losses from redistributive policies. An individual’s own income contributes to her level of demand for redistribution. However, her own perceptions of how she ranks economically within the population, along with her perceptions of inequality, also matter significantly for redistributive preferences. In order to understand how misperceptions of a person’s own rank and inequality level are generated, I developed an argument about how people use heuristics and social comparison to estimate these in the absence of perfect information. The use of heuristics, I find, causes misperceptions that weaken the link between income and redistributive demands.
Perhaps one of the most interesting findings of this dissertation is that the well-known "middle-income bias" found in public opinion surveys can be systematically explained. When individuals compare themselves either to the super-rich or the super-poor, they tend to infer that they are situated around the middle of the income ladder. This, of course, has serious effects on their political preferences.

I find significant evidence, both internationally and from the United States, that individuals are generally misinformed even on concepts that are part of everyday political and economic discourse. They are strikingly unclear about the definitions of the income groups. In particular, they overestimate or underestimate the annual income thresholds of certain income groups by large margins. Ample evidence has been given that the amount and substance of the information available to individuals are perhaps more important than actual data in predicting and shaping political behavior. On average, people judge the level of social inequality in proportion to the level of inequality they perceive. Similarly, the demand for progressive taxation increases as the perceived income of the rich increases.

Finally, I show that when the misperceptions minimized, the rich act more "selfishly." In chapter 4 of this dissertation, I analyzed the determinants of Ottoman elites’ preferences for supplying public goods. My analysis show that in authoritarian settings in which class differences are very institutionalized, there are no infor-
mational asymmetries. Hence the elites’ decisions are not affected by distributional misperceptions.

A growing literature explores alternative mechanisms such as other-regarding preferences, inequality aversion, and fiscal system structures to investigate why income is not uniformly effective across all individuals as a factor in decision making. These contributions to the Robin Hood paradox are better situated, I believe, by the cognitive mechanisms that affect agents economic and political decisions. Very intuitively, the altruism of the rich depends on the degree of poverty they perceive. Similarly, the structure of the fiscal system affects individual redistribution decisions insofar as their personal information is accurate.

Another important finding is that the design of widely-used survey questions might induce measurement error. In the literature on redistribution, most of the questions used in constructing dependent variables contain concepts such as high-income individuals. If respondents have different understanding of the high-income group’s composition, such questions will fail to measure attitudes toward redistribution uniformly across individuals. Hence, incorporating informational assumptions into research on redistributive politics is not only relevant and important theoretically. It also has important empirical implications that call for revising currently popular survey methodologies and measurement tools.
5.0.1 The Road Ahead

This dissertation offers a variety of interesting avenues for future research. First, the mechanisms through which political institutions and political actors’ strategies help to shape misperceptions of income distribution awaits further investigation. In countries with varying levels of democratic governance, different political institutions might affect the availability of information to citizens. Additionally, it is fairly well established that politicians often use political manipulation to attract more votes. Riker (1986) states that politicians “typically win because they have set up the situation in such a way that other people will want to join them even without any persuasion at all”. It is perfectly plausible that political actors are shaping economic misperceptions through political campaigns and strategies designed to portray themselves as having the tools to solve problems that might not even exist. Given the salience of income inequality and redistributive policies in political persuasion campaigns, shifting the focus toward an institutional analysis of information is a compelling next step.

I plan to utilize data on Ottoman Istanbul and water waqfs to investigate further the theoretical argument made above. In particular, I expect that the Ottoman elite used the waqf system to provide themselves “public services” that would not otherwise have been supplied. I also aim to investigate the persistent effects of
different levels of infrastructural investment in neighborhoods with various identity
groups.

The study has implications that stretch well beyond political science. It speaks
to broader audiences concerned about links between the production of knowledge
and democratic governance. If political misinformation is perpetuated by cognitive
limitations or the limited information supplied by manipulative politicians, certain
practical issues must be solved in order for a democratic choice to be functional.
People often have strong opinions about inequality and about the affluence of income
groups. To help facilitate the possibility of informed democratic decisions, one must
ensure that these opinions are based on accurate information about the state of the
economy.
Appendix A

‘Who is Rich, Anyway?: Distributional Misperceptions and Tax Preferences

Table A.1: Balance Table

<table>
<thead>
<tr>
<th></th>
<th>Control</th>
<th>Treatment</th>
<th>Overall Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household income</td>
<td>57109.420</td>
<td>59768.029</td>
<td>58462.547</td>
</tr>
<tr>
<td>Household size</td>
<td>2.620</td>
<td>2.648</td>
<td>2.634</td>
</tr>
<tr>
<td>Age</td>
<td>2.485</td>
<td>2.528</td>
<td>2.507</td>
</tr>
<tr>
<td>Obama:</td>
<td>0.704</td>
<td>0.732</td>
<td>0.719</td>
</tr>
<tr>
<td>Male:</td>
<td>0.599</td>
<td>0.546</td>
<td>0.572</td>
</tr>
<tr>
<td>Educ:</td>
<td>4.033</td>
<td>4.106</td>
<td>4.070</td>
</tr>
<tr>
<td>Altruistic:</td>
<td>1.821</td>
<td>1.792</td>
<td>1.806</td>
</tr>
<tr>
<td>Wealth:</td>
<td>3.752</td>
<td>3.623</td>
<td>3.686</td>
</tr>
<tr>
<td>Religious:</td>
<td>1.646</td>
<td>1.789</td>
<td>1.719</td>
</tr>
<tr>
<td>Ideology</td>
<td>7.632</td>
<td>8.125</td>
<td>7.907</td>
</tr>
<tr>
<td>Urban:</td>
<td>0.234</td>
<td>0.250</td>
<td>0.242</td>
</tr>
</tbody>
</table>
Table A.2: Percentage of Respondents Overestimated & Underestimated the Thresholds

<table>
<thead>
<tr>
<th>Poverty</th>
<th>Low-Income</th>
<th>High-Income</th>
<th>Top 10\textsuperscript{th} Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underestimated</td>
<td>44%</td>
<td>56%</td>
<td>63%</td>
</tr>
<tr>
<td>Overestimated</td>
<td>56%</td>
<td>44%</td>
<td>37%</td>
</tr>
</tbody>
</table>

Table A.3: Observed vs. Perceived Income Groups

<table>
<thead>
<tr>
<th>Observed Class</th>
<th>Perceived Class</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low-income</td>
</tr>
<tr>
<td>Low-income</td>
<td>100</td>
</tr>
<tr>
<td>Middle-income</td>
<td>10</td>
</tr>
<tr>
<td>High-income</td>
<td>0</td>
</tr>
</tbody>
</table>
The poverty threshold is the minimum annual income level below which a household is officially considered to lack adequate subsistence and to be living in poverty.

What do you think the poverty threshold before taxes was for a household of 2 people in 2014?

Only use numbers and optionally a decimal point. Do not use dollar signs or commas. Please give us your best estimate.

$10000

**Figure A.1:** Screen shot of the survey question asking for the poverty threshold
Thank you for your answer!

You think a household of 2 that makes less than $10000 a year before taxes is below the poverty threshold.

The truth is, a household of 2 that makes less than $15,379 is considered to be living in poverty.

Figure A.2: Screen shot of the information treatment
Bibliography


Tanıskık, İ. H. (1943), *İstanbul Çeşmeleri*, vol. 1, Maarif Matbaası, İstanbul.


Biography

Aslı Cansunar was born on January 2, 1988, in Istanbul, Turkey. She grew up in Istanbul, graduating from Robert College in 2007. She attended Koç University, where she obtained her Bachelors of Arts in Economics and Bachelors in Science in Mathematics in 2012. Subsequently, she enrolled at Duke University, obtaining her Masters in Economics in 2014, and finishing this dissertation in 201*. Starting in March 2018, she will be a Post-Doctoral Research Fellow at Oxford University, England.