Economic Inequality and Political Power in Norway

Thesis for the degree of Philosophiae Doctor (PhD)

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Abstract

For as long as democratic forms of government have existed, people have discussed whether economic inequality undermines the democratic ideal of political equality. Is it realistic that citizens with vastly different economic resources can have more or less the same level of influence on government? Previous research from the United States and Europe suggest that the answer is *no*: affluent citizens appear to enjoy considerably more policy influence than the average citizen and the poor.

In this thesis, I study the relationship between economic inequality and political power in Norway. Norway is interesting in this regard because it is widely considered one of the most well-functioning democracies in the world. Furthermore, compared to other countries, Norway has low levels of economic inequality, strong unions, and important institutions limiting the influence of economic elites. If its possible, within a modern capitalist society, for rich and poor to have more or less equal influence on government, then Norway would be the place where we should observe it. The thesis consists of the following three articles:

In **Article 1** (*Affluence and influence in a social democracy*) I use an original dataset on public opinion and public policy containing 603 specific issues over five decades (1966-2014). I show that public policy in Norway in general has responded much more strongly to the preferences of high-income citizens than to the preferences of citizens with average or low income. Still, the affluent in Norway do not appear to enjoy the exclusive political influence that similar studies have found in the United States (e.g. Gilens 2012). This is because education appears to be a more important determinant than income, and because the poor seem to have had sway on economic policy issues comparable in magnitude to that of the affluent.

Article 2 (*Taxing the 1 percent: Public Opinion vs. Public Policy*) shows that despite the general pattern of economic policy being relatively equally responsive to affluent and poor in

Norway, public opinion and public policy can still become seriously detached on an issue of high relevance to the rich—namely, high income taxation. In an original survey, I asked Norwegians to design their preferred tax rate structure, and subsequently matched their answers with registry data on what people at different incomes actually pay in tax. I show that within the top 1 percent, tax rates are far below (as much as 23 percentage points) from where citizens want them to be. A follow-up survey showed that this divergence is entirely driven by capital incomes being taxed too low.

Article 3 (*Gender, Economic Inequality, and Political Power*) shows that unequal responsiveness to economic groups can imply unequal responsiveness to men and women. This is because women make up a larger part of low-income groups, and economic elites predominantly consist of men. I combine the dataset used in Article 1 with comparable data for the United States from Gilens (2012). I then document a major gap in responsiveness between men and women in both Norway and the United States over the past 50 years. Part of the gap is accounted for by economic inequality between the genders, and poor women appear to be particularly powerless. In Norway, however, the gender-gap has virtually disappeared over time, a development that is statistically attributable to the increasing share of women in parliament. In the US on the other hand, the gap has remained remarkably stable over time.

List of publications

1) Mathisen, Ruben B. "Affluence and Influence in a Social Democracy".

   Forthcoming in *American Political Science Review*

2) Mathisen, Ruben B. "Taxing the 1 percent: Public Opinion vs. Public Policy".

   Under review at *British Journal of Political Science*

3) Mathisen, Ruben B. "Gender, Economic Inequality, and Political Power".

   "Decline and resubmit" at *Journal of Politics*

Contents

1 Introduction

1.1 Overview

For as long as democratic forms of government have existed, people have discussed whether economic inequality undermines the democratic ideal of political equality. Is it realistic that citizens with vastly different economic resources can have more or less the same level of influence on government? Much work within modern political science has taken for granted that citizens in Western formal democracies do have approximately equal voice in politics.[1] This allegedly follows from the fact that under free and fair elections one person has one, and only one, vote. However, that argument is only valid if we assume that voting is the only way to influence politics—which is clearly not case in the real world.

Beyond the ballot box, campaign funding, lobbying, disinvestment, media funding, and running for public office, are just some of the methods that can be used to achieve influence on government. What is common to all of them is that they cost money. This means that the ability to utilize them will be proportional to the economic resources of each citizen. Economic resources (income and wealth) are always unevenly distributed, and in most societies there are large disparities between rich, middle, and poor. Therefore, without effective interventions to severe the links between money and politics, economic inequality implies unequal political influence—*political inequality*.

Only very recently has political scientists tried to use large-n datasets and modern statistical tools to examine the extent of political inequality in modern formal democracies. So far, most studies have focused on the United States, and have concluded that the opinions of affluent Americans appear to have much more influence on government policy than the opinions of middle-class and poor Americans; some even finding that the latter two have "near-zero"

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[1]I use the term "formal democracy" the same way as Dahl used the terms "polyarchy", i.e. to refer to a country that has democratic political institutions like free and fair election, freedom of speech, and freedom of assembly (Dahl 1971)

impact when accounting for the preferences of the affluent. Similar research in others parts of the world is still scarce. However, the studies that do exist appear to show just as much political inequality in other Western countries as has been found in the United States.

In this thesis, my goal is to contribute to our knowledge on the relationship between economic inequality and political inequality by providing evidence about a new case that has received little attention in the literature thus far: Norway. Like the other Nordic countries, Norway is commonly viewed as a highly egalitarian social democracy with low levels of income inequality, a generous welfare state, and a well-functioning democracy. In the United States, the "Nordic Model" has been embraced by politicians on the left, like Bernie Sanders and Alexandria Ocasio-Cortez, portraying it as the solution to many of the ills of the US system.

The three articles that constitute this thesis deal with three main aspects of political inequality in Norway: Unequal policy responsiveness to the preferences of high-, middle- and low-income citizens; unequal policy responsiveness to men and women, partially resulting from gender-based economic inequality; and a case study comparing public opinion and public policy on high income taxation. All articles use original quantitative datasets collected as part of the PhD project.

In this introductory chapter, I will first review the existing literature on the relationship between economic inequality and political power, from Antiquity to present day political science. Second, I will go through a number of potential causal mechanism studied across a range of different literatures, that may account for the disproportional influence of the wealthy. Third, I will describe the Norwegian case. Fourth, I discuss the methods I use in the thesis articles. Finally, I discuss some of the findings of the thesis, and then propose some directions for future research.

1.2   Nine findings from this thesis

1) Public policy in Norway over the period 1966 to 2018 has, in general, responded much more strongly to the preferences of high-income citizens than to the preferences of citizens with average income. [Article 1]

2) The question of *how much more* responsiveness there is to the affluent than to the average citizen is difficult to answer because there are a lot of ways to estimate that difference. Nevertheless, based on the analyses reported in this dissertation, the most optimistic estimate is that a citizen at the 90th income percentile has twice as much policy influence as a citizen at the 50th income percentile. Meanwhile, the most pessimistic estimate is that the difference is more than ten-fold (see Figure 1). [Article 1]

3) The relationship between money and influence in Norway still appears to be weaker and less robust than in the US. Three pieces of evidence support this conclusion. First, responsiveness is more strongly conditioned by education than by income: the opinions of the highly educated generally matter more than the opinions of the affluent.[2] Second, although the main estimates of income group influence presented in Article 1 shows inequality of the same magnitude as in the US (see Figure 1 Dataset 1 here), if we use all available data that I gathered for Norway (including data that are arguably not directly comparable to the US data), inequality is lower than in the US (see Figure 1 Dataset 2 here). Third, on economic policy issues, it appears that low-income citizens have had independent influence on policy outcomes at roughly the same magnitude as high-income citizens. [Article 1]

4) Although policy responsiveness on economic issues appears to have been relatively equal in Norway over the past half-century, this conclusion must not be exaggerated. Looking at an important case of economic policy—high income taxation—policy decisions since

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[2]Note that 'affluent' refers to the highest income estimate that the data (both for Norway and the US) allow for, namely the 90th income percentile. It is possible—and probably quite likely—that the truly rich in Norway (e.g. the top 1% or 0.1%) have more influence than the highly educated.
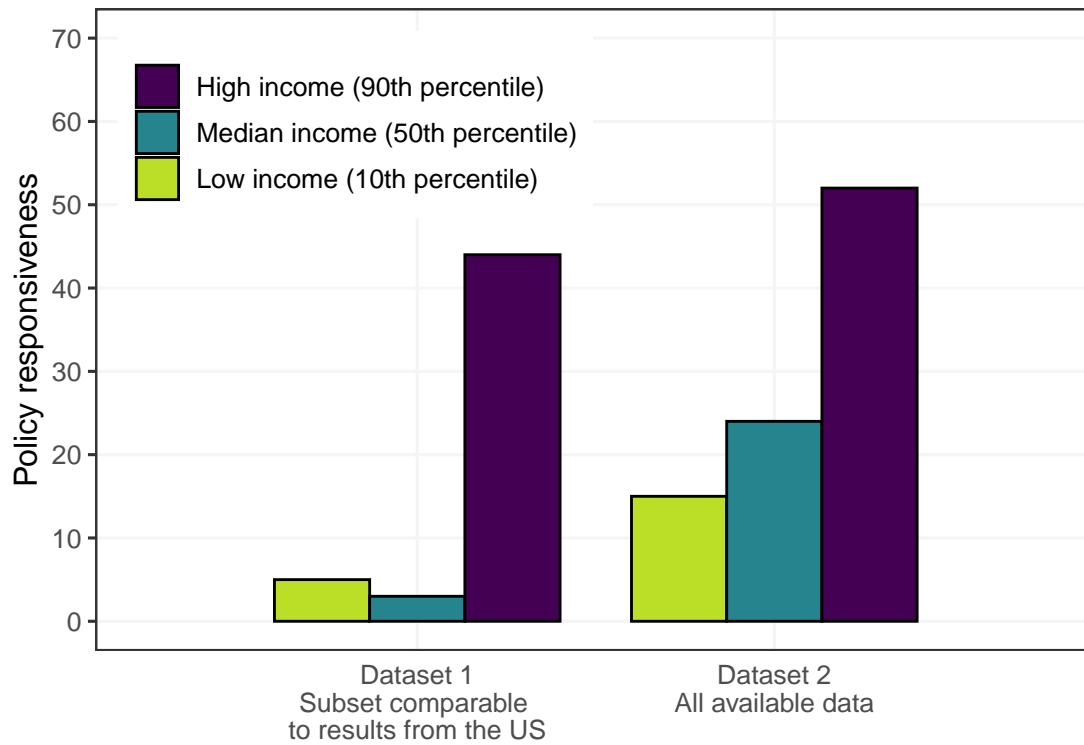
Figure 1: Policy responsiveness to high-, median- and low-income Norwegians, when their preferences diverge. *Note*: Policy responsiveness measured as the predicted change in probability that a policy proposal will be adopted when going from 20% to 80% support within a group (expressed in %-points). Numbers are calculated based on the models reported in Article 1 Table 2 and Article 1 Appendix Table D3. The estimates for the 90th income percentile are from the models where their preferences diverge from the 50th income percentile. US results refer to Gilens (2012, see page 82).

the 1960's seem to have been seriously at odds with average public opinion—and even more with opinions of the poor. Over a period of 40 years, the top marginal income tax rate in Norway was cut from around 80% to almost half that. Meanwhile, estimated public support for cutting taxes on high incomes over this period was never higher than 39%, and most of the time it was lower than 30%. [Article 2]

5) Not only that, the tax rates that the highest income earners pay today seem to be far removed from what citizens would like them to pay. Comparing public opinion with tax registry data for 2018 reveals that incomes within the top 1 percent are taxed as much as 23 percentage points lower than what the average citizen would prefer. Current rates are even further from the preferences of the poor. [Article 2]

6) Tax rates at the top of the income distribution are much lower than what public opinion prefers because of preferential taxation of capital incomes. In most countries—including Norway—people at the top of the distribution predominantly get their incomes from capital investments. Such incomes are usually subject to flat, preferential tax rates, whereas labor is taxed at higher and progressive rates. When asked to set tax rates for labor incomes and capital incomes respectively, the average respondent preference on labor income taxation was largely in line with how labor incomes are actually taxed. The preference on capital income taxation, however, was much more progressive, and higher for top incomes, compared to how capital incomes are actually taxed. [Article 2]

7) The policy preferences of women have been severely underrepresented in public policy in both the Norway and the United States over the past 50 years. Overall, the data show large inequalities in policy responsiveness between the genders. On the issues where men and women diverged in what they wanted from government, the preferences of men usually had substantial effects on policy. The preferences of women on the other hand, appear to have had little or no effect at all in the United States, and a moderate (although not statistically significant) effect in Norway. [Article 3]

8) Economic inequality between men and women likely explains most of the unequal responsiveness between men and women in Norway, but a more modest proportion in the US. These results suggests that if women and men had had the same level of income, policy responsiveness might have been less skewed in men's favor. [Article 3]

9) Still, over the course of the period under study (1966-2014). the gender inequality in responsiveness in Norway appears to have been virtually wiped out. In this period, Norway saw a large increase in the share of women in parliament, a factor that correlates with inequality of responsiveness, and accounts for the whole time trend. In the US on the other hand, gendered unequal responsiveness seems to have been highly stable of time, and women's descriptive representation appears to have made little difference. [Article 3]

2   Economic Inequality and Political Power

In this literature review I first give a cursory overview of scholarly work concerning the relationship between economic inequality and political inequality from Antiquity till today. From there, I will go through the new empirical literature on unequal responsiveness that has emerged in the 21st century. Here, I pay particular attention to controversies and debates in the literature, since they are of high relevance for the empirical analyses that I perform in the thesis articles. Then, I move on to the mechanisms of political inequality, reviewing the existing empirical evidence for six ways that money can potentially buy influence in modern formal democracies. I then discuss implications for political inequality between along the gender dimension, and finally I clarify some of the concepts that I will be using in the thesis articles. In sum, I believe, this will provide the reader with a good amount of background knowledge to better be able to interpret the findings for the Norwegian case that emerge from my work.

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2.1   Does money buy political influence?

2.1.1   The orthodox view in political science and economics

The most prominent view about power relations under formal democracy holds that the system works as it should: Citizens, empowered by elections, are the ones who ultimately decide policy. This is a very familiar story, repeated in the media, high school textbooks, and a plethora of work within political science and economics.

An elaborate incarnation of this idea is the *Median Voter Theorem* (Hotelling 1929; Black 1948; Downs 1957). The original Median Voter Theorem states that in a two-party system, the policy positions of two competing, vote-seeking parties, will gravitate towards the preference of the median voter. That is, so long as voter preferences can be reduced to a single dimension (e.g. left-right), and the distribution of voter preferences are single peaked. An implication of this is that policy will be perfectly responsive to popular majorities, and there is no a priori bias towards any group of citizens. The logical can be extended to multi-party systems since a coalition government will most likely depend on the "median party" that contains the median voter (Kang and Powell Jr 2010, 1015; Laver and Schofield 1998, 113).

Critiques of the median voter theorem are many (e.g. Rowley 1984; Harms and Zink 2003). Yet the most problematic part about it is arguably that it takes for granted that policy is simply a function of elections. Thus it naively expects the median voter to control public policy so long as she controls the outcome of elections. This idea is clearly at odds with empirical reality. In the real world, it is rather obvious that many factors beyond elections influence policy. I will go through a number of such factors in Section 2.2. Suffice it to say now that although citizens might be equal in terms of their one vote, they are *unequal* in their ability to utilize other important methods of making their voices heard.

2.1.2 Theories about the influence of economic elites

Scholarly interest in the relationship between economic inequality and political power at least dates back to Aristotle. In his book *Politics*, Aristotle writes that "when some possess too much, and others nothing at all, the government must either be in the hands of the meanest rabble or else a pure oligarchy" (Aristotle 2009 [350 B.C.], Book IV, Chapter XI). That is, at a certain point of wealth inequality, the wealthy few will dominate politics, unless the poor majority redistributes wealth by force (*expropriation* would be the modern term). Aristotle considered both these scenarios to be unjust: It is "unjust" for the poor to "distribute among themselves the possessions of the wealthy"; and it is "unjust" for the wealthy to "plunder and take away the possessions of the many" (cited in Lockwood and Samaras 2015, 170). Aristotle's solution for a stable democracy was "to take care that the majority of the community are not too poor", and he suggested specific measures that states could take to ensure this (Aristotle 2009 [350 B.C.], Book VI, Chapter V).[3]

Aristotle highlighted a tension between economic inequality and democracy that appears in the writing of many subsequent scholars. Nearly 2000 years after Aristotle, James Madison, the main author of the United States Constitution, worried that giving the public too much influence in public affairs surely would lead to demands of economic redistribution. Madison writes that "[i]n England, at this day, if elections were open to all classes of people, the property of the landed proprietors would be insecure. An agrarian law would soon take place." Therefore in the US system, government—mainly through the Senate—should make sure to "protect the minority of the opulent against the majority" (Yates 1836 [1787], 170).

Also interested in the English system, Adam Smith harshly criticized government for putting the interests of the economic elite over the public. Smith writes in the *Wealth of Na-*

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[3]Aristotle writes: "what can be saved out of the public money should be put by, and then divided at once among the poor, if possible, in such a quantity as may enable every one of them to purchase a little field, and, if that cannot be done, at least to give each of them enough to procure the implements of trade and husbandry" (Aristotle 2009 [350 B.C.], Book VI, Chapter V)

tions that "the English legislature has been peculiarly attentive to the interests of commerce and manufacturers", who "have been by far the principal architects" of "this whole mercantile system" (Smith 1937 [1776], 324, 513). This is especially problematic because, as Smith argues, "[t]he interests of the dealers … is always in some respects different from, and even opposite to, that of the public" (200).

However, the most influential account of the relationship between economic and political inequality is that of Karl Marx and Friedrich Engels, further developed by later Marxist theorists. Marx and Engels write in the *Communist Manifesto*:

> the bourgeoisie has at last, since the establishment of Modern Industry and of the world market, conquered for itself, in the modern representative State, exclusive political sway. The executive of the modern State is but a committee for managing the common affairs of the whole bourgeoisie. (Marx and Engels 2019 [1848])

This kind of argument, that the state is a mere instrument for the capitalists (or the *bourgeoisie*), is typical of the early writings of Marx. In *The Germany Ideology* Marx expresses the same sentiment, writing that the state "is nothing more than the form of organisation which the bourgeois necessarily adopt both for internal and external purposes, for the mutual guarantee of their property and interests" (Marx and Engels 1970 [1846]). But Marx's writing changed after 1848, around the time when European states, such as France and Germany, saw autocrats take the power by force.[4] As explained by Jon Elster, Marx from then on awarded the state more autonomy vis-a-vis the capitalists. The capitalists would tolerate not being in direct control of the state, letting autocrats or aristocrats run public affairs, so long as the state did not stray too far away from core capitalist interests (Elster 1985, Chapter 7). This even

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[4]Of the most well-known cases was Napoleon III's coup d'état in Paris in December 1851; subsequently declaring himself Emperor of France.

had the added benefit, Marx wrote about France, that it would "conceal" who was truly in power, and leave the capitalists free of having to "confront the subjugated classes" themselves (Marx 1978 [1852], 23). Marx's later writings thus developed a more nuanced understanding of the relationship between economic resources and power: The state was not necessarily just an instrument at the disposal of the wealthy. The state could act in a variety of ways so long as they were not directly at odds with the economic interests of the wealthy.

Arguably, this adjustment salvaged the Marxist theory of the state in the face of the wide-spread proliferation of universal suffrage in the 20th century. During Marx's time, political rights were mostly a luxury of the capitalist class. Marx himself predicted that a move towards universal suffrage would transfer power to the masses and serve as an important step towards revolution (Bottomore 1993, 20–21). Absent any revolution, in a stable formal democracy with universal suffrage, it is much less obvious why the Marxian idea of a ruling capitalist class is still valid. If the people are free to throw out the rulers at the ballot box, how could capitalists still be in power? A plausible solution was the idea that capitalists could rule indirectly through the mere knowledge on the part of the political elite, that thwarting the interests of the capitalists could lead to disinvestment with far-reaching negative social consequences. This line of argument (sometimes referred to as the *Structural dependence of the state on capital*, see Przeworski and Wallerstein (1988)) saw its contours with Marx's post-1848 writings, but was developed further in the 1960's and 70's by Marxist scholars such as Fred Block and Nicos Poulantzas (Block 2021 [1977]; Poulantzas 1969, discussed in more detail in the next section).

Up until the 20th century, the dominant perspective on the relationship between economic and political inequality, as we have seen, had been that property in itself implies influence. However, in the 20th century, the scholarly literature began to redirect its focus towards the power of elites, broadly defined (Winters 2011, 26). In this branch of the literature (commonly known as *elite theory*), property is but one out of many power resources that de-

termine the distribution of political influence. Elite theory started with scholars such Mosca (Mosca 1939 [1896]), Pareto (Pareto 1968 [1901]), and Michels (Michels 2001 [1911]), arguing that voters in modern democracies could not realistically hope to control government. Politics would inevitably remain in the hands of a small governing elite.[5]

C. Wright Mills continued this tradition in the 1950's with his seminal book *The Power Elite* (Mills 1959 [1956]), in which he argued that US politics was dominated by a network of elites occupying key positions in corporations, government and the military. The members of the elite were drawn predominantly from the upper class, but their power, Mills argued, did not originate from their wealth (Mills 1959 [1956], 279; Gilens and Page 2014, 566). So while Mills, and the other post-war elite theorists (e.g. Schattschneider 1975 [1960]; Domhoff 1967; Hunter 2017 [1953]), surely considered business as an important actor with strong influence on government, it was the corporate executives, not the owners, who were in the spotlight. Furthermore, the political elite was not dependent upon the economic elite in the Marxist sense. In fact, Mills was critical of the, as he saw it, "economic determinism" in Marxist theory, arguing instead that "the higher agents of each of these three domains [business, politics, and military] now often have a noticeable degree of autonomy" (Mills 1959 [1956], 277).

The elite theorists were criticized by another important scholarly tradition in the post-war decades, namely pluralism. Pluralism arguably falls somewhere in between the orthodox view that ordinary citizens ultimately decide, and the elitist view. Pluralists, such as Robert Dahl (Dahl 2005 [1961]) and David Truman (Truman 1971 [1951]) disagreed with the notion of elite domination at the core of elite theory. Instead they proposed that political influence was plural: That is, it was distributed across a wide variety of organized groups representing different interest, and who exerted power in different domains. In his famous study of power relations in the American city of New Haven (Dahl 2005 [1961]), Dahl clearly acknowledges

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[5]For Michels this was a logical consequence of his more general argument that any organization would over time inevitably come to be ruled by a minority (i.e. his famous *iron law of oligarchy*).

what he calls the "the interrelation of money and influence", but he also sees real opportunities for ordinary citizens to organize and effectively compete for influence in the public sphere:

> The individual of low income is not without resources [in politics], but lacking money he does lack one resource of considerable importance. He may be able to compensate for lack of money by using other resources such as his time and energy more fully or skillfully, and as a group, the influence of the aggregate votes of the poor may more than offset the influence of the aggregate wealth of the rich. (Dahl 2005 [1961], 243)

Some of the work of Norwegian political scientist Stein Rokkan is similar to Dahl in the regard. Focused on political power relations in Norway, Rokkan emphasized that policy making was influenced both through the electoral channel and the corporate channel. Elections matter, but, in his words, "[t]he vote potential constitutes only one among many different power resources [. . .] what really counts is the capacity to hurt or halt a system of highly interdependent activities", therefore "votes count, but resources decide" (Rokkan 1966, 107, 106). The argument is reminiscent of the Marxist idea of structural dependence of the state on capital. However, Rokkan points out that not only the business owners wield this kind of influence. Organized peasants and workers could also hurt the economic system by suspending production. Hence, although "resources decide", it is not necessarily business or the wealthy who rule. That would depend on the particular distribution of resources at a specific time and place.

After the elitism-pluralism debate in the 1950s and 60s, work on political inequality become less about the actual distribution of power, and more about narrower issues that where easier to investigate empirically. This includes work on inequalities in legal rights (e.g. Thernstrom 1987), and the well-known work by Sidney Verba and colleagues on unequal political

participation, particularly with respect to voting (Verba and Nie 1987 [1972]; Verba, Nie, and Kim 1978; Brady, Verba, and Schlozman 1995; see Bartels 2021, 5–6). The ancient question of who was actually in power largely fell out of mainstream of political science, although interesting debates on the topic continued in Marxist circles (e.g. the Poulantzas-Miliband debate, Miliband 1969; Poulantzas 1969; Barrow 2016; see Schakel 2020, 25).

More recently, new theories on the power of economic elites have emerged, such as Thomas Ferguson's "Investment theory of party competition" (Ferguson 1995), and Jeffrey Winter's theory of oligarchy (Winters 2011). These contributions have helped bring the discussion of money and power back to to its root. Instead of focusing on the people who at any point in time occupy elite positions within the economic and political system—the approach of most 20th century work on elites—these scholars, much like Aristotle and Marx, are interested in the material sources of power.[6]

2.1.3 The recent empirical literature on unequal responsiveness

Before the 21st century there is little systematic empirical work that could tell us anything about how much political influence the rich actually have compared to other citizens. At least that is the case if we stipulate that such an analysis must somehow measure the extent to which the preferences of well-off citizens have more impact on policy than the preferences of less well-off citizens. The long absence of such studies might be in large part because they require data that are usually far from readily available. Scholars in the 1970s and 80s studying inequalities in political participation (a related but different topic) were well aware of the challenges of measuring inequalities in actual political influence. Verba and Orren (1985) note difficulties that are almost just as relevant today as they were back then:

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[6]Winters is quite explicit that "elite theory played a significant role in undermining the precision and utility of oligarchic theory", among others things by conflating terms like "oligarchs", "elites, aristocrats, governing elites, and ruling classes", and by "downplaying . . . material power resources" (Winters 2011, 31–32).

> Political equality cannot be gauged in the same way as economic equality. There is no metric such as money, no statistic such as the Gini index, and no body of data comparing countries. (Verba and Orren 1985, 15)

To be sure, political scientists have been studying the relationship between public opinion and public policy (or, alternatively, representatives' voting behavior) for half a century. Starting with Miller and Stokes (1963), a substantial literature has established that there is a fairly strong correlation between average public opinion and policy changes over time both in the United States (Burstein 2003; B. Page and Shapiro 1983; Robert S Erikson, MacKuen, and Stimson 2002; Monroe 1998; Wlezien and Soroka 2012) and other established democracies (Brooks 1987, 1990; Binzer Hobolt and Klemmensen 2008; Soroka and Wlezien 2004). One prominent scholar even interpreted such findings from the US as providing "a sanguine picture of democracy at work" (Shapiro 2011). Two others argued that "the people ultimately decide" when it comes to changes in government spending (Soroka and Wlezien 2010, 182; Bartels 2017, 1–2). The problem however, is that these studies do not disaggregate public opinion by economic groups to try to compare the opinion-policy relationship for well-off and less well-off citizens. Therefore, while such studies do support the somewhat unsurprising conclusion that public policies tend to reflect citizens' preferences, they do not say *whos* preferences it is that government mainly follows.

It was not until the 2000s that political scientists started to examine the *who*-question (for reviews of the literature since then see Robert S. Erikson 2015; and Elkjær and Klitgaard 2021). The question of who has influence on policy (i.e. political inequality) reemerged in mainstream political science around the time of the 2003 American Political Science Association (APSA) Task Force on inequality and American democracy. With a mandate to evaluate "the health and functioning of U.S. democracy in a time of rising inequality", the Task Force concluded in its final report that despite great achievements in equalizing legal rights, "the

voices of American citizens are raised and heard unequally" (American Political Science Association Task Force 2004, 651). While the report, understandably, focused on the US and its rapidly increasing economic inequality (Piketty and Saez 2003), in hindsight, the same worry would have been justified in a number of other established democracies (Piketty 2020; Chancel et al. 2021).

2.1.3.1 Studies of the United States

One of the early studies of political inequality in the US, Martin Gilens' *Affluence and influence* (Gilens 2012, see 2005), arguably remains the most extensive and ambitious to date. Gilens collected over 2,000 survey items from pre-existing surveys where Americans had been asked whether they support or oppose some proposed change in national government policy. Most of the questions where asked between 1981 and 2002, while the remaining where asked in 1964-69 and 2005-06. For each policy proposal, Gilens and a "virtual army of research assistants" coded whether or not the proposal was adopted by government in the subsequent 4 years after the question was put to the public. For his analyses, Gilens estimated the support each policy proposal enjoyed among citizens at the 10th, 50th, and 90th income percentiles. He could then examine the impact that the support of these three groups had on the probability that a policy would be adopted. Gilens' conclusions were damning. He found that "when preferences across income groups diverged, only the most affluent appeared to influence policy outcomes"; "policy responsiveness for the 10th and 50th income percentiles is essentially zero" (Gilens 2012, 234, 257). Gilens and Page (2014) used different statistical methods on the same data, and found very similar results: Ordinary citizens, they argued, "often get the policies they favor", but only when they happen to agree with economic elites, "who wield the actual influence" (576). The conclusions of Gilens and Page (2014) had an unusual popular outreach, igniting debate about money and politics in the US.[7]

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[7]See for example "Rich people rule!", The Washington Post, 4 April 2014; "Study: US is an oligarchy, not a democracy", BBC, 17 April 2014; and "Is America an Oligarchy?", The New Yorker, 18 April 2014.

Criticism of Gilens (2012) and Gilens and Page (2014) has mainly revolved around the relative similarity between the policy preferences of the different income groups used in their studies.[8] Bashir (2015) focus on the alleged methodological complications this creates. He argues, based on data simulations, that the main result reported by Gilens and Page (2014) is "likely to have been produced by chance because the income-based independent variables are highly correlated" (Bashir 2015, 2). Gilens (2016) responded to this critique arguing that Bashir's simulation "is flawed in ways that undermine the conclusions that Bashir draws", and that highly correlated independent variables only "increases the uncertainty around the coefficient estimates"; it does not "bias the coefficients or the standard errors" (Gilens 2016).

Other critics focused more substantively on the preference similarity across income groups (Soroka and Wlezien 2008; Ura and Ellis 2008; Alexander Branham, Soroka, and Wlezien 2017; Enns 2015). Soroka and Wlezien (2008) analysed opinion differences across income groups on eight survey questions about government spending, finding that "income really only matters in isolated cases, specifically, welfare spending preferences". From this, they concluded that "the scope for inequality in policy representation ... is rather limited", and that "regardless of whose preferences policymakers follow ... policy will end up in essentially the same place" (Soroka and Wlezien 2008, 319, 325). Gilens (2009) responded by analyzing opinion differences in his large dataset of policy proposals, showing that "income-based preference gaps are much larger and more widespread than their [Soroka and Wlezien's] data suggest". Alexander Branham, Soroka, and Wlezien (2017) made a similar point, this time re-analyzing Gilens' own data, with a focus on the "win rate" of the different income groups. The win rate is defined as the share of issues on which policy went in the direction favored by the majority of a group. The authors find that even "when the middle and rich disagree, it is nearly a coin flip as to which group wins" (Alexander Branham, Soroka, and Wlezien 2017,

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[8]The Pearson correlation between the preferences of the 90th percentile and the 50th percentile in Gilen's data is 0.94. This is reduced to 0.78 after taking correlated measurement error into account (Enns 2015, 1062; Gilens and Page 2014, 571).

56).[9] Gilens and Page (2016) responded to this critique arguing that "[m]ajority "win rates" don't really measure policy influence" because "[p]olicymakers have little incentive to lean one way" if the public or a sub-group thereof "is closely divided". Gilens (2015) shows that if one uses the more meaningful benchmarks of strong and weak support (over 75% or under 25% support) among income groups, the "congruence rate" for the affluent is much higher than for the middle class.[10]

Also re-analyzing Gilens' data, Enns (2015) reiterates the point that due to preference similarity, policy outcomes would be similar regardless of whether government responds to the affluent or the middle-class. However he also touches on the normative implications of this, arguing that "[i]f 'rich people rule,' it rarely appears to be at the expense of those in the middle. Coincidental representation appears to be the norm". Gilens (2015) disagrees with the extent of preferences similarity (see previous paragraph). He also argues that even though "'democracy by coincidence' is an important feature of contemporary American politics", it is "a debased and conditional form of democracy (if it is a form of democracy at all)", leaving the majority in a "politically tentative and precarious position" (Gilens 2015, 1070).

An important take-away from this debate is that we need to be careful when discussing political inequality to distinguish between *congruence* and *influence*. Larry Bartels (2017) notes: "Studies purporting to cast doubt on the reality of biased responsiveness" have been "motivated by a quite different question—*who gets their way* [congruence] rather than *whose preferences matter* [influence]" (6; emphasis in original), referring specifically to Soroka and Wlezien (2008) and Enns (2015). The point is that there might be substantial congruence between public policy and the opinions of ordinary citizens (in fact, such a pattern might even arise in non-democratic countries, see e.g. Horne (2012); Malesky and Schuler (2010)). Alas, this

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[9]The authors report that on the issues where majorities in the 90th and 50th income percentile were on different sides, the win rate for the former was 53% and for the latter 47% (Alexander Branham, Soroka, and Wlezien 2017, 51).

[10]The reported figures are 66% for the 90th income percentile and 34% for the 50th percentile (Gilens 2015, 1066).

does not necessarily mean that ordinary citizens have any real influence on policy—which is presumably what we mean when we talked about political equality.

A number of additional studies on political inequality in the US have found similar conclusions to those of Gilens (2012) and Gilens and Page (2014). Perhaps the most famous, Larry Bartels showed that roll-call voting in the US Senate responded to high-income preferences, but little to middle- or low-income preferences (Bartels 2016 [2008], Chapter 8). Jacobs and Page (2005) studied influence on US foreign policy. Combining surveys of ordinary citizens, policy-makers, and various elites, they found that US foreign policy "is most heavily and consistently influenced" by business leaders, while the general public "seems to have considerably less effect" (Jacobs and Page 2005, 107). At the state level, Flavin (2012) found that "citizens with low incomes receive little or no substantive political representation", while Rigby and Wright (2013) found "differential responsiveness" to rich and poor for the ideological positions of parties.

2.1.3.2   Studies of other countries

While most studies to date have focused on the US case, there is a growing literature documenting political inequality in European countries, using the methods developed by Gilens (2012). Part of this thesis—Article 1—constitutes an attempt at expanding this literature to the case of Norway. Elsässer, Hense, and Schäfer (2020, see 2017) use data on public opinion and policy outcomes for 746 proposal (222 of which had information on income) in Germany (1980-2013). They found that "political decisions are systematically skewed in favor of citizens that have achieved higher ... incomes" (1891). Similarly, Schakel (2021) analyzes data for the Netherlands (291 proposal, 1979-2012), finding that "policy responsiveness is much stronger for high incomes than for low or median incomes". While it is difficult to compare coefficients across different studies directly, both of these studies find unequal responsiveness by income

similar in magnitude to what Gilens (2012) found in the US.[11]

Looking at Sweden (960 proposals, 1956-2014), Persson and Gilljam (2018) also found clear income-based inequalities in responsiveness. Perhaps even more surprisingly, however: in contrast with Gilens (2012) and the other two studies, this study (which was comparatively well powered) found no statistically significant relationship at all "between general public support and policy change" for the full dataset. A direct comparison to US, German, and Dutch results would lead us to the rather shocking conclusion that while there is at least a moderate relationship between what the public wants and what it gets in these countries (i.e. the public see some level of *congruence*, not necessarily *influence*), there is no such relationship at all in Sweden. A more likely explanation however, is that differential data sources across these four studies means that they are capturing responsiveness on different kinds of issues.[12] This presents challenges for comparing results across countries. These challenges are noted in a recent paper pooling together the data from the studies mentioned above, and also the data for Norway that are part of this thesis (Mathisen et al. 2021).

Two additional country case studies using the methods of Gilens (2012) have recently emerged. Lupu and Castro (2022) use data on public opinion and policy outcomes for 214 proposal (58 of which had information on income) in Spain (1976-2016), concluding that "the preferences of the most affluent have more influence over policy-making than do the preference of the least affluent". However, due to the scarcity of survey data containing info on respondent income, the authors mostly report results of unequal responsiveness by education and occupation to back up their conclusion. While such inequalities certainly are interesting in their own rights, they arguably do not tell us much of whether the "affluent" are more influential than the less affluent.[13] Still, the authors do find income-based inequalities in responsiveness

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[11]The difficulty has to do with the fact that the datasets across these three cases are constructed somewhat differently, and also the authors run slightly different statistical models than Gilens (2012) did.

[12]See the Appendix D for Article 1 in the thesis for a more elaborate discussion on this.

[13]That is, assuming affluence means money, either in the form of income or wealth. While money, education, and occupation surely will be correlated in most cases, we should be careful in conflating the three. Clearly, it is

in the 58 proposals where they do have such data, providing at least some evidence that influence depends on affluence also in the Spanish case. Finally, the most recent "Gilens-type" study is Manuel Wagner (2021)'s analysis of 399 proposals (277 of which had information on respondent income) in Switzerland (1987-2017), with the important contribution of testing the consequences of direct democracy on responsiveness. He finds that policy outcomes is "strongly skewed towards rich" and that "the Swiss political system as a whole does not produce more equal political outcomes than other democratic countries, despite its outstanding direct democratic institutions." (2-3).

In a first effort to combine data for multiple country case studies of unequal responsiveness, Mathisen et al. (2021) pools together data from the above-mentioned studies of Germany (Elsässer, Hense, and Schäfer 2020), Netherlands (Schakel 2021), Sweden (Persson and Gilljam 2018), and Norway (Article 1 in this thesis). Focusing on differences in responsiveness across Left- and Right-wing governments, they find that "unequal responsiveness is less pronounced under Left-leaning governments in Germany, the Netherlands, and Sweden", while in Norway "Left-leaning governments seem to favor the affluent more than Right-leaning governments". The Norwegian exception is only present on cultural issues, though—where the preferences of the affluent tend to be more progressive than the middle-class and poor.

In addition to a growing number of country case studies, several studies have taken a cross-national approach to unequal responsiveness. The advantage of such an approach is obvious, as more countries means that one can start testing country-level explanations for differences in unequal responsiveness. The disadvantage however, is that the broad coverage in these studies is usually at the expense of having to use more aggregate measures of policy outcomes—such as government spending across broad categories, or the ideological orientation of governments and parties. Peters and Ensink (2015) match income-disaggregated sup-

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of relevance—e.g. in terms of implications and possible remedies—whether it is the affluent, the highly educated, a specific occupational group, or a combination of the three, that dominate policy making.

port for redistribution with subsequent changes in government social spending for 25 European countries. They find that "[l]ower-income groups tend to be under-represented while higher-income groups appear over-represented" and that "low levels of turnout seem to emphasise" this pattern (596). Bartels (2017) similarly finds what he calls a "social welfare deficit" of 10-15% in affluent democracies due government spending being biased in favor of the preferences of the affluent. Moreover, Giger, Rosset, and Bernauer (2012) find that "generally, the poor are represented worse than the rich" in terms of their distance to the nearest party and the government on a left-right scale. However, they observe "considerable variation in the effect" across 21 Western democracies (57). In subsequent work, the authors find that the unequal ideological proximity is smaller in PR systems (Bernauer, Giger, and Rosset 2015), and in countries with lower levels of economic inequality (Rosset, Giger, and Bernauer 2013).

As the literature on unequal responsiveness has grown, new critiques have emerged. Elkjær and Iversen (2020) analyse the relationship between support for redistribution and government social spending in 21 European countries. Like Peters and Ensink (2015), who performs a very similar analysis,[14] Elkjær and Iversen (2020) find that changes in social spending respond much more strongly to the preference of high income citizens than middle or low income citizens. Nevertheless, they find that the *level* of social spending only correlates with the preferences of the middle. They believe that these results are "suggesting that the middle class is instrumental in setting the level of redistribution". However, as Bartels (2021) notes, that interpretation "sounds like a simple conflation of "alignment" [congruence] with influence" (37; recall the discussion above about the distinction between congruence and influence). If we accept that change data are better suited to tell us who has *influence* on policy, then it seems that Elkjær and Iversen (2020)'s analyses largely corroborate previous findings of unequal responsiveness.

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[14]The main difference between Elkjær and Iversen (2020) and Peters and Ensink (2015) appears to be that the former used public opinion data from the International Social Survey Programme, while the latter used public opinion data from the European Social Survey.

Elkjær (2020) pursues a different line of critique. Matching public opinion on spending with actual government spending in Denmark, he finds, just like previous studies that "policy responsiveness increases monotonically with income" (2215). However, breaking with most other studies, his proposed explanation for this finding is not that influence increases with income; rather, it is that the affluent are "more involved in political discussions; they are better informed about political and economic issues; and they express more balanced, thermostatic, and counter-cyclical preferences compared with lower income classes" (2215). Therefore, he argues, they have preferences that "coincidentally" will correpond with the decisions of any governments that "pursue standard macroeconomic policies" (2238). While Elkjær (2020) demonstrate all of these points with survey data, Bartels (2021) notes that this only constitutes "circumstantial evidence" as Elkjær (2020) does not test empirically whether these patterns in fact account for the observed differences in policy responsiveness (26). Furthermore, even if such a test were to support the explanation, it would still only apply to "macroeconomic policies", leaving observed inequalities in all other policy domains (e.g other economic issues, morality policy, foreign policy, etc.) unexplained.

2.1.4   Summary

Scholars ranging from Artistotle, Adam Smith, and Karl Marx, to Thomas Ferguson and Jeffrey Winters, have all argued in some form or another that the rich in economically unequal societies exert disproportionate influence on government. This goes against the conventional wisdom in political science, which holds that ordinary citizens ultimately control government through elections. It is only in the past 20 years, however, that political scientists have taken it upon themselves to systematically investigate the degree to which well-off citizens indeed have more policy influence than the rest. Thus far, empirical studies have shown that public policy responds much more strongly to the policy preferences of citizens with high income than citizens with average or low income. This appears to be true both in the United States (the

most studied case to date) and in Europe. Although the literature has not produced much in terms of causal evidence of *influence*, the fact that we see robust relationships between public policy changes and the preferences of the affluent, and little or no such relationships for other citizens when their preferences diverge from those of the affluent, is at least an indication that money matters.

2.2 How does money buy political influence?

In a country that has universal suffrage, free and fair election, freedom of speech, and freedom of assembly (what I call a *formal democracy*), it is not immediately obvious how the rich would exert disproportional political influence. I will now go through some possible ways that this can occur. The following should not be read as an attempt to produce an exhuastive list of all mechanisms, but rather as an overview of some of the most important ones.

2.2.1 Descriptive representation

Much of the work arguing that economic elites dominate policy making contend that they do so by having members of their own group be personally involved in the policy making process. That is, the rich achieve disproportionate influence by being numerically over-represented in important positions within the different branches of government, such as parliament. This was the focus of some Marxist scholars such as Ralhp Miliband (1969), but also elite theorists like C. Wright Mills (1959, 1956).

     Political elites are usually high up in the economic hierachy. Across the EU countries for example, the average salary for a member of parliement (MP) is 2.4 times higher than average earnings in the country.[15] And that is just counting official MP salaries, excluding additional incomes (e.g. from investments). Meanwhile in the US, a majority of Congress members are

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[15]Granted there is substantial variation, all the way from a ratio of 1.1 in Malta to 5.3 in Italy. See https://www.euronews.com/2016/04/12/who-are-the-best-paid-mps-in-the-eu (accessed 8 July 2022).

millionaries.[16] To the degree to which personal characteristics of elected representatives affect their behavior, it is possible that their affluence make them more attentive to affluent interests. This is difficult to test empirically however, since—in cotrast with other traits—*all* representatives are usually in the top tiers of the income distribution (Gilens 2012, 236).

A more feasible way to get at the meaning of descriptive representation in producing unequal responsiveness to economic groups, is to look at representatives' class backgrounds (commonly measured by occupation). Carnes (2012) looked at how the class background of members of the US House of Representatives affected their roll-call voting in the 20th century. He concludes that "The underrepresentation of the working class in Congress skews roll-call voting in favor of conservative economic policies" (22). Moreover, Carnes and Lupu (2015) looked at opinion surveys of legislators in 18 Latin American countries. They found that "[w]hen external actors like political parties force their hands—as they often do when bills are put to a vote— legislators from different classes behave about the same". However, "when they have discretion—as they often do during the agenda-setting stages of the legislative process—their choices on economic issues differ by class" (14). This suggests that unequal despcriptive representation might be more important for the question of which bills are voted over, rather than the outcome of the votes.

2.2.2 Political participation

Second to actually running for office one self, the most obvious way to influence politics is voting in elections. Furthermore, given two equally sized groups, if members of the first group turn out to vote at a higher rate than the second group, then—all else equal—the first group will have more influence on the election outcome than the second. Voting entails individual costs, such as time, transport, and—depending on the country—registration, and getting time

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[16]See https://www.opensecrets.org/news/2020/04/majority-of-lawmakers-millionaires/ (accessed 8 July 2022).

off from work. More resourceful citizens will likely be less discouraged by these obstacles than less resourceful citizens. Therefore, turnout inequality consitutes a potential source of political inequality.

It is a well-established fact that in most Western formal democracies, income is positively correlated with the probability of turning out to vote. A long line of empirical work within political science deals with this topic (e.g. Verba and Nie 1987 [1972]; Verba, Nie, and Kim 1978; Brady, Verba, and Schlozman 1995), usually motviated specifically by the belief that unequal participation will lead to political inequality.

While the logic of turnout inequality accounting for political inequality might be reasonable, this explaination does have some problems with it. Consider one of the latest additions to the turnout inequality literature. Polacko (2021) looks at survey data for "102 elections, across 30 advanced democracies from 1996 to 2016" (742). For this full dataset, Polacko (2021) reports a turnout of 78.6% for the lowest income quintile and 89.6% for the highest quintile (i.e. a difference of 11 percentage points). Regardless of whether this constitutes a "substantial income gap in turnout" as the author claims (744), there is a more subtle point to be recognized here. In practical terms, the only implication of unequal turnout by income is that it would take a larger group of low-income citizens (voting at a lower rate) to acheive the same electoral influence as the high-income citizens (voting at a higher rate). *How much larger?* is the relevant question. Based on the 11 point voting gap reported by Polacko (2021) we can easily calculate how large the low-income group would have to be in order to wield the same electoral influence as the highest income quintile (assuming conservatively that the second lowest quintile votes at the same rate as the lowest quintile). It turns out that that number is 22.8 percent.[17] In other words, the implication of this 11-point turnout gap is that instead of

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[17]The percentage who votes in the highest quintile is 0.2*0.896 = 0.1792. The percentage who votes in the lowest quintile is 0.2*0.786 = 0.1572. The differences is 0.1792-0.1572 = 0.022. Assuming conservatively that the second lowest quintile, like the lowest quitile, has a turnout of 0.786, it would take 0.022/0.786 = 0.02799 of this group, in addition to the bottom quintile (combined 0.22799) to have the same number of people turning out to vote as the top quintile.

the bottom 20% and top 20% on the income scale having the same electoral influence, the top 20% has about as much influence as the bottom 22.8%. Even if we look at the country with the highest turnout inequality in Polackos's data, the United States (with a gap of 26 point between the lowest and highest income quintile), the top 20% has about as much electoral influence as the bottom 30%.[18] Presented this way, it hardly makes sense that turnout-inequality could account for findings in the literature on unequal responsiveness suggesting that high-income citizens have strong policy influence while *both* middle- and low income citizens have little or no independnent influence.[19] The argument becomes even more implausible if the reality is that responsiveness is mostly consentrated not in the top quintile but in the top 1% (e.g. Hacker and Pierson (2010)). Even if a group that small were to vote at 100% (which might not be far from the truth actually, Page, Bartels, and Seawright (2013)), their turnout could not possibly account for their influence. In that case the poorest 5% would then surpass the top 1% in influence as long as they had a turnout of more than 20%.

Studies attempting to empirically test the link between turnout inequality and unequal responsiveness have provided mixed results. Schakel (2021) estimates income-based unequal responsiveness for both voters and non-voters in the Netherlands, finding that unequal voting "does seem to matter, but it cannot fully account for the gap in responsiveness" (53). Bartels (2016, 2008) found that election turnout was unrelated to responsiveness, while Gilens (2012) found that the relationship between income and voting did not "resemble[] the pattern of representational inequality" that he documents (239-241).[20] Also telling is the fact Lupu and

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[18]Polackos does not report turnout by quintile for specific countries. However if we assume, based on the 26 point gap he reports for the US, that turnout is 86% for the highest quintile and 60% for the lowest, we get the following calculation: The percentage voting in the top quintile: 0.2*0.86 = 0.172. The percentage voting in the bottom quintile: 0.2*0.60 = 0.12. The differences: 0.172-0.12 = 0.052. Assuming the same turnout for lowest and second lowest quintile, it would take 0.052/0.60 = 0.0867 of this group, in addition to the bottom quintile (combined 0.2867) to have the same number of people turning out to vote as the top quintile.

[19]The literature suggest that this is even the case when the preferences of the middle and poor align against the affluent (Gilens 2012, 84; Mathisen 2021)

[20]Specifically, he shows that income vs. voting has a functional relationship that looks logarithmic (the poor is markedly lower than both the middle and affluent), while income vs. responsivenesss has a functional relationship that looks exponential (both the poor and the middle are markedly lower than the affluent).

Castro (2022) finds evidence of uneuqal responsiveness in Spain, a country where the poor tend to vote at the same rate as the affluent (Lupu and Castro 2022, Table 1; also Kasara and Suryanarayan 2015).

In sum, turnout inequality might explain some of the observed patterns of unequal responsivness. However, given the availble evidence, it seems that other explanations are needed to account for the dramatic differences in responisvenss that the literature has uncovered.

2.2.3 Campaign contributions

Unlike voting or running for office, which are in principle open to everyone, campaign contributions as a source of influence are limited by the size of one's wallet. Giving a $100,000 donation to a political candidate is inconceivable for most people. For a billionaire its a small matter. Absent effective regulation of political money, the potential to make use of political donatations is simply a function of how much money a person has available to spend.

There are two ways to think about how donations can influence policy. First, a donor might make an arrangement with an electoral candidate promising her a donation in return for a certain policy outcome if she wins office. (Morton and Cameron 1992, 88) describes this as "a straightforward quid pro quo of money for services: campaign contributions resemble bribes, although provision of services may be perfectly legal". While this certainly happens, the limitations of such an approach are obvious, as arrangements of these sort soon become at odds with the law.

The second way to think about donations involves no quid pro quo. Candidates and parties do not—because of donations—change their behaviour to reflect the interests of the donor; rather, in order the recieve the donation in the first place, the they would have to have policy programs that already reflects the interests of the donor. The most elaborate version of this argument is Thomas Ferguson's "Investment Theory of party competition" (Ferguson 1995). The Investment Theory is based on the assumption that parties need money for cam-

paigning in order to get votes. Furthermore since "ordinary voters can't afford to invest much", parties are instead financed by "blocs of major investors who coalesce to advance candidates representing their interests" (27). Different blocs of investors might have somewhat different preferences—which means that different parties will cater to different blocks of investors—however, "on all issues affecting the vital interests that major investors have in common, no party competition will take place" (27).

But do parties really need money to get votes? In the US, research by Ferguson and his colleagues suggest that the link between campaign spending and votes is very strong. For the 2012 US Presidential Election, they find an almost linear relationship—with an R-squared statistic of 0.80—between a candidate's share of total spending and their vote share at the disctrict level (Ferguson, Jorgensen, and Chen 2013). The relationship was similar in magnitude for other elections going back to the 1980's (Ferguson, Jorgensen, and Chen 2019). Bekkouche and Cagé (2018) also showed that campaign spending was important for votes in French elections.

Knowing just how expensive US election campaigns have become over the years—the 2020 election coming in at a dizzying \$14 billion total—campaign contributions appear to provide a convincing explanation of political inequality in the US. The problem however, is that the US patterns of unequal responsivness (e.g. Gilens 2012) look very similar to those found in European countries where private money does not play as big a role in elections, and parties largely rely on state subsidies (e.g. Germany (Elsässer, Hense, and Schäfer 2020) and the Netherlands (Schakel 2021)). This does not mean that private campaign contributions do not play a role in these coutnries, only that additional explanations are probably needed to give a full account of political inequality.

2.2.4 Lobbying

While campaign contributions seem less relevant in Europe than it does in the US, that is not the case with lobbying. Lobbying refers to the act of "influencing the formation of public policy, its passage through the legislature and its implementation, by means of contacting and pressurizing policymakers such as individual legislators, ministers and civil servants" (Bernhagen and Bräuninger 2005, 58–59; Richardson 2000). This is commonly done by individuals, interest groups, or private companies in order to promote their own policy preferneces. Doing this obviosuly takes economic resources. Indeed, many studies in the literature has focused on the importance of resources as a determinant of successfull lobbying (Baumgartner et al. 2009; Binderkrantz, Christiansen, and Pedersen 2015; Stevens and De Bruycker 2020).

Yet there are few studies that have estimated the independent impact that interest groups have on changes in public policy. One of the major attempts to do so is actually that of Gilens (2012 Chapter 5) and Gilens and Page (2014). Gilens matched the policy positions of the 25 most powerful interest groups in the US with policy outcomes on nearly 2,000 policy proposals. In their multivarite analyses, incorporating different types of interest groups (as well as public opinion for average and affluent citizens), Gilens and Page (2014) conlude that "organized groups representing business interests have substantial independent impacts on U.S. government policy", while "mass-based interest groups have little or no independent influence".

2.2.5 Structural power of capital

Arguably the most profound way that economic inequality can lead to unequal influence is through the structural power of capital (Przeworski and Wallerstein 1988). Like any other actor, business will often lobby government to protect their interests. However, the "structural power" argument holds that capital owners can influence government without any active effort

to do so. Because capital owners take decisions on a regular basis that can make or break the economy, politicians are strongly incentivized to pay attention to their interests. Failing to do so can lead to low levels of investment, stagnation, unemployment, and crisis. Vote-seeking politicians are doubly incentiviced since a bad economy will also hamper their chances of re-election. This argument is eloquently elobaroted by Fred Block (2021), who argues that state managers are constrained in their decision making by the need to maintain "business confidence". Block writes:

> In a capitalist economy, the level of economic activity is largely determined by the private investment decisions of capitalists. This means that capitalists, in their collective role as investors, have a veto over state policies in that their failure to invest at adequate levels can create major political problems for the state managers.

Not only can capital owners reduce or pause domestic investment if public policy is not to their liking, they might also move production abroad. Numerous scholars have argued that a globalized economy with limited capital controls puts additional constraints on goverment's ability to implement policies that go against the interests of capital (Rodrik 2011; Streeck 2016; Piketty 2014).

While there has been much theorizing about the structural power of capital, strong empirical evidence has been difficult to obtain (see Culpepper (2015)). Some take the paradox of redistribution—that large economic inequalities persist over time in formally democratic countries—as suggestive evidence of capital interests undermining government's ability to redistribute (Bernhagen and Bräuninger 2005). More direct evidence is provided by Sattler (2013) who shows that stock markets "drop considerably after the election of a left government and increase after the election of a right government" in cases where there are few political contraints on the executive (i.e. checks and balances). There are also some interesting qualita-

tive case studies about the 2008 Global Financial Crisis. Culpepper and Reinke (2014) argue that the UK and France failed to implement their preferred banking regulation because of the "strategic exercise of structural power" by domestic banks. Young, Banerjee, and Schwartz (2018) argue that US investors went on a "capital strike" in the aftermath of the financial crisis in an effort to kill any major attempt at tightening financial regulation.

What is special about the structal power of capital as a mechanism for political inequality is its general applicability to most (if not all) Western countries. The fact that wealthy investors make economic decisions that have far reaching consequences is not an American phenonomon. It is an integral part of all capitalist economies. Nevertheless, we should be careful in thinking deterministically about this mechanism. As highlighted by Hacker and Pierson (2002), capital faces varying constraints across different contexts, meaning that the importance of structural power in determining the distribution of influence will likely vary as well. Indeed, the sheer variation in welfare state regimes and tax policies across Europe and North America would suggest that there are other factors at play besides the structural power of capital.

2.2.6 Control over media

The previous five mechanisms all describe ways in which people with money might increase the chance that policy will follow their preference, as opposed to other peoples' preferences. The last mechanism, control over media, differs from the others in that the main goal here is to influence policy indirectly, by bringing other peoples' preferences closer to one's own preference. The underlying expectation is that if more people share one's policy stance, this will increase the chance of it having an effect on policy.

Control over media can be a source of political inequality between economic groups to the degree to which media ownership is for sale. In most countries privately owned media constitute a large share of the total media landscape (Djankov et al. 2003). In their "propa-

ganda model" of media ownership, Herman and Chomsky (2010) argue that private media essentially serve the interests of the owners and the advertisers who finance them. They analyze multiple case studies of US media to substantiate this claim. Gilens and Hertzman (2000) provide further evidence. They looked at the effects of media ownership on reporting of the 1996 Telecommunications Act in the US and found "substantial differences in how newspapers reported ... depending on the financial interests of their corporate owners". More recently, Grossman, Margalit, and Mitts (2022) showed that billionaire Sheldon Adelson's strategy of launching a free nationwide newspaper in Israel "exerted significant electoral influence, primarly benefitting Netanyahu and his Likud party". Thus, there is some evidence to support Herman and Chomsky (2010)'s notion that private media can proliferate the policy preferences of their owners, and potentially "manufacture consent" for the policies that they favor.

2.3 The gender dimension

A possible side-effect of the unequal representation of economic groups is the unequal representation of men and women. Some studies have found that women's political preferences tend to be worse represented than those of men (e.g. Homola 2019; Reher 2018). To be sure, there might be many reasons for this that have little to with economic inequality—such as a patriarchical culture (Gilligan and Snider 2018). Yet studies of intersectionality have found that one type of inequality can exacerbate another type of inequality when the two overlap (Severs, Celis, and Erzeel 2016; Strolovitch 2008). There seems to be ample opportunity for inequality in influence along the economic dimension to exacerbate inequality in influence along the gender dimension, since we know that economic elites predominantly consist of men (Atkinson, Casarico, and Voitchovsky 2018).

Overrepresentation of men among economic elites would imply that—all else being equal—more power to the rich means more power to men. This point is illustrated in Figure 2. Figure 2 presents the the influence of men as a function of (1) men's presence among the
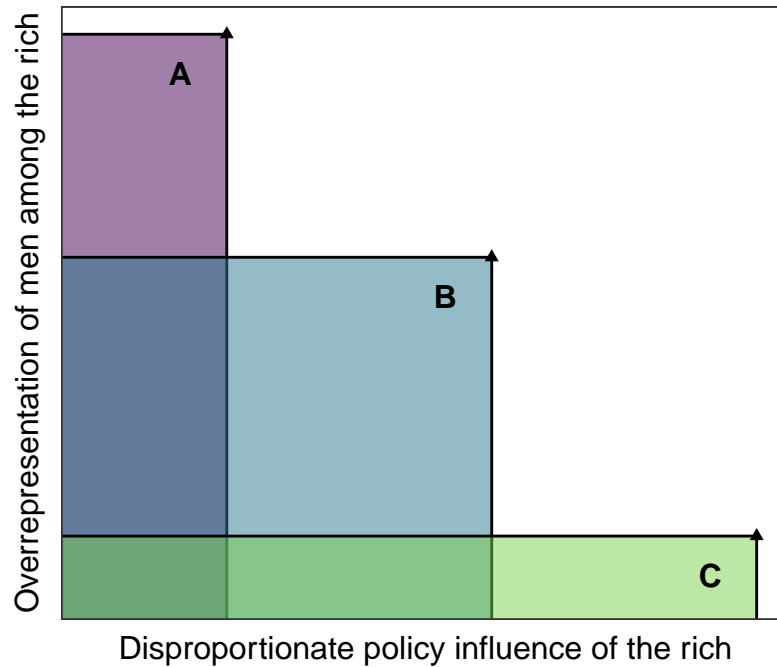
Figure 2: How disproportionate influence of the rich implies disproportionate influence of men. *Note:* The graph is a theoretical model where the disproportionate influence of men is calculated as (disporportionate influence of the rich) x (overrepresentation of men among the rich). This has the geometric property as the area of a rectangle. Out of the three scenarios (A, B, C), men have most influence in scenario B, where the rich have strong influence and there is substantial overrepresentation of men among the rich.

rich, and (2) the influence of the rich. Both terms increase the disproportionate influence of men. However, men's presence among the rich is useless if the rich have no disproportionate influence. Likewise, the disproportionate influence of the rich is useless has no bearing on gender inequality if there is gender parity among the rich. It is the combination of the two factor that exacerbates political inequality between the genders.

2.4   Clarifaction of concepts

As we have seen in the literature review, scholars use a number of different words—such as "representation", "responsiveness", "congruence", "influence", "power", etc.—to describer a set of distinct but related concepts. There is no definitive answer in the literature as to what these different words should mean, and authors often adopt their personal set of definitions. While this is of course sub-optimal—and as we have seen, differing usage of words can probably explain some of the apparent scholarly disagreements—it nonetheless is manageable as long as scholars are clear about how *they* use specific terms.

For this thesis, I try as best as possible to use the central concepts in the following ways. *Political inequality* refers to the unequal representation of popular policy preferences. Political inequality has two faces: unequal congruence and unequal influence. *Congruence* and *influence* are theoretical concepts, and I use them precisely like Bartels (2021) does. That is, congruence refers to the extent to which policy satisfies some preferences. This is a descriptive concept, containing no causal claims. A high level of congruence simply means that the status of a policy, or a policy change, aligns with public opinion.[21] Influence (or *power*, which I use synonymously) on the other hand, refers to the extent to which public opinion actually shapes policy. This is a causal concept—that is, public opinion must cause changes in public policy to talk of influence. This is not a requirement for congruence. Its rather important to recognize

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[21]By *public opinion*, I am referring to the expressed preferences of an individual, or the aggregate preference of a group of individuals.

that congruence can arise even if the group whose preferences policy aligns with had no actual influence on policy. Scholars in the literature have referred to this situation as "coincidental representation" (Gilens 2015; Enns 2015). For example in a dictatorship, everyone who shares the preferences of the dictator will see high policy congruence, but little policy influence.

Furthermore, I consider the terms *deviation* and *responsiveness* to be methodological concepts. Deviation refers to the extent to which a specific policy deviates from public opinion at a cross section in time. For example, as I show in Article 2, actual tax rates can deviate from the tax rates preferred by average public opinion. Responsiveness on the other hand, refers to the extent to which policy *changes* follow public opinion (e.g Article 1 and 3). Thus the central distinction between deviation and responsiveness is whether we compare public opinion with policy at a cross section, or with policy changes.

Both deviation and responsiveness can illuminate congruence. In other words we can study whose preferences are satisfied both in terms of policy at a cross section, and policy changes. When it comes to learning about who has *influence* on policy, however, a study of responsiveness will usually be better than a study of deviation. Since responsiveness is about policy changes, this approach comes closer to testing the causal effect of opinions on policy. Yet responsiveness does not automatically say anything about influence. Bivariate estimates of responsiveness, without some approach to disentangle the independent impact of the opinions of different actors, will usually say more about congruence than about influence. I return to the discussion of whether responsiveness can tell us something about influence in section 5.1.

3   The case of Norway

As we have seen in the literature review, political inequality appears to be a highly generalizable pattern across Western societies. Previous studies have with very few exceptions found substantial differences in responsiveness across income groups, with strong bias in favor of

the well-off. Indeed, Bartels (2017) notes that his unpublished manuscript from 2016 on the responsiveness of migration flows to public opinion is "the *only* study", as far as he knows, "providing positive evidence of egalitarian responsiveness to the preferences of affluent and poor people" (10, emphasis in original). Yet, the most promising route to try to learn how political inequality can be tackled, is probably to keep looking for exceptions to the rule. Enter Norway.

Norway provides a least likely case for finding political inequality based on economic differences—perhaps even less likely than the Netherlands and Sweden, which have already been studied. At the same time, Norway is still a capitalist liberal democracy, and thus has the same institutional bedrock as other Western countries. This makes it an interesting case because it might give us an indication as to whether something resembling political equality is possible under these initial conditions. Thus, in this section, I will give an overview of the potential for political inequality based on economic differences in the Norwegian case.

In any country, the potential for political inequality based on economic differences can be thought of as a function of three factors. First, it depends on the level of economic inequality. If there are small differences between rich and poor, then the resource advantage enjoyed by the rich in the political sphere is lower than it would be under large inequality. Second, it depends on the extent to which money can be translated into political influence. Differences in economic resources cannot lead to political inequality unless those resources can somehow be translated into political clout. Third, it depend on the presence of countervailing sources of influence. Even under significant economic inequality and ample possibilities of turning this into influence, other actors (such as unions) might serve as a counterweight that evens out the distribution of power. Thus, in order to illuminate the potential for political inequality based on economic differences in Norway, I will first discuss its level of economic inequality, then I will look at the possibilities for translating money into influence, and the countervailing forces.

3.1 Economic inequality

Compared to most other countries, Norway has low levels of economic inequality, both in terms of income and wealth. Figure 2 shows both income and wealth inequality for 174 countries measured as the share of total income/wealth held by the richest 10 percent. On average across the world, the richest 10 percent get 45% of all income and control 62% of all wealth. Meanwhile in Norway, the richest 10 percent have 30% of all income and 52% of all wealth. The only two countries that have lower inequality than Norway both in terms of income and wealth are the Netherlands and Slovakia.
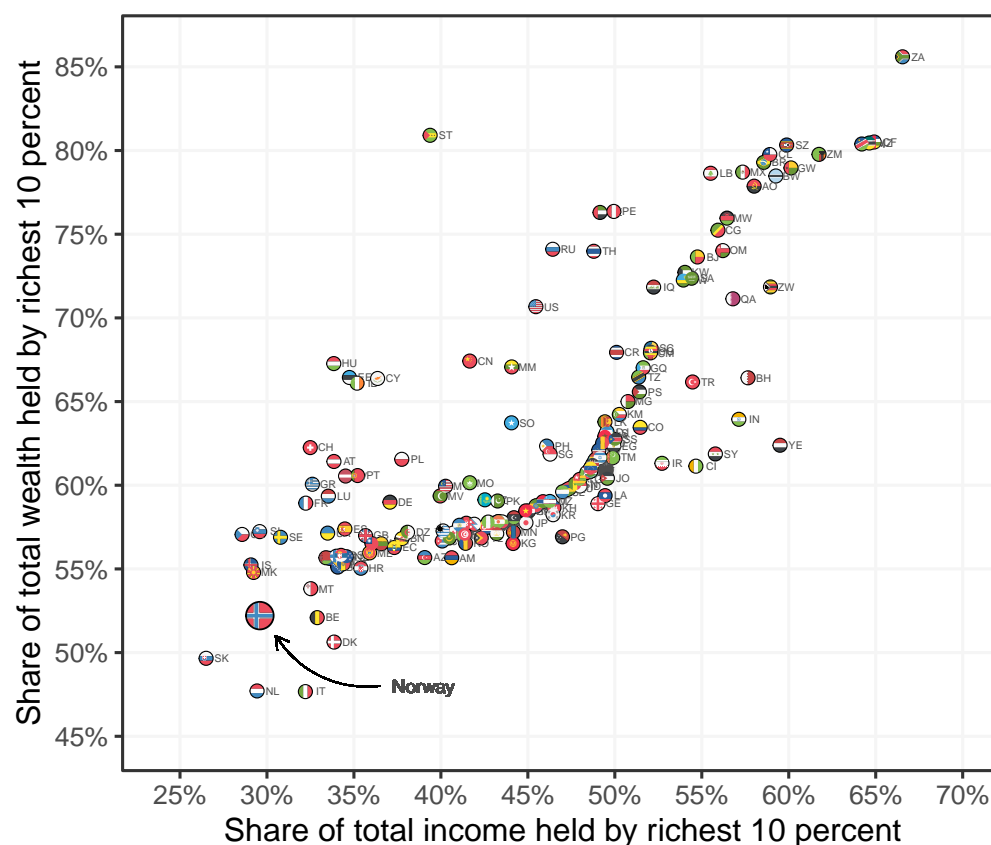

Figure 3: Income and wealth inequality in Norway and 173 other countries in 2020. Data: World Inequality Database.

Figure 2 shows pre-tax income and wealth. If we look at inequality after the operation

of taxes and transfers, inequality in Norway is even lower. If we look at disposable income (which takes into account all taxes and social benefits in cash) he share of the richest 10 percent drops to 24%, and if we also include the value of in-kind benefits (e.g. public health care and education), the share ends up at 22%. For comparison, the bottom 50% on the income scale receive 25% of all pre-tax income, 31% after taxes and cash transfers and accounted for, and 34% after adding in-kind benefits.[22] Unsurprisingly, the tax and transfers system has the effect of reducing the income share of the share of the top 10 percent, and increasing it for the bottom 50 percent.

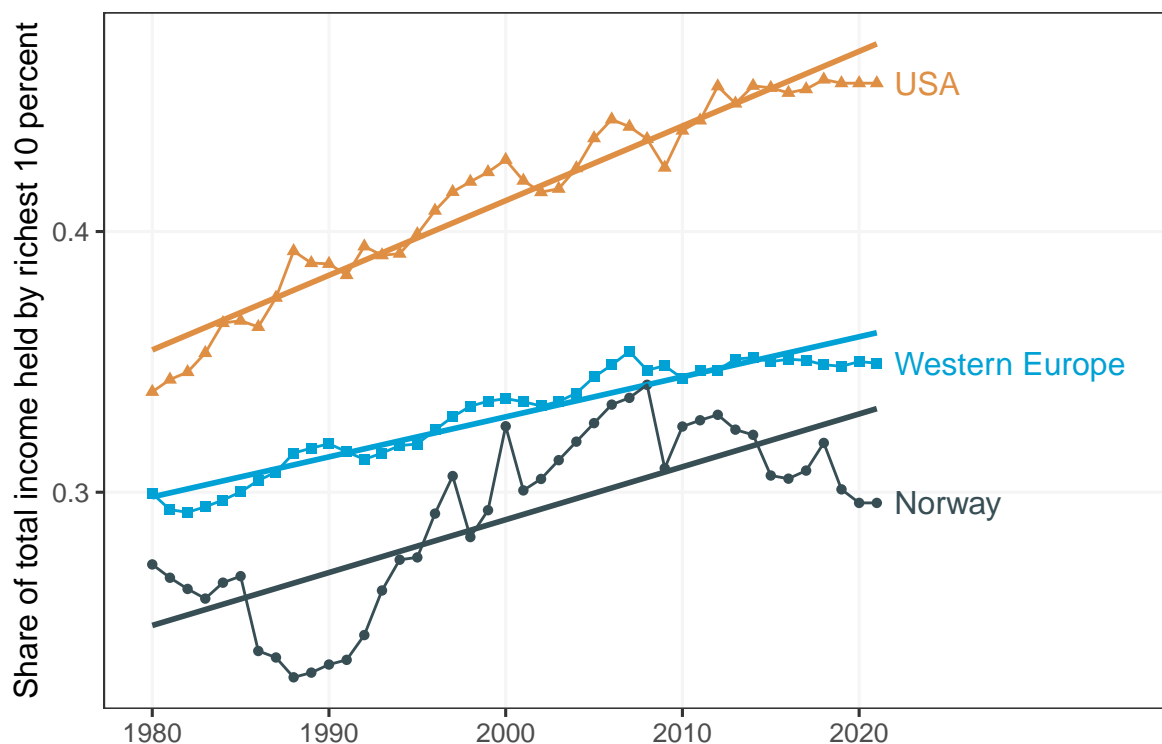Figure 4: Income inequality over time in Norway, the United States, and Western Europe. Fitted lines estimated with OLS. *Data*: World Inequality Database.

Even though Norway has comparatively low inequality, it is still far from equal. This is especially obvious when looking at the distribution of wealth. Consider for example this simple

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[22]Accessed 19 July 2022, https://wid.world/country/norway/

observation in the latest wealth inequality data from the World Inequality Database: In 2021, *in every single country for which there is data (174 countries), the top 5% owns more net wealth than the bottom 80%*. In other words, in every country, an average person in the top 5% owns at least 16 times as much wealth as an average person in the bottom 80%. For Norway the ratio is 20.7.[23]

Moreover, inequality in Norway has been increasing over the past decades (Aaberge et al. 2018). This is apparent from Figure 3. Figure 3 shows that although there is some year-to-year fluctuation in the (pre-tax) income share of the top 10 percent, the general trend since 1980 is rising inequality. The same trend can be seen for Western Europe and—to an even greater extent—for the United States.

3.2   Mechanisms of political inequality

In assessing the possibles for economic inequality to translate to political inequality in Norway, I will go through the same six mechanisms that I discussed in Section 2.2.

With regards to descriptive representation, Norway has sometimes been characterized as having comparatively high shares of MPs with working class background (Hartmann 2010). For example, Gulbrandsen (2018) finds that in 2015 33% of Norwegian MPs had working class background, compared to 39% in 1967 (58, 60). Yet working class "background" refers to upbringing and not the class of the MP herself. If we on the other hand count MPs who previously had a working class occupation, the share is much smaller: Around 5% from the 1960's to the early 2000's (Narud and Valen 2008, Figure 4). So to the degree to which the share of workers in parliament matter (Carnes 2013), the underrepresentation of workers in Norway could serve as a mechanism for political inequality.

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[23] In Norway, the top 5 percent owns 39.7% of total net wealth, while the bottom 80% owns 30.4%. Ratio calculation: $30.4/16 = 1.9$; $39.3/1.9 = 20.864$. Sources: Accessed 19 July 2022, https://wid.world/world/#shweal_p95p100_z/US;FR;DE;CN;ZA;GB;WO/2021/eu/k/p/yearly/s/false/27.2585/125/curve/false/country, and https://wid.world/world/#shweal_p0p80_z/US;FR;DE;CN;ZA;GB;WO/2021/eu/k/p/yearly/s/false/-3.7960000000000003/60/curve/false/country.

Similarly, like in most countries, participation is stratified by income and wealth. Kasara and Suryanarayan (2015, 614) report that turnout inequality in Norway between the top wealth quintile and bottom wealth quintile is actually fairly high in global perspective: The top quintile turns out to vote somewhere between 1.17 and 1.34 times the rate of the bottom quintile. Recall however, the discussion from Section 2.2 highlighting the limitation in turnout inequality as a mechanism for political inequality.

The possibilities for rich citizens to influence politics and policy via campaign contributions in Norway is certainly present, although the option is probably more limited than in most other places in the world. First, while Norway has no limits on the size of contributions to political parties nor limits on how much parties can spend, it maintains a general ban on political advertisement on television.[24] This is likely to be consequential. In the US, where political finance seems to play a major role in elections (Ferguson 1995), television advertisement is the major campaign expenditure for candidates (Ridout et al. 2012). There is also strong evidence suggesting that it is an effective way of persuading voters (Shaw 1999; Huber, Arceneaux, and Huber 2007). Second, the importance of private funding in Norway is limited by the strong public financial support that parties receive—constituting around 70 percent of party revenues. Public funding was introduced in 1970, before which membership fees constituted the main source of revenue for Norwegian parties (Falguera, Jones, and Ohman 2014, 214, 222, 224). Third, the aspect of countervailing forces is quite clear when it comes to campaign contribution. Figure 3 shows that labor organizations (unions) account for roughly half of all campaign contributions to political parties in Norway—more than individuals and corporations combined. Hence, if in the end campaign contributions affect policy outcomes, then policy will not only be shaped by wealthy donors, but to a substantial degree by unions.

Nonetheless, the role of money in Norwegian elections is changing, arguably in ways favorable to anyone seeking to influence politics via donations. As shown in Figure 3, the total

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[24]Accessed 20 July 2022, https://www.idea.int/data-tools/country-view/228/55
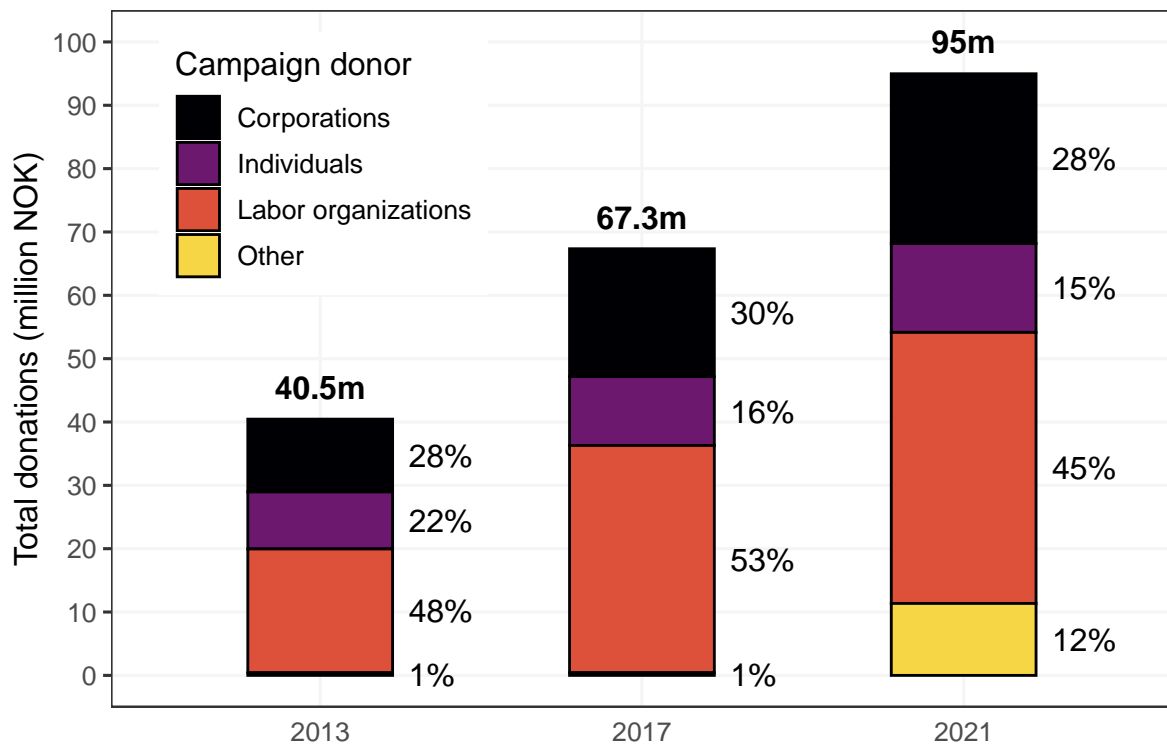
Figure 5: Compaign contributions to Norwegian parties before the last three parliamentary elections. *Data*: Statistics Norway.

amount of donations to political parties in the 2021 parliamentary election was 135% higher than in the 2013 parliamentary election (inflation was only 20% over the same period).[25] Moreover, parties are increasingly using social media (such as Facebook) for advertisement, which is not subject to the same ban as television advertisement.[26] Finally, the last election (2021) saw controversial instances of dark money during the campaign, when an association that did not disclose its donors spent substantial amounts on campaigning, and also donated to several parties.[27]

Little is known about the impact that lobbying has on public policy in Norway. What we do know however is that lobbying in Norway us fairly unregulated. Indeed, Espeli (1999) notes that the Norwegian Storting (the parliament) has "rarely if ever laid any real obstacles in the way of lobbying", and has only regulated the most elementary aspects of it such as "proposal deadlines" (273). Norway also does not have a lobby register (in contrast to the United States and the EU), meaning that there is limited transparency in terms of who lobbies and how much.[28] Furthermore, we know that lobbying has become increasingly professionalized with public relations firms selling advice and services with the aim of helping their clients influence government (Allern 2011). At the same time, lobbying is being used not just by wealthy special interests, but also by unions—partially as a response to the decline of the corporatist channel of decision making (Rommetvedt et al. 2013; Grødem and Hippe 2019). Hence, as with campaign contributions, there might be significant countervailing forces challenging the influence of the rich in the lobbying arena.

When it comes to the structural power of capital, the first thing to note is that Norway

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[25]Accessed 5 July 2022, https://www.norges-bank.no/tema/Statistikk/Priskalkulator/.

[26]Accessed 20 July 2022, https://www.nrk.no/tromsogfinnmark/sa-mye-har-arbeiderpartiet_-senterpartiet_-hoyre-og-de-andre-store-brukt-pa-valgkamp-hos-facebook-1.15638270.

[27]Accessed 20 July 2022, https://www.vg.no/nyheter/innenriks/i/47ElK6/omstridt-forening-har-gitt-11-million-til-de-borgerlige-har-ikke-sjekket-hvor-pengene-kommer-fra.

[28]Proposals to set up a lobby register has been raised several times. The latest one was rejected by the the Presidium of the Storting in May 2022. Accessed 20 July 2022, https://www.nrk.no/nyheter/nei-til-lobbyregister-pa-stortinget-1.15972901

has a capitalist economy just like other Western countries. Hence, the Norwegian economy hinges on private investors having sufficient confidence to invest. There is little reason to doubt that maintaining such confidence features into the evaluations of state managers when deciding what to do and what not to do in terms of policy reform. In the Norwegian public debate, it is often referred to as creating good "framework conditions" and "competitiveness" for the business community. For example, in 2016, the Finance Minister commented on a recent trend of increasing unemployment the following way:

> the prerequisites for [new jobs] must be that someone dares to invest in new jobs. ... That revolves around both a competitive tax system that makes companies invest here, and not in our neighboring countries, and about framework conditions that make it attractive to be in Norway and employ more people. Therefore, the government is using a wide range of instruments to make it happen, and we have no intention of giving up until the [unemployment] trend turns.[29]

Moreover, there has regularly been cases of major investors trying to put pressure on government to either change existing policies, or to abandon plans for future policies.[30]

At the same time, Norway might be less vulnerable to a loss of private investment than other countries due to its substantial public capital stock. For example, the Norwegian government owns about 1/3 of the stocks on the Oslo stock exchange (Folketrygdfondet 2017), and State Owned Enterprises account for almost half the value of the country's top ten companies.

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[29]St Nr 29 Møte 68-70, page 2805 (accessed 21 July 2022, https://www.stortinget.no/no/Saker-og-publikasjoner/Publikasjoner/Referater/Stortinget/2015-2016/160427/?utm_medium=rss&utm_source=www.stortinget.no&utm_campaign=Referater%20fra%20Stortinget).

[30]Norway's richest person, John Fredriksen, declared in 2010 that he would move his shipping business abroad because of "uncertainty" about the "framework conditions" in Norway (accessed 21 July 2022, https://www.nettavisen.no/artikkel/blir-syk-av-norge-flagger-ut/s/12-95-2967968). Also, during the 2021 election campaign, the sixth richest person in Norway, Gustav Witzøe, threatened to move out of the country if a new government where to raise the wealth tax (accessed 21 July 2022, https://e24.no/naeringsliv/i/rW7wOm/laksemilliardaer-gustav-witzoee-knallhardt-ut-mot-formuesskatt).

This is a very large share in comparative perspective: in the US and Germany for instance, the share is zero, while Sweden is at 8 percent (Kowalski et al. 2013, 6, 22). And while the typical Western state barely owns any of its country's wealth (or even has negative net wealth as in the case of the US and the UK), the Norwegian government owns 60 percent of total wealth (Alvaredo et al. 2018). This is partially due to the oil fund, which is the world's largest sovereign wealth fund, valued at over one trillion USD. It came in handy during the financial crisis in 2009. While in the US, government was pleading with investors to increase investment (Young, Banerjee, and Schwartz 2018), the Norwegian government took matters into its own hands as "the fund gave fiscal room to large-scale expansionary policies that mitigated any serious unemployment impact" (Mehlum, Moene, and Torvik 2012, 180).

[Media control to be discussed here]

In sum, Norway has some of the lowest levels of economic inequality in the world. Yet *comparatively low* is not the same as *low*. Like in all countries, there are large differences between rich and poor, and inequality seems to be increasing over time. Furthermore, there are several possibilities for translating money into political influence, although they are probably more limited and subject to stronger countervailing forces than in other countries. These insights suggest two things: (1) Norway might plausibly serve as a least likely case for political inequality based on economic differences, and (2) despite being a least likely case there might still be ample room for such inequality to arise.

4 Methods

It almost goes without saying that when it comes to complex social phenomena, like the relationship between economic inequality and political power, there will always be many possible ways to go about studying it. Indeed, if we are to gain as complete an understanding of this phenomenon as possible, we probably have to use a variety of approaches. All methods have

their limitations, so as a research field, our best bet will probably be to exploit the comparative advantages of every reasonable method.

For the lion's share of this thesis (Articles 1 and 3), I study the relationship between economic inequality and political power by estimating the extent to which changes in public policy are responsive to the preferences of different groups of citizens (e.g. affluent vs. poor; high educated vs. low educated; men vs. women). In so doing, I utilize a dataset that I—with the help of a research assistant—built during the course of the first year of my PhD project.[31] The dataset was modeled after Gilens (2012)'s dataset for the United States, and consists of 603 policy proposals that the Norwegian public have been asked whether they support or oppose—through representative public opinion samples—at some point between 1966 and 2014. For each proposal, the data set contains survey data on the level of support that the proposal enjoyed among different sectors of the public, as well information on whether or not the proposal was adopted by government within four years after the question was put to the public. Details on the data collection procedure can be found in Articles 1 and 2 and their associated appendices. The dataset is publicly available online at Harvard Dataverse (https://doi.org/10.7910/DVN/ISBPIH). Here one can also find all the computer code files that were used to construct the dataset.

Perhaps the biggest comparative advantages of the approach used in Articles 1 and 3 is the large number of specific policy proposals in the dataset. The specificity of the proposals means that public opinion and policy outcomes are measured for actual policy decisions. The often-used alternative, namely aggregate scales that for example capture the left-right ideological positioning of the electorate (Giger, Rosset, and Bernauer 2012) or the conservativeness of the public "mood" (Robert S. Erikson 2015) suffer from the fact that they are trying to proxy with one dimension a myriad of policy issues that often will not be reducible to such. A recent

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[31]I was so lucky as to get funding by the Meltzer Reserach Fund to hire a research assistant. I was even luckier to hire Martin Instebø Jamne, who did a huge amount of coding work in the limited time that he was part of the project.

study provides empirical evidence that using left-right ideological scales to measure congruence can be "highly misleading" as "unequal representation of socio-economic groups is much more muted" than if using issues (Schakel and Hakhverdian 2018, 441, 454). At the end of the day, public policy comes down to concrete decisions made by policy-makers. Therefore, the most direct way we can estimate the extent to which policy follows public opinion is to capture both for a series of specific proposals.

Furthermore, the broad coverage of topics in the dataset means that my conclusions are likely to capture general trends in how the system works—as opposed to possible idiosyncrasies of a particular policy area. This coverage is the result of the selection criteria for the survey items: any policy proposal about national government policy was included so long as it was asked about in a representative survey, was formulated specifically enough to subsequently determine whether it was adopted by government, was asked unconditionally, and had a bipolar support-oppose answer scale (these are the same criteria used by (Gilens 2012, 57–58). Hence, the proposals span all major policy issues—including questions about the EU, refugees, foreign aid, abortion, the wine monopoly, gay rights, taxes, the oil fund, farm subsidies, waters plants, and oil drilling; to name just a few. Now, some topics are obviously asked about more frequently than others, and the same questions are sometimes repeated several times. For the survey items extracted from commercial polls (72% of the dataset) this is probably a good thing, since the frequency with which pollsters ask the same questions likely reflect the salience of the issue in public debate. This way, issues that where more salient are weighted more heavily in the data than issues that were less salient (Gilens 2012, 58). The same logical, however, is unlikely to apply to academically run surveys (details in Article 1 Appendix D).

The methods used in Article 2 are different than the two other Articles. While Articles 1 and 3 study responsiveness—that is, changes in public policy as a function of public preferences—Article 2 mainly looks at policy deviation (distance between public opinion and public policy at a cross section in time. Article 2 looks at this question for the particular case of

the income tax system. The comparative advantage of this approach is that if policy and preferences are measured on comparable scales (tax rates in my case), it can tell us precisely how much public policy in a particular area deviates from public opinion. This is not information that we can get when studying responsiveness. By definition responsiveness is about changes at the margins of a policy (e.g. increasing or decreasing a tax rate by a certain amount). One can easily imagine a scenario in which marginal changes strongly reflect public policy, but where the general level of the policy is way off from where people want it to be. This is the main argument made by Simonovits, Guess, and Nagler (2019).

Throughout the thesis, I use survey respondents' self-reported income to determine their economic position, usually distinguishing between respondents at the 10th, 50th, and 90th income percentile. This approach is not uncontroversial and thus deserves some attention. First, the choice of using income rather than wealth is largely forced. It is very rare for survey organizations to ask respondents about their wealth (at least the survey organizations that gathered the original data for my dataset), so using wealth to determine economic position is not really an option.[32] However, in the context of studying how economic inequality affects policy, wealth is probably more relevant than income, at least to the extent that investor decisions matter as a way of influencing government (as previously discussed). Nonetheless, income and wealth are of course correlated, meaning that we capture part of the wealth effect when using income.[33]. The issue however, is that wealth tends to be considerably more unevenly distributed than income. Therefore, using income as a replacement for wealth means that I am underestimating economic inequality and probably also the extent of unequal responsiveness.

Another reason why I likely underestimate unequal responsiveness is that I am only able to measure the policy preferences of citizens with modestly high incomes. All standard

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[32]Other scholars have also noted the regrettable tendency to neglect wealth in survey research (e.g. Piketty 2018).

[33]In the case of Norway, registry data from microdata.no show that gross income percentile and gross wealth percentile are correlated at r=0.54

population surveys—using samples of around a thousand individuals—have the limitation that they rarely if ever capture the truly wealthy. The highest point on the income scale for which I am able to reliable estimate policy responsiveness is the 90th income percentile. According to the World Inequality Database, the 90th income percentile in Norway in 2018 had a gross income of 1.3 million NOK (or roughly \$150,000).[34] Clearly, that amount does not warrant use of the term "rich". Like Gilens (2012), I instead consider people at the 90th percentile to be fairly "affluent". Policy responsiveness to the affluent gives us an approximation of that same quantity for the rich. Nevertheless, it seems almost unthinkable that truly rich individuals— some of whom in Norway have incomes above 200 million NOK (and wealth stocks that are obviously much larger)—do not enjoy more political influence than the affluent. Therefore, the unequal responsiveness to different income groups that I uncover in this thesis should be viewed as conservative estimates.

Finally, the choice of studying public opinion when trying to assess political inequality is not unproblematic. Public opinion arguably constitutes the best available measure of popular preferences. Still, using it for assessing influence means that we are ignoring any form of political inequality that runs indirectly through the shaping of public opinion. As discussed in section 2.2.6, one mechanism for unequal influence is that people with sufficient resources can buy media ownership to proliferate their beliefs and opinions. Taking public opinion at face value essentially means that this way of influencing policy is not taken into account. This possibly constitutes yet another way that my methods of assessing unequal influence underestimate its true extent.

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[34]According to the same source, the 50th income percentile had an income of 630,000 NOK (\$76,000) and the 10th income percentile 130,000 NOK (\$16,000) (https://wid.world/country/norway/, accessed 7 July 2022.)

5 Discussion

5.1 Correlation ≠ causation

A central finding of the thesis is that public policy in Norway over the past half century has generally been much more responsive to the preferences of citizens with (1) high-income, (2) high educated, and (3) male gender. Yet, responsiveness doesn't necessarily reflect the causal influence of opinions on policy (recall Section 2.3 on distinguishing the different concepts). One could easily imagine unequal responsiveness emerging if these groups were more attentive to policy and changed their preferences in reaction to policy changes to a larger degree than other citizens. [Discussion to be written]

5.2 Replacing income-based political inequality with education-based?

[Discussion to be written]

5.3 An agenda for future research

[Discussion to be written]

References

Aaberge, Rolf, Christophe André, Anne Boschini, Lars Calmfors, Kristin Gunnarsson, Mikkel Hermansen, Audun Langørgen, Petter Lindgren, Causa Orsetta, and Jon Pareliussen. 2018. *Increasing Income Inequality in the Nordics: Nordic Economic Policy Review 2018*. Nordic Council of Ministers.

Alexander Branham, J., Stuart N. Soroka, and Christopher Wlezien. 2017. "When do the rich win?" *Political Science Quarterly* 132 (1). https://doi.org/10.1002/polq.12577.

Allern, Sigurd. 2011. "PR, politics and democracy." *Central European Journal of Communication* 4 (06): 125–39.

Alvaredo, Facundo, Lucas Chancel, Thomas Piketty, Emmanuel Saez, and Gabriel Zucman. 2018. *World inequality report 2018*. Belknap Press.

American Political Science Association Task Force. 2004. "American democracy in an age of rising inequality." *Perspectives on Politics* 2 (4): 651–66.

Aristotle. 2009. *The politics of Aristotle: a treatise on government*. Edited by William Ellis. Auckland: Floating Press.

Atkinson, Anthony B, Alessandra Casarico, and Sarah Voitchovsky. 2018. "Top incomes and the gender divide." *The Journal of Economic Inequality* 16 (2): 225–56.

Barrow, Clyde W. 2016. *Toward a critical theory of states: The Poulantzas-Miliband debate after globalization*. SUNY Press.

Bartels, Larry M. 2016. *Unequal democracy: The political economy of the new gilded age*. Princeton: Princeton University Press.

———. 2017. "Political inequality in affluent democracies: The social welfare deficit." In *4th Conference in Political Economy & Political Science (Assessing Democratic Institutions), Toulouse, March*, 23–24.

———. 2021. "Measuring Political Inequality." Unpublished manuscript.

Bashir, Omar S. 2015. "Testing inferences about American politics: A review of the 'oligarchy' result." *Research & Politics* 2 (4): 2053168015608896.

Baumgartner, Frank R, Jeffrey M Berry, Marie Hojnacki, Beth L Leech, and David C Kimball. 2009. *Lobbying and policy change: Who wins, who loses, and why*. University of Chicago Press.

Bekkouche, Yasmine, and Julia Cagé. 2018. "The Heterogeneous Price of a Vote: Evidence from France, 1993-2014." *Institute for New Economic Thinking Working Paper Series*, no. 68.

Bernauer, Julian, Nathalie Giger, and Jan Rosset. 2015. "Mind the gap: Do proportional electoral systems foster a more equal representation of women and men, poor and rich?" *International Political Science Review* 36 (1): 78–98.

Bernhagen, Patrick, and Thomas Bräuninger. 2005. "Structural power and public policy: A signaling model of business lobbying in democratic capitalism." *Political Studies* 53 (1): 43–64.

Binderkrantz, Anne Skorkjær, Peter Munk Christiansen, and Helene Helboe Pedersen. 2015. "Interest group access to the bureaucracy, parliament, and the media." *Governance* 28 (1): 95–112.

Binzer Hobolt, Sara, and Robert Klemmensen. 2008. "Government responsiveness and political competition in comparative perspective." *Comparative Political Studies* 41 (3): 309–37.

Black, Duncan. 1948. "On the rationale of group decision-making." *Journal of Political Economy* 56 (1): 23–34.

Block, Fred. 2021. "The ruling class does not rule: Notes on the Marxist theory of the state." In *The Political Economy*, 32–46. Routledge.

Bottomore, Tom. 1993. *Elites and society*. London: Routledge.

Brady, Henry E, Sidney Verba, and Kay Lehman Schlozman. 1995. "Beyond SES: A resource model of political participation." *American Political Science Review* 89 (2): 271–94.

Brooks, Joel E. 1987. "The opinion-policy nexus in France: Do institutions and ideology make a difference?" *The Journal of Politics* 49 (2): 465–80.

———. 1990. "The opinion-policy nexus in Germany." *Public Opinion Quarterly* 54 (4): 508–29.

Burstein, Paul. 2003. "The impact of public opinion on public policy: A review and an agenda." *Political Research Quarterly* 56 (1): 29–40.

Carnes, Nicholas. 2012. "Does the numerical underrepresentation of the working class in Congress matter?" *Legislative Studies Quarterly* 37 (1): 5–34.

———. 2013. *White-collar government: The hidden role of class in economic policy making*. Chicago: University of Chicago Press.

Carnes, Nicholas, and Noam Lupu. 2015. "Rethinking the comparative perspective on class and representation: Evidence from Latin America." *American Journal of Political Science* 59 (1): 1–18.

Chancel, Lucas, Thomas Piketty, Emmanuel Saez, and Gabriel Zucman. 2021. "World inequality report 2022."

Culpepper, Pepper D. 2015. "Structural power and political science in the post-crisis era." *Business and Politics* 17 (3): 391–409.

Culpepper, Pepper D, and Raphael Reinke. 2014. "Structural power and bank bailouts in the United Kingdom and the United States." *Politics & Society* 42 (4): 427–54.

Dahl, Robert A. 1971. *Polyarchy: Participation and opposition*. New Haven: Yale university press.

———. 2005. *Who governs?: Democracy and power in an American city*. Yale University Press.

Djankov, Simeon, Caralee McLiesh, Tatiana Nenova, and Andrei Shleifer. 2003. "Who owns the media?" *The Journal of Law and Economics* 46 (2): 341–82.

Domhoff, G William. 1967. *Who rules America? Englewood Cliffs, NJ, Prentice-Hall*.

Downs, Anthony. 1957. "An economic theory of democracy."

Elkjær, Mads Andreas. 2020. "What drives unequal policy responsiveness? Assessing the role

of informational asymmetries in economic policy-making." *Comparative Political Studies* 53 (14): 2213–45.

Elkjær, Mads Andreas, and Torben Iversen. 2020. "The political representation of economic interests: Subversion of democracy or middle-class supremacy?" *World Politics* 72 (2): 254–90.

Elkjær, Mads Andreas, and Michael Baggesen Klitgaard. 2021. "Economic Inequality and Political Responsiveness: A Systematic Review." *Perspectives on Politics*, 1–20.

Elsässer, Lea, Svenja Hense, and Armin Schäfer. 2017. ""Dem Deutschen Volke"? Die ungleiche Responsivität des BundestagsGovernment for the People? – Unequal Responsiveness of the Bundestag." *Zeitschrift Für Politikwissenschaft* 27 (2): 161–80.

———. 2020. "Not just money: unequal responsiveness in egalitarian democracies." *Journal of European Public Policy*, 1–19.

Elster, Jon. 1985. *Making sense of Marx*. Cambridge University Press.

Enns, Peter K. 2015. "Relative policy support and coincidental representation." *Perspectives on Politics* 13 (4): 1053–64.

Erikson, Robert S, Michael B MacKuen, and James A Stimson. 2002. *The macro polity*. Cambridge University Press.

Erikson, Robert S. 2015. "Income Inequality and Policy Responsiveness." *Annual Review of Political Science* 18 (1): 11–29.

Espeli, Harald. 1999. *Lobbyvirksomhet på Stortinget: lange linjer og aktuelle perspektiver med hovedvekt på næringsinteresser og næringspolitikk*. Tano Aschehoug.

Falguera, Elin, Samuel Jones, and Magnus Ohman. 2014. *Funding of Political Parties and Election Campaigns: A Handbook on Political Finance*. Stockholm: International Institute for Democracy; Electoral Assistance.

Ferguson, Thomas. 1995. *Golden rule: The investment theory of party competition and the logic of money-driven political systems*. Chicago: University of Chicago Press.

Ferguson, Thomas, Paul Jorgensen, and Jie Chen. 2013. "Party Competition and Industrial Structure in the 2012 Elections." *International Journal of Political Economy* 42 (2): 3–41. https://doi.org/10.2753/ijp0891-1916420201.

———. 2019. "How money drives US congressional elections: Linear models of money and outcomes." *Structural Change and Economic Dynamics*.

Flavin, Patrick. 2012. "Income inequality and policy representation in the American States." *American Politics Research* 40 (1): 29–59. https://doi.org/10.1177/1532673X11416920.

Folketrygdfondet. 2017. "Ownership report."

Giger, Nathalie, Jan Rosset, and Julian Bernauer. 2012. "The poor political representation of the poor in a comparative perspective." *Representation* 48 (1): 47–61. https://doi.org/10.1080/00344893.2012.653238.

Gilens, Martin. 2005. "Inequality and democratic responsiveness." *Public Opinion Quarterly* 69 (5 SPEC. ISS.): 778–96. https://doi.org/10.1093/poq/nfi058.

———. 2009. "Preference gaps and inequality in representation." *PS: Political Science and Politics*, 335–41.

———. 2012. *Affluence and influence: Economic inequality and political power in America*. Princeton: Princeton University Press.

———. 2015. "Descriptive Representation, Money, and Political Inequality in the United States." *Swiss Political Science Review* 21 (2): 222–28. https://doi.org/10.1111/spsr.12164.

———. 2016. "Simulating representation: The devil's in the detail." *Research & Politics* 3 (2): 2053168016654720.

Gilens, Martin, and Craig Hertzman. 2000. "Corporate ownership and news bias: Newspaper coverage of the 1996 Telecommunications Act." *Journal of Politics* 62 (2): 369–86.

Gilens, Martin, and Benjamin Page. 2016. "Critics Argued with Our Analysis of U.S. Political Inequality. Here Are 5 Ways They're Wrong."

Gilens, Martin, and Benjamin I. Page. 2014. "Testing Theories of American Politics: Elites, Interest Groups, and Average Citizens." *Perspectives on Politics* 12 (03): 564–81.

Gilligan, Carol, and Naomi Snider. 2018. *Why does patriarchy persist?* John Wiley & Sons.

Grossman, Guy, Yotam Margalit, and Tamar Mitts. 2022. "How the ultra-rich use media ownership as a political investment."

Grødem, Anne Skevik, and Jon M Hippe. 2019. "Networking, lobbying and bargaining for pensions: trade union power in the Norwegian pension reform." *Journal of Public Policy* 39 (3): 465–81.

Gulbrandsen, Trygve. 2018. *Elites in an egalitarian society: Support for the Nordic model*. Springer.

Hacker, Jacob S, and Paul Pierson. 2002. "Business power and social policy: Employers and the formation of the American welfare state." *Politics & Society* 30 (2): 277–325.

———. 2010. "Winner-take-all politics: Public policy, political organization, and the precipitous rise of top incomes in the United States." *Politics & Society* 38 (2): 152–204.

Harms, Philipp, and Stefan Zink. 2003. "Limits to redistribution in a democracy: a survey." *European Journal of Political Economy* 19 (4): 651–68.

Hartmann, Michael. 2010. "Elites and power structure." In *Handbook of European Societies*, 291–323. Springer.

Herman, Edward S, and Noam Chomsky. 2010. *Manufacturing consent: The political economy of*

the mass media. Random House.

Homola, Jonathan. 2019. "Are Parties Equally Responsive to Women and Men?" *British Journal of Political Science* 49 (3): 957–75.

Horne, Cale. 2012. "The Consistency of Policy with Opinion in the Russian Federation, 1992–2006." *Journal of Elections, Public Opinion & Parties* 22 (3): 215–44.

Hotelling, Harold. 1929. "Stability in competition." *Economic Journal* 39 (153): 41–57.

Huber, Gregory A, Kevin Arceneaux, and Gregory A Huber. 2007. "Identifying the Persuasive Effects of Presidential Advertising Identifying the Persuasive Effects of Presidential Advertising What effect campaign advertisements have on those do" 51 (4): 957–77.

Hunter, Floyd. 2017. *Community power structure: A study of decision makers*. UNC Press Books.

Jacobs, Lawrence R., and Benjamin I. Page. 2005. "Who Influences U.S. Foreign Policy?" *American Political Science Review* 99 (1): 107–23. https://doi.org/10.1017/s000305540505152x.

Kang, Shin-Goo, and G Bingham Powell Jr. 2010. "Representation and policy responsiveness: the median voter, election rules, and redistributive welfare spending." *The Journal of Politics* 72 (4): 1014–28.

Kasara, Kimuli, and Pavithra Suryanarayan. 2015. "When do the rich vote less than the poor and why? Explaining turnout inequality across the world." *American Journal of Political Science* 59 (3): 613–27.

Kowalski, Przemyslaw, Max Büge, Monika Sztajerowska, and Matias Egeland. 2013. "State-owned enterprises."

Laver, Michael, and Norman Schofield. 1998. *Multiparty government: The politics of coalition in Europe*. University of Michigan Press.

Lockwood, Thornton, and Thanassis Samaras. 2015. *Aristotle's Politics: A Critical Guide*. Cambridge University Press.

Lupu, Noam, and Alejandro Tirado Castro. 2022. "Unequal Policy Responsiveness in Spain."

Malesky, Edmund, and Paul Schuler. 2010. "Nodding or needling: Analyzing delegate responsiveness in an authoritarian parliament." *American Political Science Review* 104 (3): 482–502.

Marx, Karl. 1978. *The eighteenth brumaire of Louis Bonaparte*. Edited by Eden Paul. Foreign Languages Press Peking.

Marx, Karl, and Friedrich Engels. 1970. *The german ideology*. Edited by C.J. Arthur. Vol. 1. New York: International Publishers.

———. 2019. "The communist manifesto." In *Ideals and Ideologies*, 243–55. Routledge.

Mathisen, Ruben. 2021. "Affluence and influence in a social democracy." *Unpublished Manuscript*.

Mathisen, Ruben, Wouter Schakel, Svenja Hense, Lea Elsässer, Mikael Persson, and Harry Jonas Pontusson. 2021. "Unequal responsiveness and government partisanship in northwest Europe."

Mehlum, Halvor, Karl Moene, and Ragnar Torvik. 2012. "Mineral rents and social development in Norway." In *Mineral Rents and the Financing of Social Policy*, 155–84. Springer.

Michels, Robert. 2001. *Political Parties: A Sociological Study of the Oligarchical Tendencies of Modern Democracy*. Ontario: Batoche Books.

Miliband, Ralph. 1969. "The state in capitalist society."

Miller, Warren E, and Donald E Stokes. 1963. "Constituency influence in Congress." *American Political Science Review* 57 (1): 45–56.

Mills, C. Wright. 1959. *The Power Elite*. Galaxy. London: Oxford University Press.

Monroe, Alan D. 1998. "Public opinion and public policy, 1980-1993." *Public Opinion Quarterly* 62 (1).

Morton, Rebecca, and Charles Cameron. 1992. "Elections and the theory of campaign contributions: A survey and critical analysis." *Economics & Politics* 4 (1): 79–108.

Mosca, Gaetano. 1939. "The Ruling Class." In *Theories of Society: Foundations of Modern Social Theory*, edited by Arthur Livingston. New York; London: McGraw-Hill Book Company.

Narud, Hanne M, and Henry Valen. 2008. "The Norwegian Storting:"People's Parliament" or Coop for"Political Broilers"?" *World Political Science* 4 (2).

Page, Benjamin I., Larry M Bartels, and Jason Seawright. 2013. "Democracy and the policy preferences of wealthy Americans." *Perspectives on Politics*, 51–73.

Page, Benjamin, and Robert Shapiro. 1983. "Effects of public opinion on policy." *American Political Science Review* 77 (1): 175–90.

Pareto, Vilfredo. 1968. *The Rise and Fall of the Elites: An Application of Theoretical Sociology*. Totowa: Bedminster.

Persson, Mikael, and M Gilljam. 2018. "Who Got What They Wanted? The Opinion-Policy Link in Sweden 1956-2014." Gothenburg: University of Gothenburg.

Peters, Yvette, and Sander J. Ensink. 2015. "Differential Responsiveness in Europe: The Effects of Preference Difference and Electoral Participation." *West European Politics* 38 (3): 577–600. https://doi.org/10.1080/01402382.2014.973260.

Piketty, Thomas. 2014. *Capital in the Twenty-First Century*. Harvard University Press. https://books.google.no/books?id=J222AgAAQBAJ.

———. 2018. "Brahmin left vs merchant right: rising inequality and the changing structure of political conflict." *WID. World Working Paper* 7.

———. 2020. *Capital and Ideology*. Cambridge: Harvard University Press.

Piketty, Thomas, and Emmanuel Saez. 2003. "Income inequality in the United States, 1913–1998." *The Quarterly Journal of Economics* 118 (1): 1–41.

Polacko, Matthew. 2021. "Inequality, policy polarization and the income gap in turnout." *Party Politics*, 13540688211011924.

Poulantzas, Nicos. 1969. "The problem of the capitalist state." *New Left Review*, no. 58: 67.

Przeworski, Adam, and Michael Wallerstein. 1988. "Structural dependence of the state on capital." *The American Political Science Review*, 11–29.

Reher, Stefanie. 2018. "Gender and opinion–policy congruence in Europe." *European Political Science Review* 10 (4): 613–35.

Richardson, Jeremy. 2000. "Government, interest groups and policy change." *Political Studies* 48 (5): 1006–25.

Ridout, Travis N., Michael Franz, Kenneth M. Goldstein, and William J. Feltus. 2012. "Separation by Television Program: Understanding the Targeting of Political Advertising in Presidential Elections." *Political Communication* 29 (1): 1–23.

Rigby, Elizabeth, and Gerald C Wright. 2013. "Political parties and representation of the poor in the American states." *American Journal of Political Science* 57 (3): 552–65.

Rodrik, Dani. 2011. *The globalization paradox: democracy and the future of the world economy*. WW Norton & Company.

Rokkan, Stein. 1966. "Norway: Numerical Democracy and Corporate Pluralism." In *Political Oppositions in Western Democracies*, edited by Robert A Dahl, 70–116. New Haven: Yale University Press.

Rommetvedt, Hilmar, Gunnar Thesen, Peter Munk Christiansen, and Asbjørn Sonne Nørgaard. 2013. "Coping with corporatism in decline and the revival of parliament: Interest group lobbyism in Denmark and Norway, 1980–2005." *Comparative Political Studies* 46 (4): 457–85.

Rosset, Jan, Nathalie Giger, and Julian Bernauer. 2013. "More money, fewer problems? Cross-level effects of economic deprivation on political representation." *West European Politics* 36 (4): 817–35.

Rowley, Charles K. 1984. "The relevance of the median voter theorem." *Zeitschrift Für Die Gesamte Staatswissenschaft/Journal of Institutional and Theoretical Economics*, no. H. 1: 104–26.

Sattler, Thomas. 2013. "Do markets punish left governments?" *The Journal of Politics* 75 (2): 343–56.

Schakel, Wouter. 2020. *Representing the rich: Economic and political inequality in established democracies*.

———. 2021. "Unequal policy responsiveness in the Netherlands." *Socio-Economic Review* 19 (1): 37–57.

Schakel, Wouter, and Armen Hakhverdian. 2018. "Ideological congruence and socio-economic inequality." *European Political Science Review* 10 (3). https://doi.org/10.1017/s1755773918000036.

Schattschneider, Elmer Eric. 1975. *The semisovereign people: A realist's view of democracy in America*. Wadsworth Publishing Company.

Severs, Eline, Karen Celis, and Silvia Erzeel. 2016. "Power, privilege and disadvantage: Intersectionality theory and political representation." *Politics* 36 (4): 346–54.

Shapiro, Robert. 2011. "Public opinion and American democracy." *Public Opinion Quarterly* 75

(5): 982–1017.

Shaw, Daron R. 1999. "The Effect of TV Ads and Candidate Appearances on Statewide Presidential Votes , 1988-96 Author (s): Daron R . Shaw Published by : American Political Science Association Stable URL : http://www.jstor.org/stable/2585400 The Effect of TV Ads and Candidate" 93 (2): 345–61.

Simonovits, Gabor, Andrew M Guess, and Jonathan Nagler. 2019. "Responsiveness without Representation: Evidence from Minimum Wage Laws in US States." *American Journal of Political Science* 63 (2): 401–10.

Smith, Adam. 1937. *The wealth of nations*. Edited by Edwin Cannan. New York: Modern Library.

Soroka, Stuart N, and Christopher Wlezien. 2004. "Opinion representation and policy feedback: Canada in comparative perspective." *Canadian Journal of Political Science/Revue Canadienne de Science Politique* 37 (3): 531–59.

———. 2008. "On the limits to inequality in representation." *PS: Political Science & Politics* 41 (2): 319–27.

———. 2010. *Degrees of democracy: Politics, public opinion, and policy*. Cambridge University Press.

Stevens, Frederik, and Iskander De Bruycker. 2020. "Influence, affluence and media salience: Economic resources and lobbying influence in the European Union." *European Union Politics* 21 (4): 728–50.

Streeck, Wolfgang. 2016. *How will capitalism end?: Essays on a failing system*. Verso Books.

Strolovitch, Dara Z. 2008. *Affirmative advocacy*. Chicago: University of Chicago Press.

Thernstrom, Abigail M. 1987. *Whose votes count?: Affirmative action and minority voting rights*. Harvard University Press.

Truman, David Bicknell. 1971. *The governmental process*. Alfred A. Knopf.

Ura, Joseph Daniel, and Christopher R Ellis. 2008. "Income, preferences, and the dynamics of policy responsiveness." *PS: Political Science & Politics* 41 (4): 785–94.

Verba, Sidney, and Norman H Nie. 1987. *Participation in America: Political democracy and social equality*. University of Chicago Press.

Verba, Sidney, and Gary R Orren. 1985. *Equality in America: The view from the top*. Harvard University Press.

Verba, Sidney, Norman H Nie, and Jae-on Kim. 1978. *Participation and political equality: A seven-nation comparison*. Cambridge university press.

Wagner, Manuel. 2021. "Unequal Representation and Direct Democracy: The Case of Switzerland."

Winters, Jeffrey A. 2011. *Oligarchy*. Cambridge University Press.

Wlezien, Christopher, and Stuart N Soroka. 2012. "Political institutions and the opinion–policy link." *West European Politics* 35 (6): 1407–32.

Yates, Robert. 1836. *Secret proceedings and debates of the convention assembled at Philadelphia, in the year 1787, for the purpose of forming the Constitution of the United States of America*. Edited by G Templeman. Washington.

Young, Kevin A, Tarun Banerjee, and Michael Schwartz. 2018. "Capital strikes as a corporate political strategy: The structural power of business in the Obama era." *Politics and Society* 46 (1): 3–28. https://doi.org/10.1177/0032329218755751.

Article 1

Letter

Affluence and Influence in a Social Democracy

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*R*esearch from the United States and Europe suggests that affluent citizens enjoy considerably more policy influence than do average citizens and the poor. I examine the extent of unequal policy responsiveness in one of the countries that have gone farthest in reducing economic inequality and restricting money in politics: Norway. I use an original dataset on public opinion and public policy containing 603 specific issues over five decades (1966–2014). The results show that although policy is certainly skewed toward the preferences of the privileged, Norway stands out among previously studied cases for two reasons: (1) The preferences of the poor seem to have some sway on economic issues and (2) not all affluent citizens get their way: educational attainment appears to be the more important determinant. The Norwegian case suggests that influence need not be as dependent upon affluence as in the United States.

"[C]ountries in Scandinavia, like Denmark, Norway, Sweden, they are very democratic countries, obviously."
—*Bernie Sanders*[1]

INTRODUCTION

A defining feature of democracy is that citizens, considered as political equals, have influence over policy making. In contrast to this ideal, there is mounting evidence from the United States suggesting that the rich enjoy disproportionately large policy influence at the expense of the average citizen (Bartels 2016; Erikson 2015; Gilens 2012). Research on this topic for the rest of the world remains sparse. There are some studies that have looked at differential responsiveness in Western Europe (Elsässer, Hense, and Schäfer 2017; Peters and Ensink 2015; Rosset 2016). They tend to point in the same direction as the American studies, but they are usually not directly comparable to them. If we were to measure political inequality in exactly the same way as has been done in the most prominent U.S. studies (Gilens 2012; Gilens and Page 2014), but in a social democracy that has come far in equalizing opportunities, economic differences, and limiting the role of money in politics, what would we find? Would the poor and middle class have more influence than in the US and Western Europe?

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[1] Interview on ABC, May 3, 2015, https://abcnews.go.com/ThisWeek/video/sen-bernie-sanders-us-scandinavia-30770990.

Academics disagree about the roots of political inequality and, consequently, how it can be tackled. Some argue that institutional reform such as tightening the rules on electoral campaign finance (Page and Gilens 2020), more descriptive representation in parliament (Carnes 2013), and redistributing income and wealth (Piketty 2020), should lead to a more even dispersion of political power. Others are not that optimistic. Unequal responsiveness could be a systemic problem of capitalism or, worse, a direct consequence of any distribution of economic resources that is not equal (Przeworski 2012). The debate is not new. In fact it was salient in the early twentieth century, when the socialist movement split into reformists who believed that "the people" could successfully voice their opinions through electoral politics, and revolutionaries who believed it to be a lost cause. The reformists developed social democracy as a compromise intended to ensure workers' control over politics, within a capitalist system (Przeworski 1986). Whether it succeeded is an open question.

In this research letter, I apply the methodology from one of the flagship studies of political inequality in the US, *Affluence and Influence* (Gilens 2012), to a very different case—namely Norway. Norway is a prime example of social democracy, with low levels of income inequality, strict regulations of campaign spending, strong unions, and a generous welfare state. If social democracy is capable of curtailing the disproportionate influence of the affluent, then we should see it in this case. I constructed an original dataset of Norwegian public opinion on 603 specific policy proposals at the national level from representative surveys between 1966 and 2014. Then, for each proposal, I estimated the level of support among different income percentiles and matched those data with information on which of the proposals were subsequently adopted by government.

I find that although public policy in Norway is clearly tilted toward the preferences of high-income citizens

FIGURE 1. Policy Responsiveness to High Income and Median Income Respondents When Their Preferences Diverge by More Than 10 Percentage Points
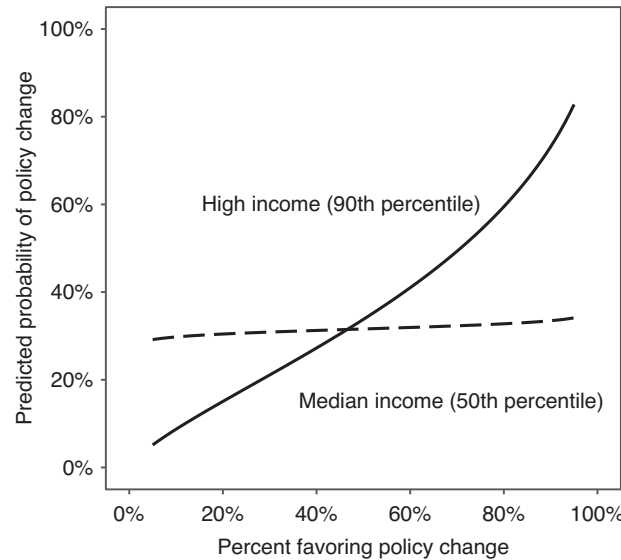
Note: Predicted probabilities for each whole percentage between 5% and 95% support, based on the logistic regressions reported in Table 2 (rows 3 and 4).

(Figure 1), the affluent do not appear to enjoy the kind of exclusive influence that characterizes the American case. First, within economic issues the preferences of both the poor and the affluent seem to matter (Figure 2). Second, the opinions of the highly educated are strongly related to policy regardless of their income (Figure 3). These results suggest a weaker link between money and politics in Norway than in the US.

CASE STUDY: NORWAY

Norway is commonly perceived to be a particularly well-functioning democracy, with little room for the rich to exert disproportionate political influence (EIU 2020). There are several plausible reasons for this.

First, Norway is widely considered a social democracy in the comparative welfare state literature (Esping-Andersen 1990; Powell, Yörük, and Bargu 2020). As such, it has generous and universal welfare schemes and high levels of redistribution (Hicks 1999). In combination with strong unions and centralized wage bargaining that contribute to a compressed wage structure (Allern, Aylott, and Christiansen 2007; Pontusson, Rueda, and Way 2002), the resulting level of income inequality is among the lowest in the world.[2] Low inequality implies less of a resource advantage for the affluent to be used (in whichever way possible) to influence politics. Additionally, it has been argued that

the universality of the social democratic welfare schemes generates legitimacy and support across classes (Rothstein 2005). That means that such policies, which are usually strongly favored by the poor, have a better chance at being maintained or even expanded by government (Brooks and Manza 2008). Thus, the process might have a self-reinforcing component by which new policy gains for the poor are more easily achieved over time.

Second, in contrast to the US, where political candidates depend on large donations from private individuals and organizations to run effective election campaigns (Ferguson 1995), parties in Norway get about two-thirds of their financing from public subsidies.[3] The country also maintains a general ban on political advertisement on television, which is the major campaign expenditure in the US (Ridout et al. 2012).

Third, Norway has historically had strong trade unions. In the literature, unions have been found to be pivotal in shaping social welfare policy in the interest of organized workers (Esping-Andersen 1990). Norwegian unions have influenced economic and social policy through pressure in the corporate channel but also through their close ties with the Norwegian Labor Party (Allern, Aylott, and Christiansen 2007). In the context of policy responsiveness, this could serve as a countervailing force to the influence of the wealthy.

Fourth, Norway's exceptional oil and gas resources have widened the spectrum of policy options available to government by allowing extra spending,

[2] Accessed October 26, 2020, https://wid.world/world/#sdiinc_p90p100_z/US;FR;DE;CN;ZA;GB;WO/last/eu/k/p/yearly/s/false/21.2205/50/curve/false/country.

[3] Accessed January 25, 2020, https://www.ssb.no/valg/statistikker/partifin.

FIGURE 2.   Unequal Responsiveness When Preferences Diverge, by Policy Area
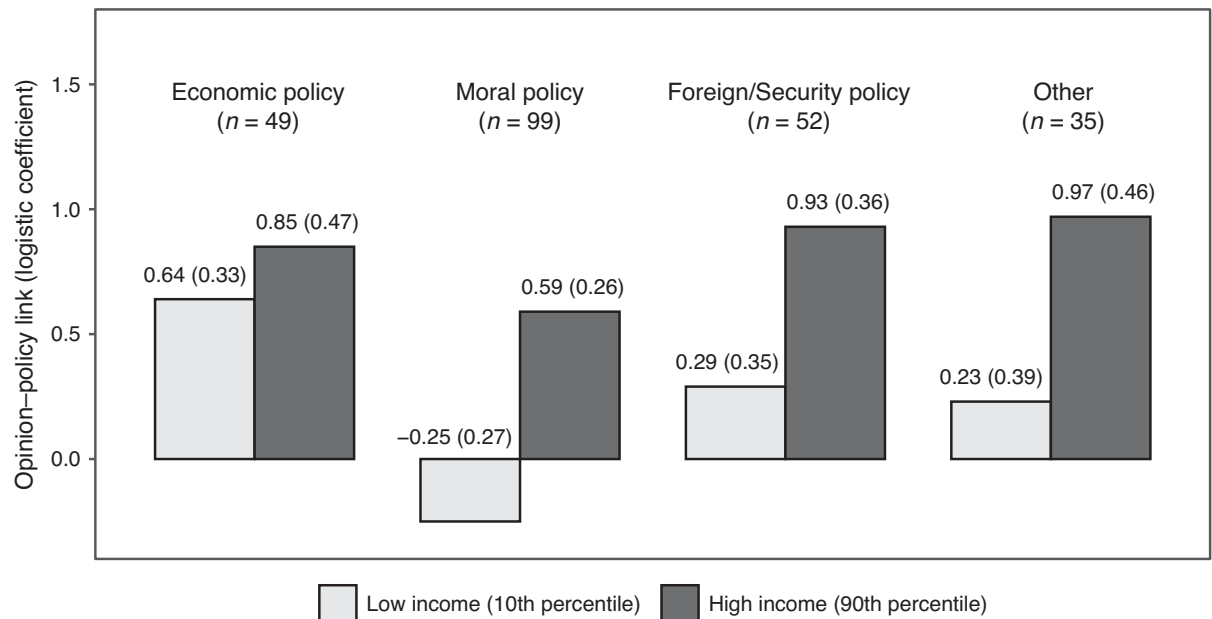
Note: Full results reported in Appendix Table A3. Standard errors in parentheses.

FIGURE 3.   Income versus Education, Norway and the US Compared

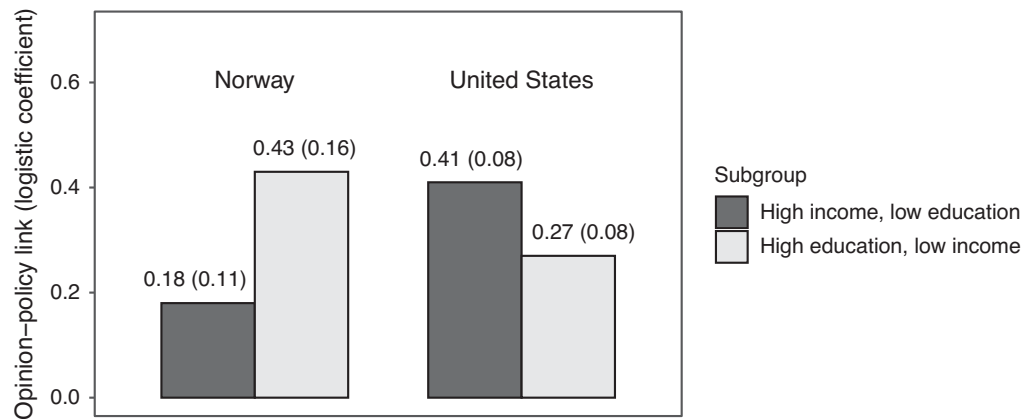*Note*: "High" is the 90th income/education percentile; "low" is the 10th income/education percentile. Standard errors in parentheses. Full results reported in Appendix Table E1.

usually amounting to around 5% of mainland GDP every year (Holden 2013). Potentially, this makes it easier to respond to a diverse set of popular preferences. To illustrate, Norway has been able to maintain generous welfare transfers while imposing lower tax rates than would otherwise be necessary (Holden 2013), presumably catering to the preferences of both the poor and the wealthy. Also, during economic crises, such as the Great Recession in 2008, the government has used oil money, rather than spending cuts or tax increases, to finance stimulus packages (Mjøset and Cappelen 2011).

Finally, the country's political class is not particularly rich. Although MP salaries surely are in the top third of the income distribution, the median wealth among MPs is in fact zero, according to tax data.[4] Therefore, it is

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[4] Accessed June 27, 2020, https://www.abcnyheter.no/penger/privatokonomi/2017/10/27/195342958/de-rikeste-politikerne-pa-stortinget.

unlikely that policy is biased toward the rich because politicians are rich themselves (Carnes 2013).

To be sure though, relatively small differences in political influence between rich and poor in Norway could have more indirect reasons if, for instance, there were little political inequality along—or simply an absence of—other dimensions that usually intersect with economic affluence, such as gender or ethnicity (Crenshaw 1989). Previous studies in the US and Europe have suggested that the interests of both women and ethnic minorities tend to be politically underrepresented (Costa 2017; Reher 2018; Whitby 2000). However, in Norway, policy makers have actively sought to increase the political influence of women—for example, by adopting laws requiring gender balancing in government institutions and company boards, an approach sometimes called "state feminism" (Hernes 1987; Siim and Skjeie 2008). Because women on average have lower income than men do,[5] these measures might have indirectly increased the influence of low-income citizens. Furthermore, for most of the period under investigation here, both ethnic fractionalization in Norway and the share of foreign-born citizens have been comparatively low (Dražanová 2020; see Appendix H). The absence of a prominent ethnic cleavage overlapping with class suggests that this type of double underrepresentation might not be as common among the Norwegian poor as for example among the poor in the US (e.g., Strolovitch 2008).

MEASURING POLICY RESPONSIVENESS

To examine the possibility of unequal responsiveness in Norway, I constructed an original dataset, containing Norwegian public opinion on 603 concrete policy proposals at the national level as well as information on which of these proposals were subsequently adopted by government. The dataset was constructed following the same procedure as in Gilens (2012). Policy questions posed to representative samples of the Norwegian population were extracted from preexisting surveys.[6] Data were available for the period 1966–2014. To be included in the dataset, questions had to ask respondents whether they support or oppose some change in national government policy. This can be anything from "should the right to abortion be extended to week 16?" to "should Norway send troops to Afghanistan?" The proposed change had to be specific enough so that it could be reliably determined whether or not the change was subsequently adopted.

I managed to obtain 431 survey items from commercial surveys and 172 from academic ones (total of 603). I then imputed, for each policy proposal, the percentage

that favored the proposed change among respondents at different income percentiles, using Gilens' approach. Finally, each proposal was coded, using government and media sources, as either adopted or not adopted in the subsequent four years (for details about the data collection and imputation method, see Appendix F).

Three studies inspired by Gilens (2012) have examined unequal policy responsiveness outside the US. All find that policy is skewed toward the preferences of the affluent. Although all provide interesting results, only one of the studies, of Germany (Elsässer, Hense, and Schäfer 2017), is directly comparable to Gilens's results for the US. For the other two, the Netherlands (Schakel 2021) and Sweden (Persson and Gilljam 2017), according to the authors, the results are not strictly comparable because their survey data partially or fully come from academic sources, whereas Gilens (2012, 54–56) used commercial survey data (the distinction is discussed in Appendix D).

To make my data maximally comparable to Gilens's US data, I do three things: (1) I primarily analyze the sample of proposals from the commercial surveys, (2) I filter out policy proposals that would require constitutional change ($n = 43$), and (3) I remove policy proposals that were "half-adopted" ($n = 3$; Gilens 2012, 60). After this, 397 proposals are left for the analysis below.[7]

FINDINGS

I begin by looking at the overall relationship between public opinion and policy.[8] A simple bivariate logistic regression of policy outcome on policy support (Table 1, first column) suggests a moderate relationship between what the public wants and what it gets ($b = 0.44$, $p < 0.001$).[9] Predicted probabilities allow us to better understand the size of the effect: If 20% of Norwegians support a policy proposal, it has a predicted 17% chance of being adopted within the subsequent four years. If 80% favor it, the probability increases to 41% (i.e., it increases by a factor of 2.4). Public opinion matters, although with a status quo bias. This is quite similar to the results from the US (see Gilens 2012, 76).

Next, Table 1 presents results from bivariate logistic regression models where policy outcome is regressed on the policy support of five income percentiles. Although the effect sizes vary (from a factor 1.8 for the 10th percentile, to 2.3 for the 50th, to 2.9 for the 90th), all income groups have a positive, statistically significant effect on policy.

However, the preferences of the income groups are highly correlated. Consequently, the moderate responsiveness to the preferences of the middle-class

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[5] As late as 2011, the average household income of women was still 71% of the average among men. Accessed July 28, 2021, https://www.ssb.no/statbank/table/09903/.

[6] The replication materials include the finalized dataset as well as all code necessary to reproduce the dataset and analyses. However, the original surveys files are subject to restricted access. Appendix I explains how interested researchers can obtain such access.

[7] Analyses with the academic surveys included showed somewhat less unequal responsiveness across income groups, strengthening the paper's final conclusion (see Appendix D).

[8] I refer to this relationship as *policy responsiveness*.

[9] Overall, 27% of the proposed policies were adopted. All support variables are logit transformed as in Gilens (2012, 73–96).

TABLE 1. Policy Responsiveness by Income

	Effect (logit coefficient)	Standard error	Predicted probability of policy change at 20% support	Predicted probability of policy change at 80% support	Relative change in probability	N
All	0.44***	0.11	0.17	0.41	2.4	397
Income percentile						
P10	0.29***	0.1	0.2	0.36	1.8	397
P30	0.36***	0.1	0.18	0.38	2.1	397
P50	0.42***	0.11	0.17	0.4	2.3	397
P70	0.49***	0.11	0.16	0.42	2.7	397
P90	0.54***	0.11	0.15	0.44	2.9	397

Note: Bivariate logistic regression models (rows). The dependent variable is a dichotomous measure of whether or not the policy change was adopted within four years of the time of the survey question. *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.

TABLE 2. Policy Responsiveness When Preferences Diverge by More Than 10 Points across Income Percentiles

	Effect (logit coefficient)	Standard error	Predicted probability of policy change at 20% support	Predicted probability of policy change at 80% support	Relative change in probability	N
Poor vs. affluent						
Poor	0.08	0.18	0.28	0.33	1.2	177
Affluent	0.83***	0.21	0.13	0.59	4.7	177
Middle vs. affluent						
Middle	0.04	0.32	0.3	0.33	1.1	89
Affluent	0.76***	0.3	0.15	0.59	3.9	89

Note: Bivariate logistic regression models (rows). The dependent variable is a dichotomous measure of whether or not the policy change was adopted within four years of the time of the survey question. Poor = P10, Middle = P50, and Affluent = P90. *$p < 0.10$, **$p < 0.05$, ***$p < 0.01$.

and the poor that we observe in Table 1 could merely because these groups often want the same from government as do the affluent. In order to disentangle the preferences of the income groups and estimate their independent effects, one would normally use multivariate regression. But as Gilens (2012) points out, this will produce biased results due to the correlated measurement error of the opinion estimates for the income percentiles (Achen 1985). As an alternative, I subset the data, as has become standard in this type of study, keeping only policy proposals where preferences diverge by at least 10 percentage points across income groups (Elsässer, Hense, and Schäfer 2017; Gilens 2012; Schakel 2021).[10]

Having filtered out the policy proposals where income groups more or less agree, Table 2 paints a very different picture of whose opinions matter. Although the preferences of the affluent still have a substantial, statistically significant effect on policy,

there is no detectable effect for any of the other income groups. On the issues where the preferences of the affluent and the poor diverge, responsiveness to the preferences of the affluent is even greater than before: From low to high popularity among affluent respondents, the probability of policy adoption changes from 13% to 59% (factor of 4.7). In contrast, popularity among the poor only marginally affects the probability (28% vs. 33%, factor of 1.2), and the effect is statistically indistinguishable from zero ($p = 0.66$). When comparing the affluent and the middle class in the same way, I find the same: responsiveness to the affluent is substantial (factor of 3.9), whereas responsiveness to the middle class is weak and insignificant (factor of 1.1, $p = 0.9$). The magnitude of this unequal responsiveness is illustrated in Figure 1, which plots predicted probabilities of policy change at different levels of support among the middle class and the affluent.

To rule out that the results above are caused by the more or less arbitrary choice of a 10-point threshold for preference divergence, I also ran the regression models in Table 2 using multiple different thresholds.

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[10] Appendix A reports some of the most contested proposals in different policy areas.

This showed a clear pattern of increasing unequal responsiveness the higher the threshold (see Appendix B). I also checked whether unequal responsiveness has increased over time and whether it is lower on highly salient issues. The results suggest that unequal responsiveness has been quite stable over time and that it does not decrease on the more salient proposals (see Appendix C).

Is there any policy area in which the preferences of the poor matter? Yes. Figure 2 shows estimates of responsiveness for the poor and the affluent, by policy area.[11] Within moral issues, foreign policy and national security, and other (uncategorized) issues, the familiar pattern is observed: strong effect for the affluent, near zero effect for the poor. The economic area is somewhat different. Here as well, responsiveness to the affluent is substantial, but so is responsiveness to the poor. Given that the proposals of relative agreement have been excluded, it seems that on economic policy, the government sometimes follows the will of the affluent and other times the will of the poor, when the two are opposed.

Although my data do not include public opinion estimates by race/ethnicity, they do contain estimates by gender. Regression results (Appendix G) suggest that on economic issues, women's preferences are better represented than are men's (despite being less represented overall). Because women on average have lower income than men do, this could possibly account for some of the responsiveness to low-income citizens in this area.

Is the overall policy bias toward the preferences of the affluent simply explained by the fact that they are more educated than the rest? To investigate this, I imputed the policy preferences of different combinations of income and education percentile (see Appendix E). Then, I estimated policy responsiveness to income percentiles at the same level of education. The results, presented in Appendix Table E1, show that education explains some but not all of the unequal responsiveness across economic groups. Still, what is also evident from the results is that education has a stronger effect than income. For example, the preferences of respondents with high education and low income (i.e., at the 90th education percentile and 10th income percentile) have a strong effect on policy, whereas respondents with high income and low education have a weak, insignificant effect.[12] This suggests that education is by itself enough to see ones preferences reflected in policy. Income, on the other hand, must be coupled with a certain level of education. This is interesting because it is the exact opposite

from what Gilens found in the US. In the US, "high income alone seems sufficient to ensure a strong association between preferences and outcome, while education alone does not" (Gilens 2012, 95). This contrast is visualized in Figure 3, where the results from Norway are juxtaposed to the equivalent ones for the US.[13]

IMPLICATIONS

The findings of this study are twofold. On one hand, there are surprising similarities between my results for Norway and Gilens's (2012) results for the United States. The most important is that public policy tends to be heavily skewed toward the preferences of the privileged, violating the democratic principle of political equality. However, the Norwegian case deviates from the American in two rather consequential ways, suggesting that influence is not quite as dependent on affluence as in the US.

First, the data show responsiveness to both poor and rich citizens on economic issues. It is somewhat striking that the exception lies in this particular area, given that it is here that class interests are most clearly opposed and where one usually expects the wealthy to wield the strongest influence. One plausible explanation is the focus on economic welfare and redistribution in Norway's social democratic project as well as the powerful allies that the poor have in this domain through the unions and the left (Allern, Aylott, and Christiansen 2007). In that case, it suggests that social democracy can be expected to empower the have-nots in a policy area that affects them the most as a class. It is also possible that Norway's gender equality policies have indirectly increased the voice of the less well-off. To be sure though, Norway's oil wealth might play a special role within the economic sphere by granting government extra leeway to satisfy the interests of both affluent and poor (Holden 2013). If this is indeed an important part of the explanation, Norway might represent a sort of upper bound of what can be expected from social democracies in terms of equality of responsiveness.

Second, education is a stronger predictor of responsiveness than income; the opposite of what Gilens (2012) found in the US. In Norway, public policy generally reflects the preferences of low-income citizens, so long as they are higher educated. A possible explanation is the fact that government members are predominantly recruited from the highly educated, which causes their descriptive overrepresentation (Bovens and Wille 2017; Lie Andersen 2014). Although this is certainly also the case in the US (Carnes 2013), there might be more room for it to have an effect on policy in Norway. The importance of political finance in U.S. elections constrains the behavior of politicians as they try to attract private funding (Ferguson 1995). The absence of a comparable mechanism in Norway would imply that other factors, such as

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[11] See Appendix A for an overview of how proposals were coded into different areas.

[12] Appendix H shows, using registry data, that these two groups are comparable in size in the actual population and that although the groups disproportionately consist of certain types of occupations (e.g., service workers and teachers in the group with low income/high education; managers in the opposite group), they are quite heterogeneous. Therefore, it seems unlikely that such differences would be driving much of the reported effects.

[13] Extracted from Table A3.4 in Gilens (2012, 259).

an education-based value system, could potentially play a larger role in determining their behavior.

It is important to emphasize that the type of data employed here, and in Gilens (2012), cannot demonstrate that popular opinions are in fact *causing* policy change. Even though this is the usual interpretation of opinion–policy links in the literature, there is evidence of reversed causality as well: cues from political elites can shape public opinion, and such effects might be stronger and occur more quickly for the rich and highly educated (Zaller 1992), possibly explaining part of the unequal responsiveness. Although Gilens (2012, 93–96) argued that this was unlikely in the American case, it cannot be ruled out as an explanation for my results. However, it is unlikely to be the whole story. For example, it does not explain why there would be less unequal responsiveness on economic issues, as shown above.

The main conclusion from this study is that although social democracy, of the kind that exists in Norway, probably cannot be counted on to eliminate political inequality, the link between money and politics does appear to be weaker than in the American case. Public policy, at least partially, reflects the economic preferences of the poor and is robustly associated with the preferences of the highly educated, suggesting that political influence need not be reserved for the affluent.

Achieving results similar to those of Norway in other contexts could prove difficult and perhaps most difficult precisely where reforms are most needed— that is, where the affluent already hold dominant influence. Still, reducing the initial level of economic inequality, restricting how money can be used to influence elections, and strengthening the countervailing forces (such as unions), are some steps that might change the balance of power in favor of the less well-off.

SUPPLEMENTARY MATERIALS

To view supplementary material for this article, please visit http://doi.org/10.1017/S0003055422000739.

DATA AVAILABILITY STATEMENT

Research documentation and data that support the findings of this study are openly available at the American Political Science Review Dataverse: https://doi.org/10.7910/DVN/ISBPIH.

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CONFLICTS OF INTEREST

The author declares no ethical issues or conflicts of interest in this research.

ETHICAL STANDARDS

The author affirms this research did not involve human subjects.

REFERENCES

Achen, Christopher H. 1985. "Proxy Variables and Incorrect Signs on Regression Coefficients." *Political Methodology* 11 (3/4): 299–316.

Allern, Elin Haugsgjerd, Nicholas Aylott, and Flemming Juul Christiansen. 2007. "Social Democrats and Trade Unions in Scandinavia: The Decline and Persistence of Institutional Relationships." *European Journal of Political Research* 46 (5): 607–35.

Bartels, Larry M. 2016. *Unequal Democracy: The Political Economy of the New Gilded Age*. Princeton, NJ: Princeton University Press.

Bovens, Mark, and Anchrit Wille. 2017. *Diploma Democracy: The Rise of Political Meritocracy*. Oxford: Oxford University Press.

Brooks, Clem, and Jeff Manza. 2008. *Why Welfare States Persist: The Importance of Public Opinion in Democracies*. Chicago: University of Chicago Press.

Carnes, Nicholas. 2013. *White-Collar Government: The Hidden Role of Class in Economic Policy Making*. Chicago: University of Chicago Press.

Costa, Mia. 2017. "How Responsive Are Political Elites? A Meta-Analysis of Experiments on Public Officials." *Journal of Experimental Political Science* 4 (3): 241–54.

Crenshaw, Kimberlé. 1989. "Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics." *University of Chicago Legal Forum* 1989 (1): article 8.

Dražanová, Lenka. 2020. "Introducing the Historical Index of Ethnic Fractionalization (HIEF) Dataset: Accounting for Longitudinal Changes in Ethnic Diversity." *Journal of Open Humanities Data*. https://openhumanitiesdata.metajnl.com/articles/10.5334/johd.16/.

Economist Intelligence Unit (EIU). 2020. *Democracy Index 2020*. https://www.eiu.com/n/campaigns/democracy-index-2020/.

Elsässer, Lea, Svenja Hense, and Armin Schäfer. 2017. "'Dem Deutschen Volke'? Die ungleiche Responsivität des Bundestags [Government for the People? Unequal Responsiveness of the Bundestag]." *Zeitschrift Für Politikwissenschaft* 27 (2): 161–80.

Erikson, Robert S. 2015. "Income Inequality and Policy Responsiveness." *Annual Review of Political Science* 18:11–29.

Esping-Andersen, Gosta. 1990. *The Three Worlds of Welfare Capitalism*. Princeton, NJ: Princeton University Press.

Ferguson, Thomas. 1995. *Golden Rule: The Investment Theory of Party Competition and the Logic of Money-Driven Political Systems*. Chicago: University of Chicago Press.

Gilens, Martin. 2012. *Affluence and Influence: Economic Inequality and Political Power in America*. Princeton, NJ: Princeton University Press.

Gilens, Martin, and Benjamin I. Page. 2014. "Testing Theories of American Politics: Elites, Interest Groups, and Average Citizens." *Perspectives on Politics* 12 (3): 564–81.

Hernes, Helga Maria. 1987. *Welfare State and Woman Power: Essays in State Feminism*. Oslo: Norwegian University Press.

Hicks, Alexander. 1999. *Social Democracy & Welfare Capitalism: A Century of Income Security Politics*. Ithaca, NY: Cornell University Press.

Holden, Steinar. 2013. "Avoiding the Resource Curse the Case Norway." *Energy Policy* 63 (December): 870–76.

Lie Andersen, P. 2014. "Den norske politiske eliten." In *Elite Og Klasse I et Egalitært Samfunn*, eds. Olav Korsnes, Marianne Nordli Hansen, and Johs. Hjellbrekke, 144–64. Oslo: Universitetsforlaget.

Mathisen, Ruben Berge. 2022. "Replication Data for Affluence and Influence in a Social Democracy." Harvard Dataverse. Dataset. https://doi.org/10.7910/DVN/ISBPIH.

Mjøset, Lars, and Ådne Cappelen. 2011. "The Integration of the Norwegian Oil Economy into the World Economy." In *The Nordic Varieties of Capitalism*, ed. L. Mjøset, 167–263. Bingley, UK: Emerald Group Publishing Limited.

Page, Benjamin I., and Martin Gilens. 2020. *Democracy in America? What Has Gone Wrong and What We Can Do about It*. Chicago: University of Chicago Press.

Persson, Mikael, and M. Gilljam. 2017. "Who Got What They Wanted? The Opinion-Policy Link in Sweden 1956-2014." University of Gothenburg. Working Paper.

Piketty, Thomas. 2020. *Capital and Ideology*. Cambridge, MA: Harvard University Press.

Pontusson, Jonas, David Rueda, and Christopher R. Way. 2002. "Comparative Political Economy of Wage Distribution: The Role of Partisanship and Labour Market Institutions." *British Journal of Political Science* 32 (2) 281–308.

Powell, Martin, Erdem Yörük, and Ali Bargu. 2020. "Thirty Years of the Three Worlds of Welfare Capitalism: A Review of Reviews." *Social Policy & Administration* 54 (1): 60–87.

Przeworski, Adam. 1986. *Capitalism and Social Democracy*. Cambridge: Cambridge University Press.

Przeworski, Adam. 2012. "Democracy, Redistribution, and Equality." *Brazilian Political Science Review* 6 (1): 11–36.

Reher, Stefanie. 2018. "Gender and Opinion–Policy Congruence in Europe." *European Political Science Review* 10 (4): 613–35.

Ridout, Travis N., Michael Franz, Kenneth M. Goldstein, and William J. Feltus. 2012. "Separation by Television Program: Understanding the Targeting of Political Advertising in Presidential Elections." *Political Communication* 29 (1): 1–23.

Rothstein, Bo. 2005. *Social Traps and the Problem of Trust*. New York: Cambridge University Press.

Schakel, Wouter. 2021. "Unequal Policy Responsiveness in the Netherlands." *Socio-Economic Review* 19 (1): 37–57.

Siim, Birte, and Hege Skjeie. 2008. "Tracks, Intersections and Dead Ends: Multicultural Challenges to State Feminism in Denmark and Norway." *Ethnicities* 8 (3): 322–44.

Strolovitch, Dara Z. 2008. *Affirmative Advocacy*. Chicago: University of Chicago Press.

Whitby, Kenny J. 2000. *The Color of Representation: Congressional Behavior and Black Interests*. Ann Arbor: University of Michigan Press.

Zaller, John R. 1992. *The Nature and Origins of Mass Opinion*. Cambridge: Cambridge University Press.

Appendix for Article 1

Online appendix for: Affluence and influence in a social democracy

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June 2022

Appendix A: Policy areas

Table A1: Most constested policy proposals across income levels, by policy area

	Policy	Support among income groups (%)			P90-P10	Adopted after 4 years?
		Poor (P10)	Middle (P50)	Affluent (P90)		
Economy						
1983	Prioritise Norwegians when hiring	72	66	46	-26	NO
1982	Government bail-out of businesses	61	55	37	-24	YES
1984	Ban private hospitals	69	58	45	-24	NO
1982	Inflation adjusted NRK fee	6	20	30	+24	NO
1986	Increase national budget	59	54	35	-23	YES
1990	Gas fee	19	26	41	+22	NO
1988	1988 Bill on income regulation	67	54	46	-22	YES
1989	Government decides wage level	91	75	70	-21	YES
1983	Reduce tax on high incomes	17	25	37	+21	YES
1977	Wage equalization fund	45	35	25	-20	NO
Moral						
1992	Apply for EU membership	25	41	63	+38	YES
1990	EEA Agreement	69	87	95	+27	YES
2007	Military troops to Southern Afghanistan	37	52	56	+18	NO
2004	Apply for EU membership	47	55	65	+18	NO
1978	Withdraw troops from Lebanon	53	34	35	-18	NO
1978	Traffic control cameras	83	70	65	-18	NO
1984	Information office for PLO in Norway	32	38	49	+17	YES
1980	Leave NATO	33	12	17	-16	NO
2003	Full military participation in Iraq	38	28	22	-16	NO
2007	Withdraw troops from Afghanistan	51	51	35	-16	NO
Foreign/security						
1972	Allow liquor serving on Saturdays	44	66	82	+38	YES
1972	Allow liquor serving on hollidays	38	54	74	+36	YES
1978	No homosexual doctors	50	36	18	-32	NO
1978	Allow homosexuals teachers	43	59	72	+29	YES
1970	Re-criminalize intoxication in public	72	59	43	-28	NO
1982	The Wine Monopoly closed on Saturdays	67	63	39	-28	NO
1970	Ban "strong beer" from grocery stores.	55	42	28	-27	NO
1966	Allow Norwegian Riksmål in offical grammar	60	73	87	+27	NO
1978	Allow homosexuals priests	44	59	70	+26	NO
1988	Forcefully isolate people with AIDS	54	42	28	-26	NO
Other						
1988	Second nationwide TV-channel	47	74	75	+27	YES
1993	Merging of municipalities	25	34	51	+26	NO
1988	No main airport in Hurum	59	47	34	-25	NO
1988	Ban TV3 in Norway	39	16	14	-25	NO
2013	Impact assessment in LoVeSe	51	59	73	+22	NO
1979	Oil search north of the 62nd latitutde	41	53	63	+22	YES
1989	No main airport in Hurum	89	81	67	-22	YES
2006	Prevent MP spending on social events	76	66	55	-21	NO
1989	Limit on car use, 10.000 km/year/houshold	50	34	30	-20	NO
1981	Other broadcasters than NRK	59	69	77	+18	YES

Table A2: Coding of policy areas (n in full dataset / n in dataset used in letter)

Economic policy (162/110)	Moral policy; value issues (212/164)	Foreign/Security policy (134/68)	Other issues (95/55)
economic welfare (35/20) fees (14/14) government intervention in economy (16/15) labor market (25/22) oil fund (2/2) pensions (7/7) privatization (12/6) spending (12/5) subsidies (10/7) tax (29/12)	abortion (14/13) adoption (5/4) age limits (2/1) alchohol (34/34) animal welfare (2/2) beggars (4/1) children (3/3) crime (9/7) death penalty (4/4) drugs (3/2) euthanasia (6/4) gender (8/7) GMO (3/0) HIV/AIDS (11/11) homosexuality (16/10) immigration (6/3) language (4/4) other moral (8/7) pornography (4/0) prostitution (6/6) religion (22/9) school (23/18) tobacco (11/10) treatment (2/2) violent sport (2/2)	bilateral relations (9/7) EU (37/9) foreign aid (21/9) foreign operations (8/8) international sports (4/4) military (24/14) NATO (13/7) police authority (6/1) surveillance (10/7) terrorism (2/2)	climate (26/10) decentralization (7/3) energy (10/5) environment (9/3) infrastructure (6/5) other regulation (5/5) political system (15/8) sports (4/4) television (13/12)

Table A3: Policy reponsiveness when preferences diverege, by policy area.

	Effect (logit coefficient)	Standard error	Predicted probability of policy change at 20% support	Predicted probability of policy change at 80% support	Relative change in probability	N
Economy						
Poor (P10)	0.64*	0.33	0.17	0.54	3.2	49
Affluent (P90)	0.85*	0.47	0.15	0.65	4.4	49
Moral						
Poor (P10)	-0.25	0.27	0.33	0.2	0.6	99
Affluent (P90)	0.59**	0.26	0.14	0.46	3.3	99
Foreign/Security						
Poor (P10)	0.29	0.35	0.22	0.39	1.7	52
Affluent (P90)	0.93**	0.36	0.11	0.62	5.6	52
Other						
Poor (P10)	0.23	0.39	0.25	0.39	1.5	35
Affluent (P90)	0.97**	0.46	0.1	0.61	6.4	35

Note:

Bivariate logistic regression models (rows). The dependent variable is a dichotomous measure of whether or not the policy change was adopted within four years of the time of the survey question. Included are policy proposals where preferences diverege between the 90th and 10th income percentiles. To ensure an acceptable sample size in each domain (around 50 or more where possible), the cutoff-point for inclusion was set to 8 points for economic and moral issues, and 4 points for foreign policy and 'other' issues (due to the lower n on the latter two topics). The lower threshold for the latter two could pose a challenge for comparison if it showed equal responsiveness, however, since it already shows highly unequal responsiveness, we can be fairly certain that this would not change much with a higher threshold. The same, of course, applies to moral issues. The effect size for the poor on economic policy remained essentially the same at higher cut-off points (b=0.62, se=0.33 at 10p; b=0.58, se=0.37 at 12p). The results are also robust to an alternative model specification, as reported in Table A4 below.*p<0.1; **p<0.05; ***p<0.01

Table A4: Alternative specification for estimating unequal responsiveness by policy area

	Effect (OLS coefficient)	Standard error	p-value	N
Economy				
Affluent minus poor	-0.09	0.41	0.835	110
Moral				
Affluent minus poor	0.71***	0.21	0.001	164
Foreign/Security				
Affluent minus poor	1.48***	0.43	0.001	68
Other				
Affluent minus poor	1.34***	0.47	0.006	55

Note:

OLS regression models (rows). Alternative specification, as proposed by Schakel, Burgoon and Hakhverdian (2020, 154-155). The dependent variable is a dichotomous measure of whether or not the policy change was adopted within four years of the time of the survey question. The independent variable 'Affluent minus poor' was calculated by taking (% support of P90) minus (% support of P10). A positive coefficient means that policy is biased towards the preferences of the affluent, while a negative coefficient means that policy is biased towards the preferences of the poor. All models include controls for overall policy support. See Schakel, Burgoon and Hakhverdian (2020) for details about this method. *p<0.1; **p<0.05; ***p<0.01

Appendix B: Cutoff-points for preference divergence
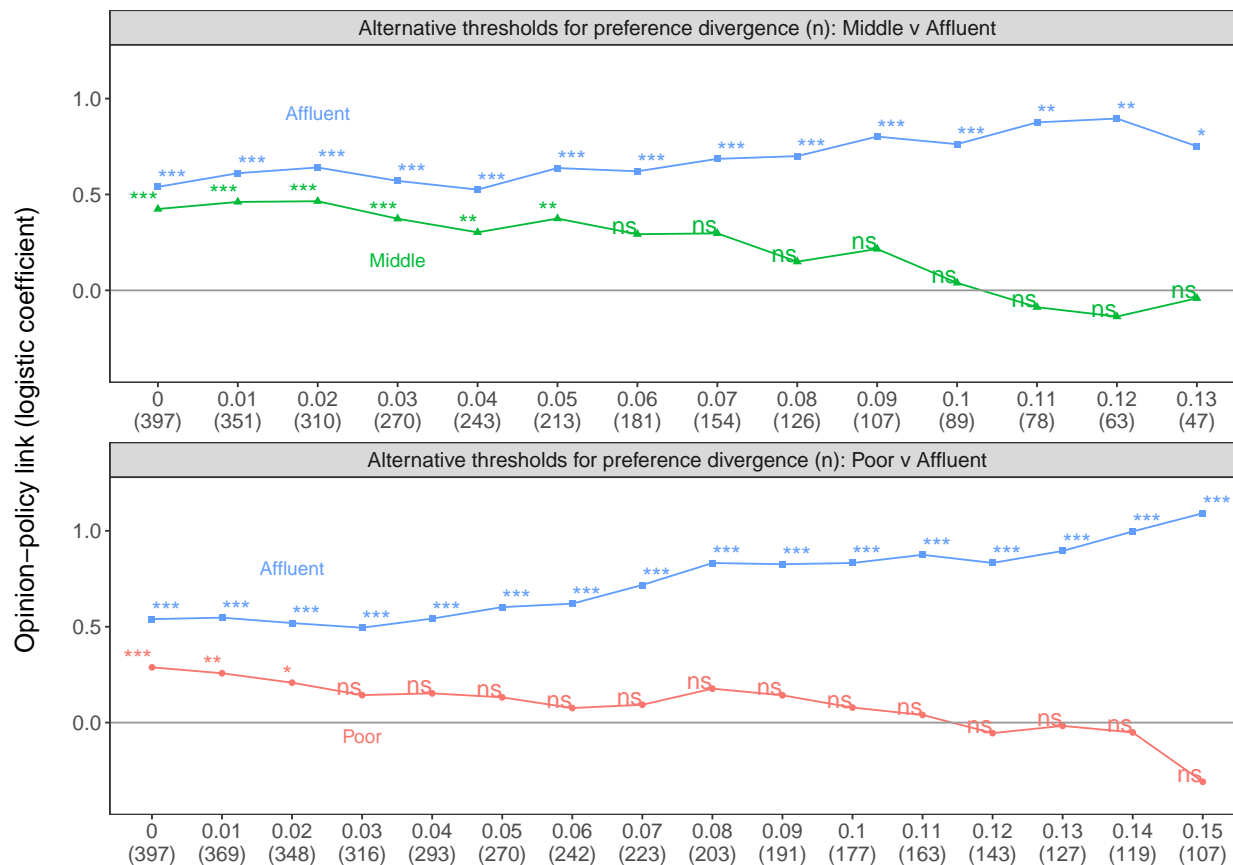
Figure B1: Alternative cutoff-points for the preference divergence between income groups.*p<0.1; **p<0.05; ***p<0.01.

Appendix C: Is unequal responsiveness conditioned by time and issue salience?

To check whether inequality has increased over time I simply split the sample of proposals where preferences diverge into two: those before 1985 and those after (this creates two almost equally sized samples). The results are quite similar in the two samples with respect to the overall conclusion. To check whether inequality is lower on more salient issues, I extracted all the survey items that had a 'don't know' response option. Salience was then measured using the percentage of respondents answering 'don't know' (or equivalents) to the survey

item, under the assumption that salient issues have a lower share of such responses. I again split the sample into two: those with less than 13% 'don't know's, and those with more than 13% (two almost equally sized samples). Unequal responsiveness was even larger in the high salience sample than in the low salience sample of, suggesting no extra influence for the less-well off on highly salient matters.

Table C1: Policy reponsiveness when preferences diverege (>10p), by time period.

	Effect (logit coefficient)	Standard error	Predicted probability of policy change at 20% support	Predicted probability of policy change at 80% support	Relative change in probability	N
1966-1984						
Poor (P10)	-0.03	0.24	0.36	0.34	1	83
Affluent (P90)	0.6**	0.25	0.2	0.57	2.9	83
1985-2014						
Poor (P10)	0.23	0.28	0.21	0.33	1.6	94
Affluent (P90)	1.27***	0.38	0.06	0.67	11.6	94

Note:
Bivariate logistic regression models (rows). The dependent variable is a dichotomous measure of whether or not the policy change was adopted within four years of the time of the survey question. *p<0.1; **p<0.05; ***p<0.01

Table C2: Policy reponsiveness when preferences diverege (>10p), by issue salience.

	Effect (logit coefficient)	Standard error	Predicted probability of policy change at 20% support	Predicted probability of policy change at 80% support	Relative change in probability	N
Low salience (% 'Don't knows' > 13)						
Poor (P10)	0	0.43	0.3	0.3	1	47
Affluent (P90)	0.67*	0.35	0.14	0.52	3.6	47
High salience (% 'Don't knows' < 13)						
Poor (P10)	0.2	0.36	0.18	0.27	1.5	49
Affluent (P90)	1.58**	0.62	0.03	0.7	24.5	49

Note:
Bivariate logistic regression models (rows). The dependent variable is a dichotomous measure of whether or not the policy change was adopted within four years of the time of the survey question. *p<0.1; **p<0.05; ***p<0.01

Appendix D: Analyses with academic survey data included

When examining whose support affects the probability of a policy proposal being adopted, the choice of which policy proposals to include in the dataset is clearly of importance. Gilens' (2012) approach was to use archived survey data originally from commercial pollsters such as "Harris, Gallup, CBS, and *Los Angeles Times*" (Gilens 2012, 57; his emphasis). In Gilens' own words, his sample "constitutes a broadly defined group of policies that plausibly represent the range of issues that were on the public agenda over this time period (...). To the extent that news media and survey organizations tailor their questions to the more prominent policy issues of the day, the set of questions I collected should reflect at least in a loose way the set of concerns that the federal government and the American public were grappling with" (Gilens 2012, 56).

Hence, the rationale is that pollsters tend to ask about relatively salient issues at the time when they are on the public agenda. This is arguably crucial with respect to the 4-year coding window employed in Gilens' research design. This window assumes that the initial date of the question has some substantive meaning. And to the degree that Gilens is correct in his assessment of pollsters asking about salient issues at the time when they are most debated, it has. Therefore, it seems that government would have a fair opportunity to act within a 4-year period after the question was posed.

The simplest way to approximate Gilens' research design in a country like Norway, would be to go the same kinds of sources, that is, pollsters asking survey questions often on behalf of newspapers, and collect survey items for the dataset. And indeed, this is exactly what I have done for the dataset analyzed in the research letter (n=397, excluding constitutional issues and half-adopted proposals).

Additionally however, like two of the three other studies that have used Gilens' research design in other countries, I collected survey items from what we might call academic surveys, such as election studies and surveys made by research centers. While survey items from these sources might satisfy Gilens' criteria pertaining to the content of the question (such as being specific and unconditional), it is important to recognize that the decision by the original surveyor to pose the question hardly follows the sort of logic described above. Questions in such surveys *could* of course be asked based on salience in current debates, but often they are based on more fundamental social science research interests, and specific priorities are usually at the discretion of the researchers administrating the survey. Furthermore, standard "core" policy questions are often asked repeatedly with fixed time intervals for decades. At least this is the case for the Norwegian academic surveys presented below (the Norwegian Election Studies and the Norwegian Citizen Panel). This suggests that policy questions from these sources cannot be expected to reflect "the range of issues that were on the public agenda" for a given time period, in the same way as Gilens' polling data.

Empirically, the academic and commercial survey data are somewhat different. Look-

ing at Table D1 we see, just as expected, that the academic surveys repeat the same questions twice as often as the commercial (42 percent non-unique vs. 21 percent in the commercial), and that they contain three times as many "gradual" questions ("reduce", "increase", "expand", etc.) as the commercial (36 percent vs. 12 percent). The latter could be important since these proposals clearly have a lower threshold for getting adopted than other proposals (e.g. any increase, no matter how small, would count as adoption of a proposal about increasing the number of soldiers in Afghanistan).

When combining the academic and commercial survey data, the results show somewhat less unequal responsiveness across income groups when using a 10 percentage point cutoff for preference divergence (see Table D3). However, when using multiple different cutoffs, the overall pattern is quite similar to the results without the academic data (cf. Figure D1 and Figure B1).

Table D1: Differences and similarities between commercial and academic survey data

	Data source	
	Commercial survey	Academic survey
N (policy propals)	431	172
Mean support P10	0.47	0.49
Mean support P50	0.46	0.48
Mean support P90	0.46	0.48
Mean absolute support distance (P10,P90)	0.11	0.09
Share of policies adopted	0.25	0.25
Share of gradual questions ('reduce', 'increase', 'expand', etc.)	0.12	0.36
Share of proposals asked about more than once	0.21	0.42

Table D2: Policy responsiveness by income, when including the data from academic surveys (Norwegian Election studies 1969-2013, and the Norwegian Citizen Panel 2013-2014; not included in the data presented in the main maunscript).

	Effect (logit coefficient)	Standard error	Predicted probability of policy change at 20% support	Predicted probability of policy change at 80% support	Relative change in probability	N
All	0.53***	0.09	0.15	0.43	2.9	557
Income percentile						
P10	0.41***	0.09	0.17	0.39	2.3	557
P30	0.45***	0.09	0.16	0.4	2.5	557
P50	0.5***	0.09	0.15	0.41	2.7	557
P70	0.56***	0.09	0.14	0.44	3.1	557
P90	0.61***	0.09	0.13	0.46	3.4	557

Note:

Bivariate logistic regression models (rows). The dependent variable is a dichotomous measure of whether or not the policy change was adopted within four years of the time of the survey question. *p<0.1; **p<0.05; ***p<0.01

Table D3: Policy responsiveness when preference diverege by more than 10 points, when including data from academic surveys.

	Effect (logit coefficient)	Standard error	Predicted probability of policy change at 20% support	Predicted probability of policy change at 80% support	Relative change in probability	N
Poor vs. affluent						
Poor (P10)	0.27	0.16	0.22	0.37	1.7	231
Affluent (P90)	0.96***	0.2	0.1	0.62	6	231
Middle vs. affluent						
Middle (P50)	0.43*	0.25	0.18	0.42	2.3	137
Affluent (P90)	0.98***	0.27	0.1	0.63	6.3	137

Note:
Bivariate logistic regression models (rows). The dependent variable is a dichotomous measure of whether or not the policy change was adopted within four years of the time of the survey question. *p<0.1; **p<0.05; ***p<0.01
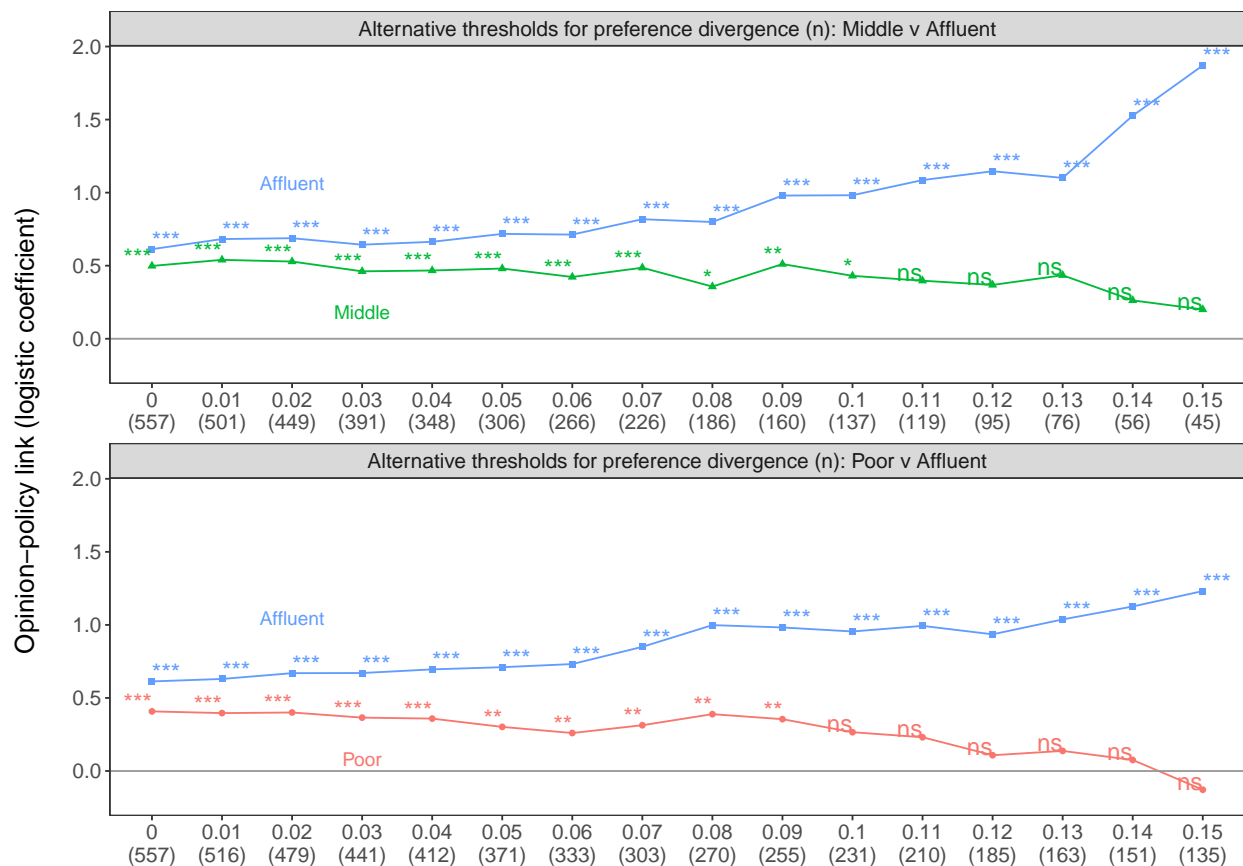
Figure D1: Alternative cutoff-points for the preference divergence between income groups, when including the academic survey data.*p<0.1; **p<0.05; ***p<0.01.

Appendix E: The role of education

In order to impute the preferences of income/education combinations I ran OLS regression models based on a variance/covariance matrix for each policy question. Just like Gilens' data, my data has an aggregate structure which lacks information about the covariance between income and education; information that is necessary to estimate the joint effect of the two on policy support. Gilens calculated the covariance between education and income for the period under investigation using the General Social Survey. For Norway, I calculated the covariance over time using the Norwegian Election Studies, since this is the only Norwegian surveyor (to the best of my knowledge) asking about income and education all the way back

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to the 1960's. I calculated the covariance between household income and education in each election study from 1965 to 2013. Since the survey is only performed in tandem with elections, I imputed the covariances for the in-between years using locally estimated scatterplot smoothing (LOESS). I then had all the information required to impute the preferences of income/education percentile based on OLS regressions on a variance/covariance matrix for each question.

One issue that arose was that since both Gilens and I use logit-transformed percentages in the analysis, imputed values cannot exceed 1 or go below 0 (if that is the case they cannot be logit-transformed). If the imputed percentages were based on logistic regression this would not be a problem, but since they are based on OLS on a variance/covariance matrix they can, theoretically, go outside the 0-1 range. On 8 proposals in my dataset, this is the case for one or more of the income/education combinations. One solution here would be to just drop these observations. However, this would not be wise, for the very reason that these are proposals where one or more of the income/education groups are very strongly opposed or in favor (that is why they have a predicted support slightly below 0 or above 1). In order to include these observations in the models, before logit-transforming them, I recoded the ones below 0 to 0,0001 and those above 1 to 0,9999. This way they are registered as the ones with the strongest (weakest) support for the relevant group, but still within the 0-1 range. As a robustness check I also ran the models while excluding these observations; results were basically unchanged. I also ran the models without logit-transforming the percentages so that negative values and values above 1 could be included. Also here results were essentially the same.

Table E1: Policy responsiveness to income/education percentile.

	Effect (logit coefficient)	Standard error	Predicted probability of policy change at 20% support	Predicted probability of policy change at 80% support	Relative change in probability	N
Education P10						
Income P10	-0.03	0.09	0.3	0.29	0.9	265
Income P50	0.01	0.12	0.29	0.3	1	265
Income P90	0.18	0.11	0.25	0.35	1.4	265
Education P50						
Income P10	0.09	0.14	0.27	0.32	1.2	265
Income P50	0.3*	0.15	0.21	0.39	1.8	265
Income P90	0.47***	0.14	0.18	0.44	2.5	265
Education P90						
Income P10	0.43***	0.16	0.19	0.43	2.3	265
Income P50	0.59***	0.16	0.15	0.49	3.2	265
Income P90	0.54***	0.13	0.16	0.47	2.8	265

Note:
Bivariate logistic regression models (rows) for 9 combinations of education and income percentile. The support among an income/education combination is the logit-transformed imputed percentage of respondents favoring the policy change in that income/education combination. Included are policy proposals with minimum 10 point preference divergence between the 90th and 10th income percentiles or 90th and 10th education percentiles. The dependent variable is a dichotomous measure of whether or not the policy change was adopted within four years of the time of the survey question. *p<0.1; **p<0.05; ***p<0.01

Appendix F: Data collection and imputation

Survey items for the dataset were selected based on the selection criteria used by Gilens (see Gilens 2012, 57-60). Consequently, if a question used a Likert scale, it was dicotomized to support/oppose. If a question asked about a policy already in place, responses were reversed so as to indicate support for repealing said policy. Conditional questions were not included.

Also, some survey question have been asked multiple times. Identical questions were included in the dataset as long as they were asked in different calender years.

The dataset consists of survey items originally from five commercial survey companies (TNS Gallup AS, Opinion, MMI (now Ipsos), ACNielsen, and Respons Analyse AS), as well from two academic surveys (The Norwegian Election Study, and the Norwegian Citizen Panel). The commercial survey items were extracted from the opinion poll archive maintained by the Norwegian Centre for Research Data (https://www.nsd.no/meningsmalingsarkivet/search, accessed 25 January 2021).

In coding which policies were adopted by government, the main sources used were the legislative archive Lovdata, and the archive of Norwegian newspapers at Retriever. About half of the data were coded by myself; the other half was coded by a research assistant.

I here describe how the preferences of income groups where imputed. The exact same procedure was followed with regards to education. In order to determine the level of support for each policy proposal among different economic groups, I broke down responses to each survey item by the household income variable used in the relevant survey. However, herein lies a challenge: Different surveys use different cut-off points and numbers of categories for their income variables. This was solved using a 3-step procedure proposed by Gilens (Gilens 2012, 61), which entails the following for each of the survey items: First, the survey's income variable is standardized, by replacing each income category with a percentile score, indicating where on the income distribution respondents in that income group is placed. This score is determined by calculating the share of respondents in each income group, and choosing the percentile midpoint for each group. Second, a logistic regression model is specified, with support for the policy proposal in the survey (1/0) as the dependent variable, and two independent variables: the new standardized income variable, and the same variable squared (to allow for a curve linear relationship between income and probability of supporting the policy). Finally, this model is used to impute the probability of supporting the policy for the desired income percentiles.

Appendix G: Responsiveness by gender

Table G1: Policy responsiveness by gender

	Effect (logit coefficient)	Standard error	Predicted probability of policy change at 20% support	Predicted probability of policy change at 80% support	Relative change in probability	N
All issues						
Men	0.47***	0.11	0.16	0.41	2.6	395
Women	0.36***	0.1	0.18	0.38	2.1	395
When preferences diverge						
Men	0.88***	0.32	0.15	0.67	4.5	98
Women	0.29	0.24	0.28	0.46	1.7	98
Economic policy, preferences diverge between rich and poor						
Men	0.67	0.45	0.16	0.55	3.4	48
Women	1.02**	0.43	0.11	0.67	6.2	48

Note:
Bivariate logistic regression models (rows). The dependent variable is a dichotomous measure of whether or not the policy change was adopted within four years of the time of the survey question. Rows 3 and 4 based on the set of issues where the preference distance between men and women is larger than 10 points. Rows 5 and 6 based on the set of issues where the preference distance between the 10th and 90th income percentile is larger than 8 points (cf. Table A3).*p<0.1; **p<0.05; ***p<0.01 *p<0.1; **p<0.05; ***p<0.01

Appendix H: Demography

Since most of the original polls used when creating my data contained little demographic information besides income, education and gender, Table H1 reports information about survey demography in three waves of the Norwegian National Election Studies that contain information about immigration and some other variables, spread out over the time period of the dataset. The first two waves ask if the repondent was raised abroad, while the third asks

Table H1: Survey demography

Statistic	1965	1989	2013
% Women	49.5	49.6	50.1
% With only primary, lower secondary, or no education	76.1	54.9	9.2
% Married	77.6	60.7	49.7
% Born/raised abroad	0.9	0.9	5.1
Mean age	47.0	43.3	47.7

Note:
Source: Norwegian National Election Studies.

if the respondent was born abroad. Notice the low shares in the first two waves, which are similiar to population stats (provided by the statistics bureau of the Norwegian government) on foreign born citizens around the same time period (1.5% in 1970, 3.4% in 1989, 11.7% in 2013; source: https://www.ssb.no/statbank/table/05182/, accessed 28 July 2021).

With regards to the analysis interacting income and education (see in particular Figure 3 in the manuscript, and Section E here), it is helpful to have some information on the prevalence and characteristics of these groups in the population. Hence, I have included two tables based on registry data for Norwegian citizens, using the platform *microdata.no* (a service provided jointly by the Norwegian Centre for Research Data (NSD) and the Norwegian government's statistics bureau; accessed October 5, 2021). Table H2 shows the joint distribution of income and education in the Norwegian population. While the analysis in the manuscript uses policy support at specific percentiles (i.e. points in a distribution), in order to get a sense of the prevalence of different income/education combinations, we must use some set of brackets. Education is difficult to bracket in the microdata because the education variable only consists of eight categories. However, it is possible to get three groups of roughly equal size if we define the first as *incomplete upper secondary or lower* (37%), the second as *completed upper secondary* (30%), and the third as *higher educated (with or*

without degree) (34%). The income variable is easier to work with (since it measures the exact numeric personal annual income) and can be split into terciles. As expected, the most common combinations are high income/high education (18 percent), and low income/low education (19.4 percent). Less common are the combinations high income/low education (4.9 percent) and low income/high education (5.9 percent).

To get a better sense of what sort of people are at the high/low and low/high combinations of income and education, Table H3 provides information on the occupational distribution of these groups. When it comes to the people with high education, but low income, they are most clearly overrepresented among sales and service workers (38%, vs. 23% in the overall population), under which the largest sub-category is personal care workers (17%, vs. 11%). They are also overrepresented among professionals (29%, vs. 26%), and particularly so within the sub-category teachers (13%, vs. 7%). The people with low education, but high income are overrepresented among managers (15%, vs. 9%), but also quite overrepresented among plant and machine operators (17%, vs. 6%). Despite some differences from the overall population, however, it is clear that both of these groups are quite heterogeneous. It therefore appears unlikely that such differences would be driving much of the reported effects. If anything, one could expect the overrepresentation of managers in the high income/low education group to give them more influence. Still, the opinion-policy link for this group is rather weak.

Table H2: Combinations of income and education in the Norwegian population

	Income			Sum
	Low	Middle	High	
Education				
Low	19.4	12.5	4.9	36.7
Middle	8.0	11.2	10.5	29.7
High	5.9	9.6	18.0	33.6
Sum	33.3	33.3	33.3	100.0

Note:

Entries are percentages of total population. Source: microdata.no. Registry data for 4,250,361 individuals. Low, middle, and high education refer to 'incomplete upper secondary or lower', 'completed upper secondary', and 'higher educated (with or without degree)' respectively. Low, middle, and high income refer to the bottom, middle, and top income tercile.

Table H3: Occupational distribution for different combinations of income and education

	Percent who hold occupation (%)		
	Population	High edu, low inc	Low edu, high inc
Occupation (ISCO-08)			
Managers	8.9	1.8	15.0
Professionals	25.5	28.6	8.7
Technicians and associate professionals	14.7	11.4	18.6
Clerical support workers	6.7	8.5	10.3
Service and sales workers	22.5	37.6	13.9
Skilled agricultural, forestry and fishery workers	0.7	0.7	1.2
Craft and related trades workers	8.3	1.3	10.2
Plant and machine operators, and assemblers	6.3	1.9	16.6
Elementary occupations	4.8	7.2	4.9
Armed forces and unspecified	1.4	1.1	0.7
Total	100.0	100.0	100.0

Note:

Source: microdata.no. Registry data for 2,420,335 individuals who are currently registered with an occupation. Low and high education refer to 'incomplete upper secondary or lower' and 'higher educated (with or without degree)' respectively. Low and high income refer to the bottom and top income tercile.

Appendix I: Data access

The data included in the replication materials at Harvard Dataverse include all but the original survey data files used to construct the opinion-policy dataset analyzed in the paper, as well as some of the tables in the appendix. The original survey data for the opinion policy dataset are subject to restricted access, and cannot be shared in the Dataverse. Researchers who want to replicate the construction of the finalized dataset can get access to all the original survey files by contacting the data provider Sikt - Norwegian Agency for Shared Services in Education and Research (email: bestilledata@sikt.no). Researchers should then request access to all the datasets listed in the document "Names of policy survey items, by dataset name" in the replication materials.

The data used for Tables H2 and H3 come from microdata.no, an online database of registry data on Norwegian citizens. It is fairly simple to gain access to the database as long as you are affiliated with a Norwegian university: "Researchers, PhD- and master's students at Norwegian universities, colleges, researchers at approved research institutions in Norway, and employees in ministries and directorates can access microdata.no. Access for end users is arranged by the campuses / institutions / employers themselves after having signed an institutional access contract with microdata.no. The institution sends e-mail to microdata@ssb.no and requests access. It is not necessary to apply. Everyone who meets the requirements gets access." (source: https://www.microdata.no/en/bli-bruker/). However, as of 1 June 2022 there is not yet a way for scholars based in foreign universities to access the database: "microdata.no is working with access solutions for users at international universities and research institutions." The raw data on microdata.no cannot, for privacy reasons, be exported. They must be analyzed using the online analysis tool. Within this analysis tool, it is possible to create and save code scripts. The replication materials include the code necessary to recreate Tables H2 and H3.

The data for Table H1 is from the Norwegian National Election Surveys. These are part of the original survey data material for the finalized dataset and can be accessed as

described above.

References

Gilens, Martin. 2012. *Affluence and influence: Economic inequality and political power in America.* Princeton: Princeton University Press.

Schakel, Wouter, Brian Burgoon, and Armen Hakhverdian. 2020. "Real but unequal representation in welfare state reform." *Politics & Society* 48 (1): 131–63.

Article 2

Taxing the 1 percent: Public opinion vs. public policy

Manuscript: 8,970 words. Abstract: 149 words.

Abstract

Recent studies suggest that public policy in established democracies mostly caters to the interests of the rich and ignores the average citizen when their preferences diverge. I argue that high income taxation has become a clear illustration of this pattern, and I test the proposition on a least likely case: Norway. I asked Norwegians to design their preferred tax rate structure, and subsequently matched their answers with registry data on what people at different incomes actually pay in tax. I find that within the top 1 percent, tax rates are far below (as much as 23 percentage points) from where citizens want them to be. A follow-up survey showed that this divergence is entirely driven by capital incomes being taxed too low. My results suggest that even in a fairly egalitarian society like Norway, the rich get away with paying considerably less in tax than what people deem fair.

Introduction

Research on the link between public opinion and public policy in formal democracies has established two important insights: public policy often adheres to aggregate public opinion, but when affluent citizens and the average citizen diverge in their preferences, government tends to follow the former and ignore the latter (Gilens 2012; Gilens and Page 2014; Bartels 2016; Jacobs and Page 2005; Rigby and Wright 2013; Elsässer, Hense, and Schäfer 2017; Schakel 2021). For the United States, the most studied case to date, these conclusions were not shocking given its unusually high economic inequality and the role of money in election campaigns (Ferguson, Jorgensen, and Chen 2015; Piketty 2014). What is perhaps more surprising is that similar studies have found much of the same results in other—presumably more egalitarian—Western countries, such as Germany (Elsässer, Hense, and Schäfer 2017) and the Netherlands (Schakel 2021). A number of cross-national studies have also concluded that public spending in the OECD overall is tilted towards the preferences of the rich (Peters and Ensink 2015; Bartels 2017; Giger, Rosset, and Bernauer 2012).

While these insights are highly valuable, we still lack knowledge about which specific policies are most affected by unequal political influence. That is: if the rich hold disproportionate influence over the policy making process, which policies is it that, as a result, deviate the most from what ordinary citizens want? Studies of political representation are usually not able to answer this question, either because they study policy *changes*, thus capturing responsiveness at the margins, and not overall bias (Gilens 2012; Elsässer, Hense, and Schäfer 2017; Schakel 2021); or simply because opinions and policies are measured on incomparable scales (see Simonovits, Guess, and Nagler 2019 for more on these limitations).

In this paper, I explore the case of high income taxation. To the extent that the rich exert disproportional influence on politics, high income taxation is one of the areas where one would expect this to manifest most clearly. High income taxation directly curtails the power resource of the rich by reducing their accumulation of wealth. This makes taxation a potential threat, which will usually be countered with varies sorts of "income defense"

strategies. In most societies, the rich will use their vast resources to try to influence policy in such a way that they keep as much of their income flow as possible (Winter 2011).

The question is whether the institutions of democracy, in the face of such special interests, still manages to ensure that public policy adheres to public opinion. To shed light on this question, I study the case of Norway. Norway is usually considered to be a well-functioning, egalitarian democracy with strong unions giving voice to the working class (EIU 2020; Allern, Aylott, and Christiansen 2007). Norway therefore provides a useful *least likely* case, because if high income taxation is out of tune with the preferences of ordinary citizens here, one would hardly expect the situation to be much better in other affluent countries—where, presumably, political influence is more unequally distributed.

To begin with (**Study 1**), I compare the long-run evolution of the top marginal income tax rate in Norway since the 1960's, with opinion surveys implemented at key moments in the timeline—that is, right before major changes occurred. This analysis already reveals that decisions taken to substantially reduce the top marginal rate had limited, and usually very low, popular support.

Zooming in on the current tax system (**Study 2**), I fielded a survey where I asked Norwegians to freely design their preferred income tax structure by setting rates for a group of imaginary tax payers with annual incomes ranging from low (ca. $11,000) to extremely high (ca. $11 million). Their answers were matched with registry data on what the same kinds of tax payers actually pay in income tax. I show that while actual tax rates in the bottom 99% are quite close to where citizens want them to be, tax rates in the top 1 percent are far off: On average, citizens want one-per centers to pay around 45 percent in income tax, considerably higher than their actual tax burden, which is around 30 percent (according to the probably conservative estimates used in this article). What is more, while citizens, unsurprisingly, prefer a progressive tax structure, actual effective tax rates are *regressive* towards the top. This means that the opinion-policy divergence increases *within* the 1 percent, reaching a striking 23 percentage points for the highest income evaluated by respondents.

Finally, using a follow-up survey (**Study 3**), I show that the disconnect between actual and preferred tax rates at the top of the income distribution is entirely driven by preferential taxation of capital incomes. In most countries—including Norway—people at the top of the distribution predominantly get their incomes from capital investments. Such incomes are usually subject to flat, preferential tax rates, whereas labor is taxed at higher and progressive rates. When asked to set tax rates for labor incomes and capital incomes respectively, the average citizen preference on labor income taxation was largely in line with how labor incomes are actually taxed. The preference on capital income taxation, however, was much more progressive, and higher for top incomes, compared to how capital incomes are actually taxed. I discuss possible explanations for my findings in the final section of the paper.

High income taxation in the 21st century: Out of tune with public opinion?

In a 2007 interview, multi-billionaire Warren Buffet said that he paid less in income tax, as a fraction of his income, than his secretary.[1] Perhaps contrary to some peoples' expectation, this was not due to tax avoidance or elaborate tax planning. Rather it was a result of how the US tax system is designed: Buffet gets most of his income from dividends and long-term capital gains, which are taxed considerably lower than labor income.

The Buffet-story is no anomaly. In their book, the *Triumph of injustice* (2019), Emanuel Saez and Gabriel Zucman used an impressive dataset based on tax returns, survey data, and national accounts to show that the structure of the US tax system constitutes, in their words, "a giant flat tax that becomes regressive at the top". Studies using similar kinds of data have found much the same structure in France (Bozio et al. 2018) and Europe

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[1]Buffet had calculated that the effective tax rate he payed on his income was 17.7 percent, while the average tax rate for employees in his office was 32.9 percent (https://www.theguardian.com/business/2007/oct/31/usnews, accessed 25 May 2022).

in general (Blanchet, Chancel, and Gethin 2020). In *Capital in the twenty first-century,* Thomas Piketty writes that because of increasing cross-national tax competition, "in most countries taxes have (or will soon) become regressive at the top of the income hierarchy" (Piketty 2014).

Observers often point to two reasons for the decreasingly progressive income tax systems in rich countries. The first is the gradual reduction of the top marginal income tax rate (Piketty 2020, 445–56). In the 1960's, most rich countries had top marginal tax rates above 60 percent (in the US and UK it was above 80 percent). These rates have been gradually cut to levels closer to 40 percent, making statutory rates less progressive (Piketty, Saez, and Stantcheva 2014).[2]

The second reason is preferential taxation of capital income. The truly wealthy get most of their incomes not from work, but from returns to capital. Saez and Zucman (2019) describe this as "a constant of capitalist societies: as one moves up the income ladder, the capital share of income rises until it reaches 100% at the tip-top". The implication is that "[w]hen governments reduce the tax burden on capital, they almost always reduce taxes for the wealthy" (Saez and Zucman 2019, 97). And indeed, the tax burden on capital has been reduced substantively in recent years. For example, Genser and Reutter (2007) note that dual income taxation—where labor income is taxed progressively, and capital incomes at flat, preferential rates—"has become an important blueprint for income tax reforms in Europe". The duality can easily be observed for the OECD as a whole: while the average top marginal *labor* income tax rate in 2020 is 44.5 percent, the average top tax rate on long term capital gains is 19.1 percent.[3] Preferential treatment is also common for other types of capital income, such as dividends, and interest on bank deposits (Harding and Marten 2018).

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[2]See Figure A1 in the Appendix

[3]Labor tax rate includes employee social security contributions. Mean calculated based on *Table I.7. Top statutory personal income tax rates* at stats.oecd.org. Capital gains tax from https://taxfoundation.org/savings-and-investment-oecd/. Both accessed October 27, 2021.

The median voter model

Is the structure of the modern income tax system, particularly with respect to the tax level for the very wealthy, in line with what the public wants? Although flat taxes that become regressive at the top might seem unattractive, it cannot be ruled out that this outcome is a result of policy makers following the will of the public. If not directly (as in the public is pushing for a regressive system), then perhaps as a result of several tax policy changes supported by the public that together make the system flat or regressive—such as the cutting of top marginal rates, or preferential treatment of capital income. There are at least three potential reasons for this.

First, from the perspective of the classic median voter theorem (Black 1948; Downs 1957)—which posits that parties will gravitate towards the policy preferences of the median voter—the public should be fully able to shape the tax system according to its preferences. The Meltzer-Richard model for example (Meltzer and Richard 1981; Romer 1975), which builds on the median voter theorem, implies that the progressiveness of the income tax will be decided by the voter with median productivity (income). Although the multidimensional of politics means that this model might not work as smoothly in practice as in theory, if citizens care strongly about taxes (which is typically the case), we should see a fairly close relationship between policy and average public opinion.

Second, we know that citizens sometimes favor tax policy choices that mostly benefit the very wealthy and make the overall tax system less progressive. Some examples of this from the US include public support for some of the Reagan tax cuts in the 1980's, and the Bush tax cuts in the early 2000's (Gilens 2012, Chapter 6-7). In a very different case, Sweden, the inheritance tax was abolished in 2004 with substantial popular support (Henrekson and Waldenström 2016), and in a later survey only around 41 percent favored reinstating it with a high exemption threshold (Bastani and Waldenström 2021). Furthermore, in a cross-national survey of five Western countries, Alesina, Stantcheva, and Teso (2018) found that in none of the countries was the estate tax supported by more than a third of respondents

(even though it only affects a small fraction of the population). Many studies have suggested that such preferences could partially stem from misinformation (Slemrod 2006; Kuziemko et al. 2015; Bartels 2005), or policy options that are too narrowly defined (Hacker and Pierson 2005). Nevertheless, whether by misinformation or manipulation, these still were the expressed preferences of the public within the specific context in which these questions were debated.

Third, periods in which the tax system has been made less progressive has sometimes coincided with clear shifts in the voting behavior of the electorate. Many of the changes in high income taxation in North America and Europe happened during the 1980's when right wing parties where bolstering impressive election results, while social democrats had started to decline—and still are (Benedetto, Hix, and Mastrorocco 2020). Furthermore, tax policy was not a hidden issue, but rather some of the main talking points for politicians such as Ronald Reagan and Margareth Thatcher. Even seemingly controversial policies, such as cutting taxes for the rich, were openly embraced by right-wing parties under the justification that this would produce economic growth, which would "trickle down" on the less well off. Regardless of the validity of such claims, it would not be surprising if substantial numbers of these parties' voters accepted them as fact and therefore supported tax changes that made the system less progressive. Hence, such changes might have reflected the wishes of right-wing voters, if not the average citizen.

The disproportionate influence of the wealthy

The median-voter perspective has some important limitations though. As Alesina and Giuliano (2011) rightly point out, "the main failure of this model relies on the simplistic assumption about the policy equilibrium, namely the one person one vote rule and the median voter result". There is a diversity of political science research showing that even in formally democratic societies, rich citizens can achieve much more influence than what their "one vote" would entail. For example, they might help their favorite political candidates win by

contributing to their election campaigns (Ferguson 1995; Ferguson, Jorgensen, and Chen 2019); finance lobby groups that voice their views (Coen, Katsaitis, and Vannoni 2021); or simply stop investing in the economy, pressuring government to adopt policies inducive to continued investment (Przeworski and Wallerstein 1988; Young, Banerjee, and Schwartz 2018). And indeed, there is an increasing number of studies showing that proposed policy changes are much more likely to be adopted if they are favored by the affluent, than if they are favored by the middle-class or the poor (Gilens 2012; Gilens and Page 2014; Elsässer, Hense, and Schäfer 2017; Schakel 2021). Hence, public policies might end up at very different places than they otherwise would have if the median voter really decided.

One would expect high income tax policy to be particularly vulnerable to such distortions. As a policy area, it is uniquely relevant for the wealthy because their material interests are so clearly opposed to the rest of the public. That is, issues of economic incentives aside, taxes on the highest income earners entail costs exclusively for them, and benefits to the rest of the public through increased tax revenue. Previous research has emphasized that it is precisely on these types of issues, where preferences gaps are large, that unequal responsiveness will have the clearest effects on public policy (Gilens 2009).

Furthermore, we know from public opinion research that attitudes towards taxation tend to be heavily influenced by self-interest, at least when personal cost and benefits are clear (Franko, Tolbert, and Witko 2013; Chong, Citrin, and Conley 2001). This would suggest that if policy influence is mainly concentrated at the top of the income/wealth distribution (which is what some research has found; see for example Gilens 2012, 82), then that influence would be used to reduce taxes specifically at the top, possibly resulting in the observed tax rate regression for top earners. Additionally, income taxes, particularly those affecting capital, are quite prone to international competition in a world of free flowing capital. In fact, in a review of the literature, Fuest, Huber, and Mintz (2005) note that "[m]uch economic analysis has viewed that capital taxes will disappear if real capital is perfectly mobile at the international level". While this might be an exaggeration, there is

good evidence that there has at least been a partial "tax race to the bottom" (e.g. Clausing, Saez, and Zucman 2021; Lierse 2021; Keen and Konrad 2013). Hence, governments might experience pressure to cut taxes at the top, not only from the wealthy in their own country, but from multinational companies and investors who are relatively free to move capital to the places where they are taxed the least.

A least likely case: Norway

While tax policy, in a context of political inequality, might be particularly prone to favor the interests of the wealthy over the general public, it is unclear how universal this pattern is likely to be. In this article, I examine the case of Norway, which could be considered a least likely case to find such a pattern. Therefore it is particularly illuminating for the question at hand, because if tax policy deviates much from public opinion here, it seems unlikely that the situation would be much better in other cases. There are several reasons for this. First, Norway is commonly viewed as one of the most well-functioning democracies in the world. For example, in the *Democracy Index* by the Economist Intelligence Unit, Norway has been ranked the most democratic country in the world every single year since 2010 (EIU 2020). Norway also has long had comparatively strong unions that serve as a counterweight to business influence in the policy making process. In addition, there are limited possibilities for using money to influence election results, since political advertisement on television is banned. Possibly a testimony to a combination of these institutions, a recent study of Norway comparing public opinion and public policy on hundreds of concrete policy proposals over a fifty year period, found that government appears to have responded to the preferences of both high- and low-income citizens on issues of economic policy. Furthermore, income did not appear to be as strong a predictor of political influence as education. Nevertheless, because of the particular relevance that high income taxation holds for the wealthy, it might be that they are still able the muster the influence that they do have to shape policy in this

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area, even in a relatively egalitarian context like Norway.

Study 1: The evolution of the top marginal income tax rate

I begin the empirical analysis by following in the footsteps of previous studies of policy responsiveness. Hence, I examine to what extent *changes* in the top marginal income tax rate over time has reflected public opinion.

Methods

For such an analysis one needs survey data collected at strategic points in time, preferably right before major changes occur. Most of the reductions in the top marginal income tax rate in OECD countries—including in Norway—took place between 1975 and 2000. While survey questions asking specifically about the top marginal rate are surprisingly hard to come by in this period (for any country), the Norwegian National Election Surveys (NNES), luckily, have asked respondents since 1965 about the general tax level on "high incomes". Sample sizes vary from 1,600 to 2,200 between the surveys. The following question was asked, with minor linguistic variations, in 1977, 1981, 1985, 1989, 1993, and 1997: "Using one of the answers on this card, how do you view... Lowering taxes on high incomes?". From 1977 to 1989, respondents answered on a bad proposal-good proposal 5-point scale, while in 1993 and 1997 they answered on an disagree-agree 5-point scale. For the analysis below, support is calculated as the percentage of respondents who chose one of the options above the neutral midpoint of the scales, don't knows excluded. The question in 1965 is a bit different,[4] but still asks about the tax level on high incomes, making it roughly comparable to the question in later waves.

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[4]It asks: "Do you think that our current tax rules are fair or do you think that the tax affects people with somewhat higher incomes unreasonably hard?". Respondents answered either "Current rules fair" or "Too high progression". I use the latter to measure support for cutting high income taxation.
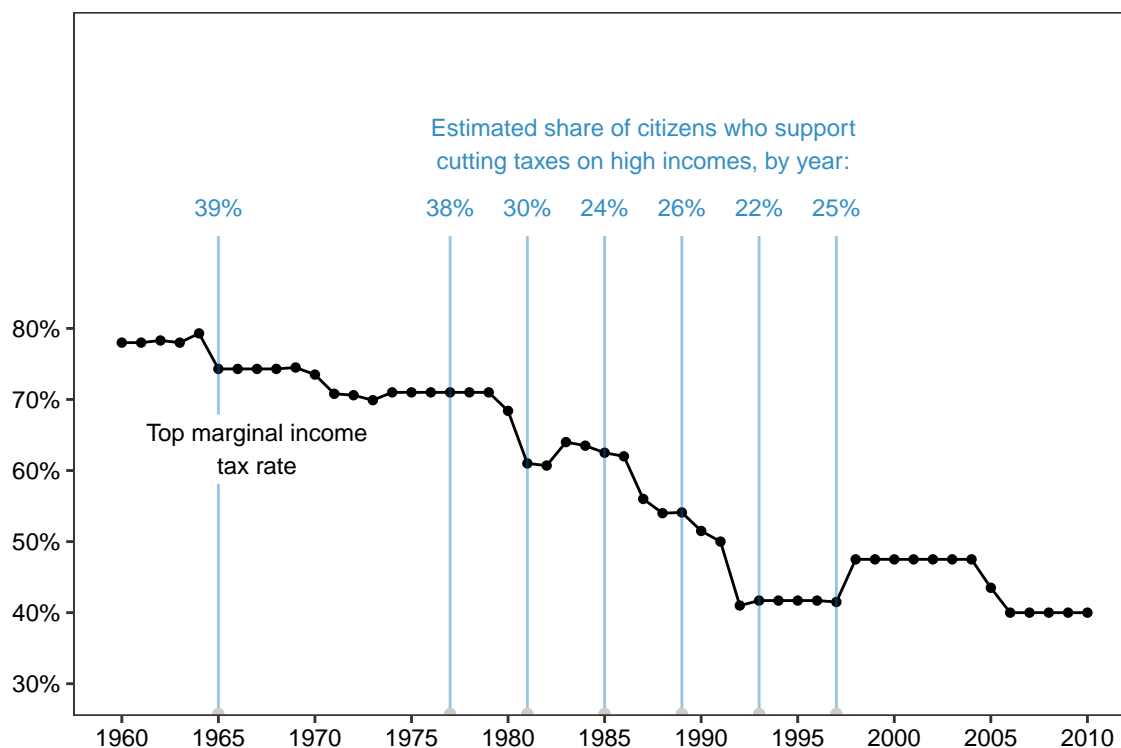
Figure 1: The top marginal income tax rate, and popular support for cutting taxes on high incomes, over time. Source: Tax rates from Piketty, Saes, and Stantcheva (2014). Public opinion estimates from Norwegian National Election Studies (1965-1997).

Results

Figure 5 shows the evolution of the top marginal income tax rate in Norway. In addition, it shows the estimated share of Norwegians who support cutting taxes on high incomes in each of the relevant National Election Studies. These are marked with vertical lines. A couple of things are noteworthy. First, there was never majority support for cutting taxes on high incomes. Not even in 1977, at the start of the supposed "turn to the right", was this the case. In fact, support was just below 40 percent both in 1965 and in 1977, which was the highest that it ever got. From 1981 onward, no more than a third of citizens supported further cuts. Second, despite of this fact, the top marginal income tax rate was slashed from around 80 percent to 40 percent over the period. During the course of the 1980's alone it was cut 20 percentage points, and with the tax reform of 1992 it was reduced by an additional 10 points. Quite clearly, these vast changes in high income taxation were not what the average citizen
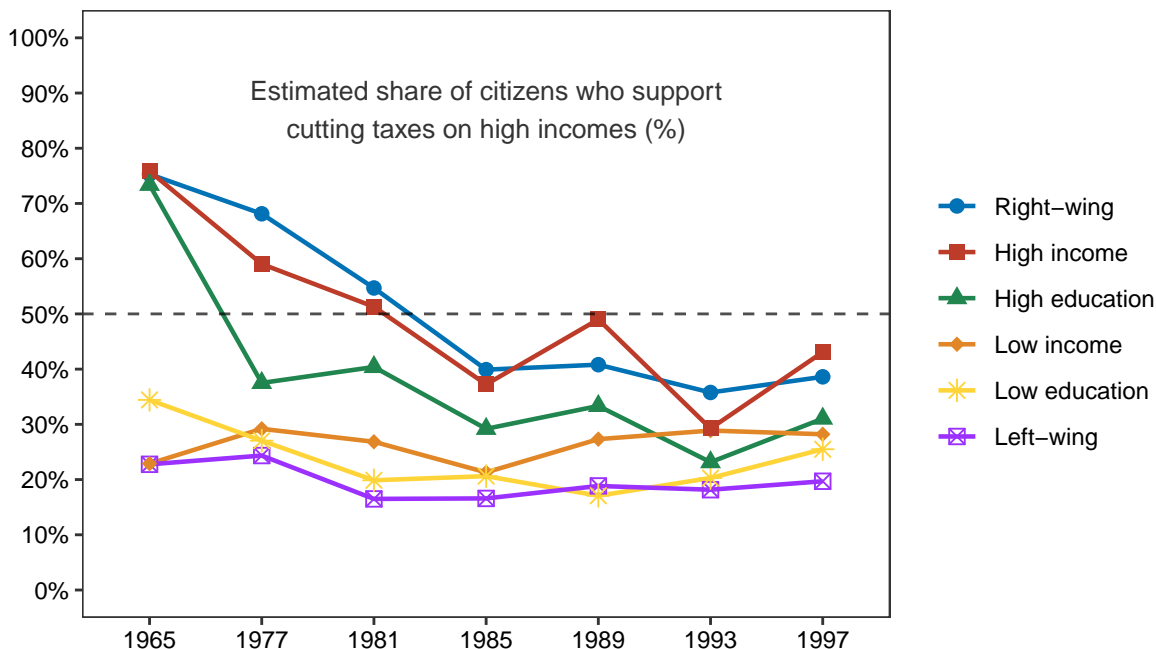
Figure 2: Support among different sectors of the public for cutting taxes on high incomes.

wanted. The question then becomes, were these policies more in line with the preferences of certain sectors of the public?

Figure 6 shows over-time estimates of support for cutting high income taxes among six different social groups.[5] Just as one would expect, high income citizens are more keen on cutting high income taxes than low income citizens. However, among the affluent there was only majority support for cutting the rate in the 60s and 70s. during some of the major cuts in the 80s and 90s, only about a third supported it.

Another possibility is that these changes responded to demands from right-wing voters. However, this explanations only seems to be plausible for the initial tax cuts of the early 80's. Looking at support by political orientation (Figure 6) reveals that while left-wingers have been quite stable over time in their opposition towards tax cuts for high incomes, there

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[5]The estimates are based on OLS-models on a pooled dataset (NNES 1965, 1977-1997; n=13,573), where the variable of interest is interacted with a categorical survey-wave variable. In each wave, the income variable was transformed to represent income deciles (i.e. ten equally sized categories from lowest to highest). Right-party voter refers to respondents who reported voting for the Conservative Party or the Progress Party in the latest election. Left-party voter refers to the Labor Party, Socialist Left, Norwegian Communist Party and Red Electoral Alliance.

has in fact been a radical shift among right-wingers. In 1965 and 1977, strong majorities on the right (>70 percent) did indeed favor tax cuts for the rich. However, already in 1985 the majority within this group had shifted, and support was down to around 40 percent. During the course of only 8 years (from 1977), right-wing support fell by a whooping 30 percentage points. These results suggest that while right-wingers likely supported the initial high income tax cuts of 1981 (bringing the top marginal rate down to about 60 percent), not even they wanted the subsequent cuts of the late 80's and early 90's.

Study 2: Preferred tax rates vs. actual tax rates

Having established in Study 1 that the reductions in the top marginal income tax rate over the past half century had limited, and usually very low, popular support, Study 2 addresses the natural follow-up question: To what extent is the current tax system in Norway congruent with the preferences of Norwegian citizens when it comes to the tax burden on high earners?

Methods

Answering this question requires two types of data: A measure of citizens' preferred tax rates for a set of incomes (including the highest earners), and a measure of the actual effective tax rates payed at those incomes.

To measure citizens' preferred tax rates, I designed a survey which was included as part of the Norwegian Citizen Panel (NCP) Round 19 in November 2020. The NCP is a nationally representative online panel based on randomized postal recruitment from the national registry. My survey was implemented on a sub-sample of 1,990 of the respondents. The following vignette was presented to the respondents:

Below, we have listed a number of imaginary people with different annual incomes. A person's income can come from work, investments, or other sources. For each of the imaginary people, please enter what you think the tax rate on

their income should be, i.e. how much of their entire income you think they should pay in income tax. 0% would mean that you think the person should not pay any income tax.

Then followed a list of 10 people identified as *Person A, Person B, etc.*, with annual incomes ranging from 100,000 NOK (ca. 11,000 USD) all the way up to 100 million NOK (ca. 11 million USD). Unlike previous tax preference studies, who usually have not asked about incomes higher than $200,000, in order to capture tax preference on the truly high incomes, I here included incomes that go all the way up to the 0,01% of the income distribution.[6] Next to each person was a blank space where the respondent could write any tax rate from 0 to 100 (with decimals if they wanted).

Respondents were randomly assigned to either view the list from the lowest earner to the highest, or from the highest to the lowest. A comparison of the average tax rates set by the two groups shows that the order effect was very limited (see Figure A4)[7] Additionally, citizens were asked what they believe to be the current effective tax rate for a randomly chosen income.[8] This is done mainly so that tax knowledge can be controlled for when estimating whether actual tax rates are closer to the preferences of certain groups of citizens.

To measure what people actually pay in tax, I ordered data from Statistics Norway, which is the national statistical body in Norway and the main producer of official statistics.[9] They maintain registry data based on tax returns for all Norwegian citizens. They provided data from 2018 on taxes payed around the same ten levels of income as those evaluated by

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[6]Zelenak (2008) (372) notes: "As far as I have been able to discover, no survey has ever asked about the maximum fair tax burden for any specified dollar amount of income above $200,000." The more recent study, Ballard-Rosa, Martin, and Scheve (2017), asks about higher amounts, but only up to $375,000.

[7]Specifically, the concern is that if respondents who prefer a strictly progressive tax structure are asked to set rates from lowest to highest, they might end up with higher rates for the top incomes than if they had started at the top. This is because unless such respondents plan all ten rates before-hand, they might end up setting ever higher rates, simply to ensure progressivity. A similar bias could apply for the lowest rates if respondents start at the top.

[8]The following question was put to respondents: "With the current tax system, what do you think the average tax rate is for a person earning [X] kroner a year? In other words, how much of their entire income do you think the person pays in income tax? Here, 0% would mean that you think the person does not pay any income tax on their income." X was randomly replaced with one of the ten annual incomes listed in Table 2. Each respondent evaluated one income.

[9]See https://www.ssb.no/en (accessed 02.08.2021).

Table 1: Effective tax rates for different incomes in 2018

Target annual income (USD)	Approx. point in the income distribution	Interval around target income (USD)	N taxpayers in interval	Income tax as a share of gross income (average %)
$11,000	P5	+/-$1,100	47,651	7.3
$28,000	P10	+/-$1,100	115,402	12.0
$55,000	P40	+/-$1,100	119,141	23.2
$83,000	P65	+/-$1,100	38,830	27.6
$110,000	P85	+/-$1,100	13,805	30.7
$220,000	P97	+/-$5,500	4,455	34.7
$550,000	P99.5	+/-$22,000	853	33.9
$1,100,000	P99.9	+/-$110,000	584	32.0
$5,500,000	P99.99	+/-$1,1 mil.	42	28.5
$11,000,000	P99.997	+/-$3,3 mil.	18	25.1

Note:
Source: Registry data for Norwegian tax payers for the year 2018. The data were compiled by Statistics Norway in January 2021. Income tax is calculated as the sum of all types of income tax paid to municipality, county, and state, as well as National Insurance Scheme members' contributions (details in Appendix). Locations in the income distribution are from the World Inequality Database (https://wid.world/).

respondents in the NCP survey. In order to get robust average tax rates, we constructed intervals around the target incomes to obtain a sufficient number of observations. Naturally, the intervals must be fairly large for the highest incomes since there are very few citizens at those levels. In the data, *income* means all taxable income, including wages, salaries, and realized capital incomes (i.e. interests, dividends etc.).

Table 1 presents effective tax rates for approximately the same income amounts that respondents in the 2020 survey were asked about (details about how these were calculated can be found in the Appendix). Perhaps the most striking feature of the table is that the effective income tax in 2018 was only progressive up to the $220,000 amount. From there one, it was in fact regressive: Tax payers near the two highest incomes (5.5 and 11 million USD) payed less in tax, as fraction of their income, than people earning around $110,000. Importantly however, this regression only applies for incomes at the very top of the distribution (within

the 1 percent). Even though the tax rates at the top intuitively seem rather low compared to the rest of the income distribution, if anything they are probably *overestimated*, since they do not consider unrealized capital gains, and they do not take tax evasion into account, which we know is much more common among top income earners (Alstadsæter, Johannesen, and Zucman 2019). For these reasons, the discrepancies documented below between preferred and actual income tax rates for high incomes, should be viewed as conservative estimates. The real discrepancies are bound to be larger.

Results

Table 2 shows the average preferred tax rate at different levels of income, given by respondents in the Norwegian Citizen Panel.[10] On average, respondents clearly want a progressive tax structure. Average preferred tax rates vary from 5.9 percent for someone earning $11,000 per year, all the way up to 48 percent for someone earning $11,000,000 per year. Interestingly, respondents even want progressivity *within* the top 1 percent of the income distribution (see the 7.2 percentage point difference between the first and last income within the 1 percent in Table 2). However, as shown in Appendix Figure A2 (which plots the full distribution of responses to each income amount), respondents are in more agreement about normal incomes than they are about very high ones. The tax rate standard deviation almost doubles—from 8 points to 16 points—from the lowest to the highest amount (Appendix Figure A3).

How do average preferences square with actual effective tax rates payed by different income groups? Quite well for incomes within the normal range. As Table 2 shows, for the first six incomes listed ($11,000 up to $220,000), average preferred rates deviate at the most 3.2 points from actual rates. This income range represent approximately 99 percent of the income distribution (the bottom 99 percent). However, as one moves up from here, the deviation increases rapidly. On the very highest income ($11,000,000), actual tax payers payed an income tax rate that was 23 percentage points lower than the average preferred rate.

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[10] All estimates from the NCP survey are weighted according the post-stratification weight provided by the surveyor. They are based on gender, age, education, and region of residence.

Table 2: Actual and preferred income tax rates by size of income

Annual taxable income	Average effective income tax rate in 2018 (%)	Estimates from survey % (standard errors in parentheses)	
		Average preferred rate	Difference from actual rate
Bottom 99 percent			
$11,000	7.3	6.0 (0.19)	-1.3 (0.19)
$28,000	12.0	13.8 (0.20)	+1.8 (0.20)
$55,000	23.2	24.1 (0.19)	+0.9 (0.19)
$83,000	27.6	29.5 (0.20)	+1.9 (0.20)
$110,000	30.7	33.9 (0.21)	+3.2 (0.21)
$220,000	34.7	37.8 (0.26)	+3.0 (0.26)
Top 1 percent			
$550,000	33.9	40.9 (0.30)	+7.1 (0.30)
$1,100,000	32.0	43.3 (0.33)	+11.3 (0.33)
$5,500,000	28.5	45.8 (0.37)	+17.2 (0.37)
$11,000,000	25.1	48.1 (0.40)	+23.0 (0.40)

Note:

Survey results are from NCP Round 19 (2020). Each respondent was asked about preferred rates for all ten income sizes, resulting in a total of 17,209 observations given by 1,754 respondents. Actual tax rates are based on registry data for Norwegian tax payers provided by Statistics Norway.
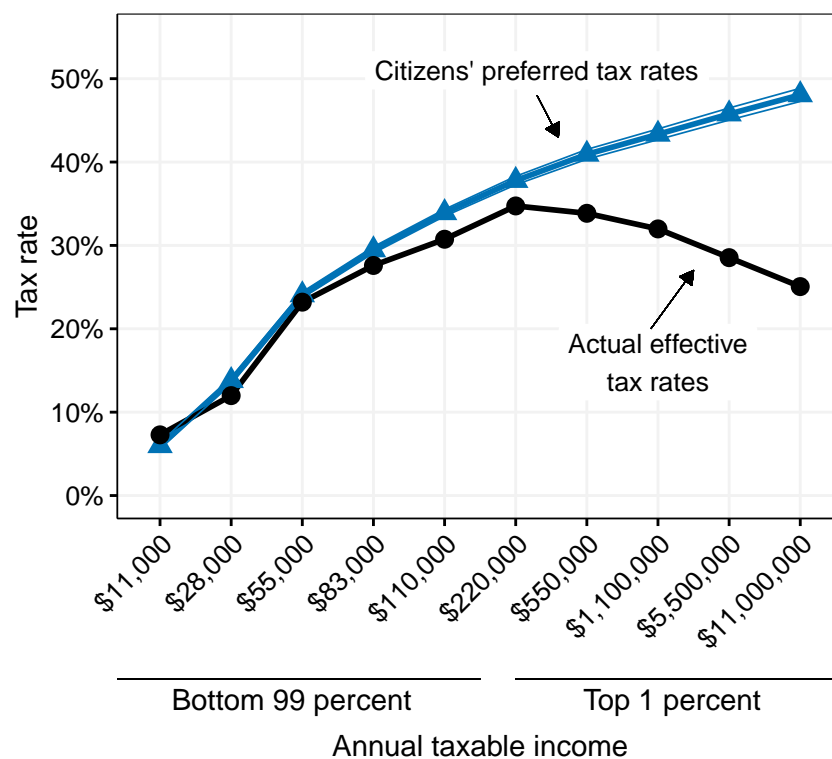
Figure 3: Preferred vs. actual tax rates. Note: Thin lines indicate 95 percent confidence intervals (too small to be visible for some of the triangle line).

This extraordinary discrepancy between public opinion and public policy can be explained by a combination of the popular preference for progressivity beyond moderately high incomes, and the actual reality of tax rate *regression* at the top of the income distribution. The comparison of preferred and actual tax rates are plotted in Figure 1, which shows a "crocodile shape"—that is, a close match followed by rapidly increasing divergence at the top of the distribution. The Appendix contains an extended version of this graph (Figure A11) that also plots what respondents believed were the actual rates when asked to guess. This shows that citizens are largely aware of the discrepancy at the top, but they underestimate the full extent of it.

Does the tax system fit better with the preferences of certain groups of respondents? Figure 4 plots the tax preferences of six social groups based on income, education and political orientation. The figure shows that actual tax rates lie closest to the preference of high-income and right-wing respondents—because these groups favor a somewhat less progressive structure than the others. The highest educated respondents, having the most progressive tax rate preferences, are furthest apart from actual rates. In order to statistically test these differences, I estimated the following OLS model for each income amount on which respondents were asked to provide a tax rate:

$$dev_i = \alpha + \beta_x X_i + \beta_c C_i + \varepsilon$$

Where dev_i is the absolute distance between the actual tax rate and the preferred tax rate for respondent i; X is the group variable of interest; and C is a set of control variables. Control variables include (in addition to the variables already mentions) occupation, age, gender, and region. The model also controls for respondent tax rate knowledge, measured as the absolute distance between their guess for the actual tax rate on a randomly assigned income amount (out of the ten used to measure preferences) and the actual tax rate for that income. The latter is important since we know that citizens partially form their opinions based on current policies (Zaller 1992; Popkin 1991). Therefore, a group of respondents
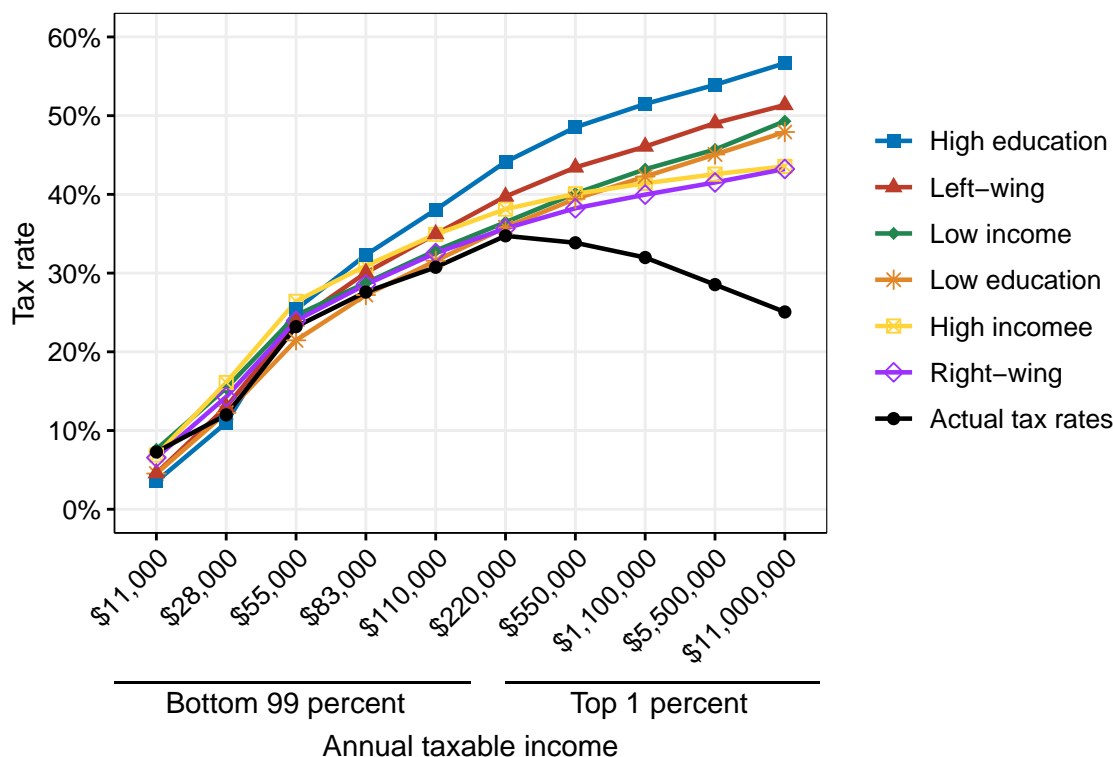
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Figure 4: Preferred vs. actual tax rates for six groups of respondents. Note: High refers to the top 10 percent on a variable's distribution, while low refers to the bottom 10 percent. Left-wing: voted for the parties Labor, Socialist Left, or Red in the last election. Right-wing: voted for the parties Conservative, or Progress.

might appear to have preferences that are closer to the current system merely because they are more aware of how the system looks. This however, is no longer a viable explanation for the results when tax rate knowledge is controlled for.

The model results (shown in Figure A5-A7 in the Appendix) show that after controls, actual tax rates are still closer to the preferences of high-income and right-wing respondents, and farther apart for high-education respondents, for the three highest income amounts. The effects are statistically significant, and effect sizes vary from 2 to 8 percentage points.

Despite these differences however, Figure 4 suggests that there is wide spread agreement across different social groups about the basic structure of the tax system: On average, all six groups agree that tax rates should be no higher than 10 percent for the lowest income amount and at least 40 percent for the highest. In total, 86 percent of respondents set rates

that agreed with the former; 76 percent with the latter. Even if we break down tax preferences by party ID (Appendix Figure A8), the voters off all nine parties (including both the communist party and the populist radical right party) on average prefer a tax rate structure that goes from somewhere below 10 percent to somewhere above 40 percent.

Nevertheless, this is not how the tax system looks. To be sure, for incomes in the bottom 99%, the system is never far off from the preference of any of the groups. Taxes in the 1 percent on the other hand, while they are comparatively closer to the preferences of the right-wingers and the respondents with (relatively) high income, even these groups would prefer a considerably heavier tax burden on the truly rich.

Study 3: Preferential taxation of incomes from capital

The results of Study 2 showed that at the top of the income distribution, there is a substantial discrepancy between how much earners actually pay in tax, and what public opinion wants them to pay. However, by design, Study 2 asked respondents about income tax without specifying its source. In most countries, including Norway, incomes from capital have increasingly been taxed at preferential rates compared to incomes from labor—a major reason for the tax rate regression at the top when looking at all income combined (Saez and Zucman 2019, 19; Genser and Reutter 2007). In the Norwegian system, labor income is taxed progressively from 0 to 46.4 percent (53 percent if one includes employer's national insurance contributions). Capital income is taxed at a flat 22 percent rate. Certain capital incomes—capital gains and stock dividends—are taxed at a somewhat higher effective rate of 31.68 percent.[11] The question that Study 3 addresses is how this system compares to citizens' preferred tax rates on capital incomes and labor incomes respectively.

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[11]See https://www.skatteetaten.no/satser/ (accessed October 27, 2021). When it comes to dividends it is common to report the combined rate of the personal tax on dividends and the corporate tax, assuming that the latter falls completely on the investor. However, economists who have studied the incidence of the corporate tax often find that most of it falls on labor wages. A recent review of the literature noted that "[t]hese studies appear to show that labor bears between 50 percent and 100 percent of the burden of the corporate income tax, with 70 percent or higher the most likely outcome" (Enthin 2017).

Methods

I did a follow-up survey of Norwegian citizens through the survey company YouGov in October 2021. Respondents where presented with a similar design as Study 2, where they set tax rates for a list of ten income earners. However, the new survey asked all respondents to first do this exercise for ten earners who exclusively received their income from capital investments (i.e. capital gains, dividends, interests, etc.), and then do it again for ten earners who exclusively received their income from labor wages (the order of the labor and capital tasks was randomized). Question formulations in the survey are available in the Appendix. The preferred tax rates were then compared to effective tax rates for labor incomes, and tax rates for capital incomes in the Norwegian tax system, respectively.[12]

Results

Figure 5 plots actual tax rates on capital and labor income, as well as the rates that citizens prefer, on average, when asked about the two types of income respectively. Comparing the two panels in Figure 5, it seems that citizens want both labor and capital incomes to be taxed progressively from approximately 10 to 40-45 percent, but with a slight advantage for capital (about 5 points lower than labor income for most of the amounts). The left-hand panel shows that when it comes to labor income this is not very far from actual tax rates. If anything, actual tax rates on some of the highest labor incomes are a bit too high for the average citizen. In contrast, the right-hand panel shows that the highest capital incomes are taxed considerably lower than what citizens want. This is particularly the case for the capital types subject to the 22 percent rate. The same plot looks quite similar if we isolate right-wing voters or high-income citizens in the survey (Figures A9 and A10). These results suggest that the large discrepancy between actual (payed) and preferred tax rates for the 1

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[12]This analysis does not use actual payed tax as the tax measure but rather effective rates derived from the tax calculator for labor and capital incomes provided by The Norwegian Tax Administration (available at https://skattekalkulator.app.skatteetaten.no/#/; accessed October 26, 2021). This is because the hypothetical income earners that respondents evaluate in the new survey, who have *all* of their income from either labor or capital are not easily matched with any actual tax payer.
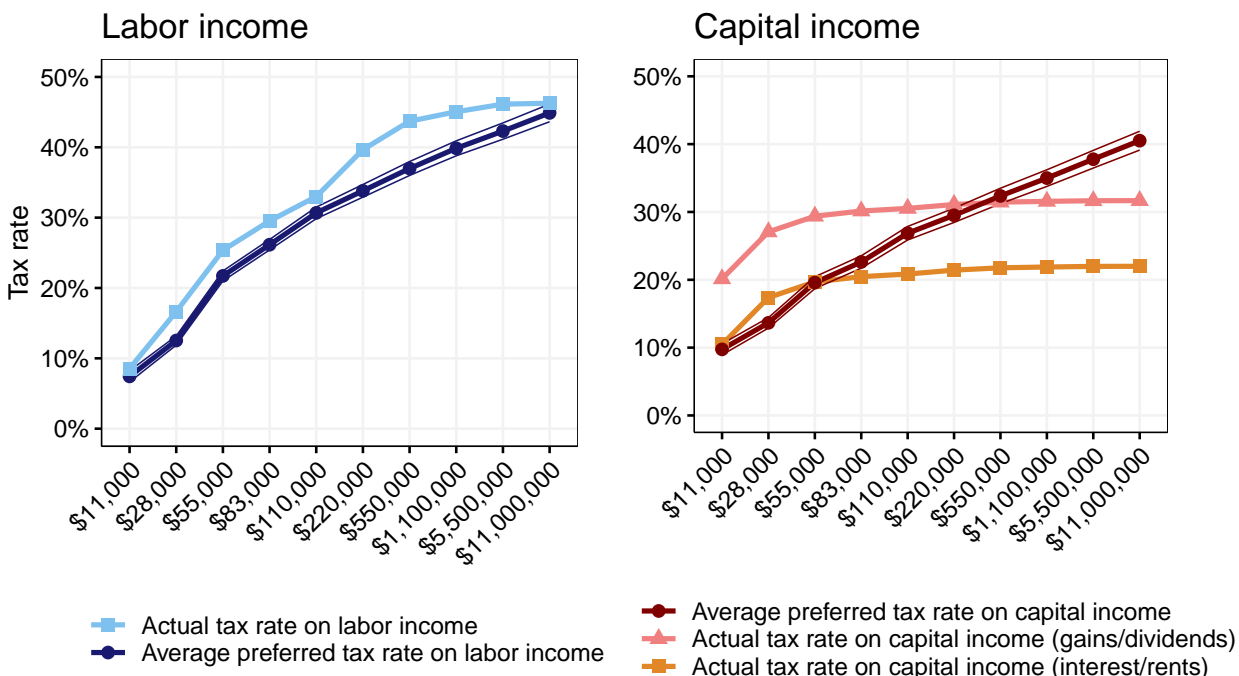
Figure 5: Preferred and actual tax rates for labor income and capital income. Thin lines indicate 95 percent confidence intervals

percent (see Figure 1) is entirely explained by capital incomes being taxed lower than what citizens want—top labor incomes are not taxed too low.

Conclusion

This article provides evidence that even in a fairly egalitarian country like Norway, public policy on an issue of high relevance to the wealthy, can become seriously detached from the preferences of ordinary citizens. Had government followed average public opinion about the tax burden on the highest income earners, the top marginal income tax rate would likely not have been cut the way it was over the past decades, capital incomes would not receive the preferential treatment they currently enjoy in the tax system, and, perhaps most importantly, incomes at the top would be taxed significantly higher than they are today.

The discrepancies documented above between actual tax rates at the top of the income distribution and those preferred by citizens are striking. Nonetheless, they are quite likely

underestimated. This is because the official tax data employed here ignore an important part of top incomes, namely unrealized capital gains (that is, capital gains that are not paid out to investors, but withheld in companies). Aaberge, Modalsli, and Vestad (2020) finds that when those incomes are included on the income side of the tax equation, effective tax rates at the top almost reach single digits.[13]

If high income taxation is so out of tune with public opinion (including the preferences of right-wingers and the modestly affluent), then why has policy in this area still developed in the manner that it has? A plausible answer to that question must take into account who benefits from the policies that are seemingly so unpopular with most of the public. Based on the analyses presented here, that appears to be earners in the top 1 percent and upwards, who are often paying lower effective tax rates than the middle-class. It is also of high relevance to consider the numerous studies suggesting that influence on government policy is concentrated at the top of the income hierarchy (Gilens 2012; Gilens and Page 2014; Bartels 2016; Jacobs and Page 2005; Rigby and Wright 2013; Elsässer, Hense, and Schäfer 2017; Schakel 2021). Combining these two pieces of information, a parsimonious explanation would be that: high income taxation is out of tune with public opinion because rich citizens use their disproportionate political influence to change the tax system in ways that minimize their own tax burden. This explanation aligns with Jeffrey Winters' argument in his book *Oligarchy* (Winters 2011). Winter's argument would additionally account for my finding that high income taxation seems at odds with the preferences of even relatively affluent survey respondents. Winters argues that "oligarchs are not just offloading tax burdens to those below them in society, but the mass affluent" who "lack the material power resources" for "income defense" (Winters 2011, 213, 245).

Some scholars have pointed to financial globalization as the main factor behind declining top tax rates, but usually in ways that reinforce rather than challenge the explanation

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[13]For earners in the the top 0.1 percent, they estimated the average effective tax rate at 11.5 percent, vastly lower than the 43-48 percent rate preferred by respondents in the NCP survey (Study 1) (see https://www.ssb.no/inntekt-og-forbruk/artikler-og-publikasjoner/ulikheten-betydelig-storre-enn-statistikken-viser?tabell=432469, accessed 27 May 2022).

above. Increasing capital mobility over the past decades have given multinational corporations (predominantly owned by economic elites), more leeway to place their investments where tax conditions are most favorable. This puts downward pressure on capital taxes as governments compete to maintain and attract investment (Rodrik 2011; Bretschger and Hettich 2002; Lierse 2022). This is why some economists have stressed the need for cross-national cooperation and coordination when addressing the issue of high income taxation (Clausing, Saez, and Zucman 2021).

It might be unrealistic (perhaps even undesirable) to expect that tax policy should precisely mirror public opinion in every aspect. Tax policy can certainly be complicated and might contain many considerations about which citizens have few opinions (Converse 1964). At the same time, it seems uncontroversial to say that if the overall distribution of the tax burden differs dramatically from what citizens believe is fair, then this is a serious problem for any political system that has democracy as its ideal. Not only because tax policy is in itself an important policy area, but because it is one of the major tools that governments in the 21st century have at their disposal to counteract rising economic and political inequality.

References

Aaberge, Rolf, J Modalsli, and O Vestad. 2020. "Ulikheten—betydelig større enn statistikken viser." Oslo: SSB.

Alesina, Alberto, and Paola Giuliano. 2011. "Preferences for redistribution." In *Handbook of Social Economics*, 1:93–131. Elsevier.

Alesina, Alberto, Stefanie Stantcheva, and Edoardo Teso. 2018. "Intergenerational mobility and preferences for redistribution." *American Economic Review* 108 (2): 521–54.

Allern, Elin Haugsgjerd, Nicholas Aylott, and Flemming Juul Christiansen. 2007. "Social democrats and trade unions in Scandinavia: The decline and persistence of institutional

relationships." *European Journal of Political Research* 46 (5): 607–35.

Alstadsæter, Annette, Niels Johannesen, and Gabriel Zucman. 2019. "Tax evasion and inequality." *American Economic Review* 109 (6): 2073–2103.

Ballard-Rosa, Cameron, Lucy Martin, and Kenneth Scheve. 2017. "The structure of American income tax policy preferences." *The Journal of Politics* 79 (1). University of Chicago Press Chicago, IL: 1–16.

Bartels, Larry M. 2005. "Homer gets a tax cut: Inequality and public policy in the American mind." *Perspectives on Politics.* JSTOR, 15–31.

———. 2016. *Unequal democracy: The political economy of the new gilded age.* Princeton: Princeton University Press.

———. 2017. "Political inequality in affluent democracies: The social welfare deficit." In *4th Conference in Political Economy & Political Science (Assessing Democratic Institutions), Toulouse, March*, 23–24.

Bastani, Spencer, and Daniel Waldenström. 2021. "Perceptions of inherited wealth and the support for inheritance taxation." *Economica* 88 (350). Wiley Online Library: 532–69.

Benedetto, Giacomo, Simon Hix, and Nicola Mastrorocco. 2020. "The rise and fall of social democracy, 1918–2017." *American Political Science Review* 114 (3). Cambridge University Press: 928–39.

Black, Duncan. 1948. "On the rationale of group decision-making." *Journal of Political Economy* 56 (1). The University of Chicago Press: 23–34.

Blanchet, Thomas, Lucas Chancel, and Amory Gethin. 2020. "Why Is Europe More Equal Than the United States?"

Bozio, Antoine, Bertrand Garbinti, Jonathan Goupille-Lebret, Malka Guillot, and Thomas Piketty. 2018. "Inequality and redistribution in france, 1990-2018: evidence from post-

tax distributional national accounts (dina).” *WID. World Working Paper Series* 10: 2018.

Bretschger, Lucas, and Frank Hettich. 2002. “Globalisation, capital mobility and tax competition: theory and evidence for OECD countries.” *European Journal of Political Economy* 18 (4). Elsevier: 695–716.

Chong, Dennis, Jack Citrin, and Patricia Conley. 2001. “When self-interest matters.” *Political Psychology* 22 (3). Wiley Online Library: 541–70.

Clausing, Kimberly A, Emmanuel Saez, and Gabriel Zucman. 2021. “Ending corporate tax avoidance and tax competition: a plan to collect the tax deficit of multinationals.” *UCLA School of Law, Law-Econ Research Paper*, no. 20-12.

Coen, David, Alexander Katsaitis, and Matia Vannoni. 2021. *Business lobbying in the European Union.* Oxford University Press.

Converse, Philip E. 1964. “The nature of belief systems in mass publics.” In *Ideology and Discontent*, edited by David Apter, 206–61. N.Y.: Free Press,

Downs, Anthony. 1957. “An economic theory of democracy.” New York.

EIU. 2020. “Democracy Index 2020.” London: Economist Intelligence Unit.

Elsässer, Lea, Svenja Hense, and Armin Schäfer. 2017. “„Dem Deutschen Volke“? Die ungleiche Responsivität des BundestagsGovernment for the People? – Unequal Responsiveness of the Bundestag.” *Zeitschrift Für Politikwissenschaft* 27 (2): 161–80.

Enthin, Stephen J. 2017. “Labor Bears Much of the Cost of the Corporate Tax.” Tax Foundation.

Ferguson, Thomas. 1995. *Golden rule: The investment theory of party competition and the logic of money-driven political systems.* Chicago: University of Chicago Press.

Ferguson, Thomas, Paul Jorgensen, and Jie Chen. 2015. “How money drives US congressional

elections: More evidence." In *Annual Meeting of the Institute of New Economic Thinking*.

———. 2019. "How money drives US congressional elections: Linear models of money and outcomes." *Structural Change and Economic Dynamics*. Elsevier.

Franko, William, Caroline J Tolbert, and Christopher Witko. 2013. "Inequality, self-interest, and public support for 'Robin Hood' tax policies." *Political Research Quarterly* 66 (4). SAGE Publications Sage CA: Los Angeles, CA: 923–37.

Fuest, Clemens, Bernd Huber, and Jack Mintz. 2005. *Capital mobility and tax competition*. Vol. 1. Now Publishers Inc.

Genser, Bernd, and Andreas Reutter. 2007. "Moving towards dual income taxation in Europe." *FinanzArchiv/Public Finance Analysis*. JSTOR, 436–56.

Giger, Nathalie, Jan Rosset, and Julian Bernauer. 2012. "The poor political representation of the poor in a comparative perspective." *Representation* 48 (1): 47–61. doi:10.1080/00344893.2012.653238.

Gilens, Martin. 2009. "Preference gaps and inequality in representation." *PS: Political Science and Politics*. JSTOR, 335–41.

———. 2012. *Affluence and influence: Economic inequality and political power in America*. Princeton: Princeton University Press.

Gilens, Martin, and Benjamin I. Page. 2014. "Testing Theories of American Politics: Elites, Interest Groups, and Average Citizens." *Perspectives on Politics* 12 (03). Cambridge University Press: 564–81.

Hacker, Jacob S, and Paul Pierson. 2005. "Abandoning the middle: The Bush tax cuts and the limits of democratic control." *Perspectives on Politics* 3 (1). Cambridge University Press: 33–53.

Harding, M, and M Marten. 2018. "Statutory tax rates on dividends, interest and capital gains."

OECD Taxation Working Papers, Paris, Organisation for Economic Co-operation . . . .

Henrekson, Magnus, and Daniel Waldenström. 2016. "Inheritance taxation in Sweden, 1885–2004: the role of ideology, family firms, and tax avoidance." *The Economic History Review* 69 (4). Wiley Online Library: 1228–54.

Jacobs, Lawrence R., and Benjamin I. Page. 2005. "Who Influences U.S. Foreign Policy?" *American Political Science Review* 99 (1). Cambridge University Press: 107–23. doi:10.1017/s000305540505152x.

Keen, Michael, and Kai A Konrad. 2013. "The theory of international tax competition and coordination." *Handbook of Public Economics* 5. Elsevier: 257–328.

Kuziemko, Ilyana, Michael I Norton, Emmanuel Saez, and Stefanie Stantcheva. 2015. "How elastic are preferences for redistribution? Evidence from randomized survey experiments." *American Economic Review* 105 (4): 1478–1508.

Lierse, Hanna. 2021. "A race to the bottom? The politics of tax competition." In *Handbook on the Politics of Taxation.* Edward Elgar Publishing.

———. 2022. "Globalization and the societal consensus of wealth tax cuts." *Journal of European Public Policy* 29 (5). Taylor & Francis: 748–66.

Meltzer, Allan H, and Scott F Richard. 1981. "A rational theory of the size of government." *Journal of Political Economy* 89 (5). The University of Chicago Press: 914–27.

Peters, Yvette, and Sander J. Ensink. 2015. "Differential Responsiveness in Europe: The Effects of Preference Difference and Electoral Participation." *West European Politics* 38 (3). Routledge: 577–600. doi:10.1080/01402382.2014.973260.

Piketty, Thomas. 2014. *Capital in the Twenty-First Century.* Harvard University Press.

https://books.google.no/books?id=J222AgAAQBAJ.

———. 2020. *Capital and Ideology.* Cambridge: Harvard University Press.

Piketty, Thomas, Emmanuel Saez, and Stefanie Stantcheva. 2014. "Optimal taxation of top labor incomes: A tale of three elasticities." *American Economic Journal: Economic Policy* 6 (1): 230–71.

Popkin, Samuel L. 1991. *The reasoning voter: Communication and persuasion in presidential campaigns.* University of Chicago Press.

Przeworski, Adam, and Michael Wallerstein. 1988. "Structural dependence of the state on capital." *The American Political Science Review.* JSTOR, 11–29.

Rigby, Elizabeth, and Gerald C Wright. 2013. "Political parties and representation of the poor in the American states." *American Journal of Political Science* 57 (3). Wiley Online Library: 552–65.

Rodrik, Dani. 2011. *The globalization paradox: democracy and the future of the world economy.* WW Norton & Company.

Romer, Thomas. 1975. "Individual welfare, majority voting, and the properties of a linear income tax." *Journal of Public Economics* 4 (2). Elsevier: 163–85.

Saez, Emmanuel, and Gabriel Zucman. 2019. *The triumph of injustice: How the rich dodge taxes and how to make them pay.* WW Norton & Company.

Schakel, Wouter. 2021. "Unequal policy responsiveness in the Netherlands." *Socio-Economic Review* 19 (1). Oxford University Press: 37–57.

Simonovits, Gabor, Andrew M Guess, and Jonathan Nagler. 2019. "Responsiveness without Representation: Evidence from Minimum Wage Laws in US States." *American Journal*

of Political Science 63 (2). Wiley Online Library: 401–10.

Slemrod, Joel. 2006. "The role of misconceptions in support for regressive tax reform." *National Tax Journal* 59 (1). The University of Chicago Press: 57–75.

Winters, Jeffrey A. 2011. *Oligarchy.* Cambridge University Press.

Young, Kevin A, Tarun Banerjee, and Michael Schwartz. 2018. "Capital strikes as a corporate political strategy: The structural power of business in the Obama era." *Politics and Society* 46 (1): 3–28. doi:10.1177/0032329218755751.

Zaller, John R. 1992. *The nature and origins of mass opinion.* Cambridge: Cambridge University Press.

Zelenak, Lawrence. 2008. "The Conscientious Legislator and Public Opinion on Taxes." *Loy. U. Chi. LJ* 40. HeinOnline: 369.

Appendix for Article 2

Appendix

Taxing the 1 percent: Public opinion vs. public policy

Appendix

Measuring actual effective tax rates for different incomes

In order to capture the actual tax rate payed at different levels of income, the qunatity of interest is the *average effective income tax rate*; that is, the total amount of payed income tax as a share of gross income. To that end, Statistics Norway included two measures of payed tax: *total assessed tax* and *wealth tax*. Total assessed tax is the sum of all income tax and wealth tax paid to municipality, county, and state, as well as National Insurance Scheme members' contributions. To obtain a measure of average income tax rate, I subtracted the wealth tax from total assessed tax, and divided the remaining amount on gross income. This adjustment is important for two reasons. First, as the name suggests, the wealth tax is not a tax on any flow of income but a tax on capital stock.[1] Second, even though one could conceive of the wealth tax as a tax on the return to capital, it would be misleading to include it when measuring a person's income tax rate, if one does not simultaneously include total return to capital (i.e. both realized and unrealized capital gains) in the concept of income. In theory, including wealth tax but not total wealth *gains* could lead one to the obviously erroneous conclusion that some people in Norway pay more than 100 percent in tax.[2] Unrealized capital gains are not included in Statistics Norway's concept of income, and therefore the wealth tax should not be included in the concept of income tax. It is important to emphasize however, that a more complete measure of income and tax, including unrealized capital gains on the income side and wealth tax and corporate tax on the tax side, leads to *lower*, not higher, tax rates for the highest incomes than what I present here (Aaberge, Modalsli, and Vestad 2020).

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[1]As of February 2021 the rate is 0.85 percent (see https://www.skatteetaten.no/satser/formuesskatt/, accessed 02.08.2021)

[2]Such a claim was in fact made by one Norwegian newspaper in 2015. It said that the Norwegian business magnate Bjørn Kjos "had to pay 1,900 percent in tax". The seemingly extraordinary number is simply explained by the fact that the newspaper chose to include wealth tax as part of Kjos' tax, but to ignore his capital income as part of his income, only considering his relatively modest $170,000 salary as CEO (https://www.nettavisen.no/kjos-ma-betale-1-900-prosent-i-skatt/s/12-95-8522427, accessed 01.30.2021).

Respondents' beliefs about the actual tax rates

Are citizens aware of the discrepancy between their preferences and the actual tax system shown in Figure 1 in the manuscript? Figure A11 plots both the average preferred rates, and actual rates from 2018. In addition, it plots what respondents in the NCP survey *believed* to be the effective tax rate payed at the different income levels.[3] Consistently, respondents overestimate what people at "normal" incomes pay in tax.[4] On the other hand, they are surprisingly skilled at guessing what earners at the top pay: For the six highest incomes, respondents are off by less than 3 percentage points for all but the very highest income. Overall, citizens correctly identify the "flatness" of the structure: they believe a person earning $55,000 pays about as much as someone earning $11,000,000, a belief that turns out to be quite accurate (except for the fact that both earners pay less than what respondents believe to be the case). However, they do not seem to know about the regressivity at the top of the distribution. Respondents on average set the tax rate for both the $550,000 earner and the the $11 mil. earner to around 35%. This is correct for the former, but for the latter it is about 10 points to high (the $11 mil. earner pays about 25%). It seems that Norwegians are relatively pessimistic in their assessment of the progressivity of the income tax, but, as it turns out, not pessimistic enough.

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[3]The following question was put to respondents in the 2020 NCP survey: "With the current tax system, what do you think the average tax rate is for a person earning [X] kroner a year? In other words, how much of their entire income do you think the person pays in income tax? Here, 0% would mean that you think the person does not pay any income tax on their income." X was randomly replaced with one of the ten annual incomes listed in Table 2. Each respondent evaluated one income.

[4]One possible explanation for this is that respondents try to guess rates based on their own income tax rate each month. However, the tax rate on labor income that is drawn each month from a Norwegian worker's pay check is somewhat higher (about 5 points) than their actual annual tax rate. This is because tax is only drawn during 10.5 months of the calender year.
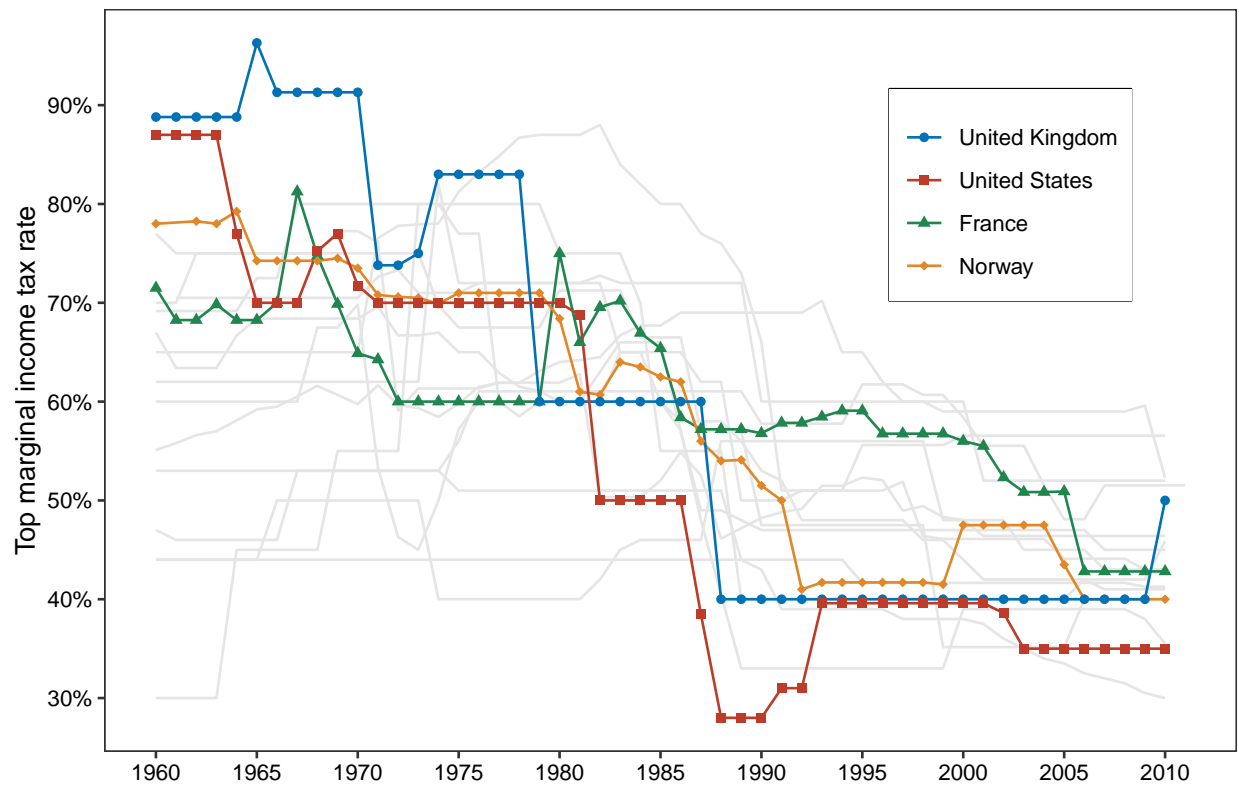
Figure A1: The evolution of the top marginal income tax rate in OECD countries. Source: Tax rates from Piketty, Saes, and Stantcheva (2014).
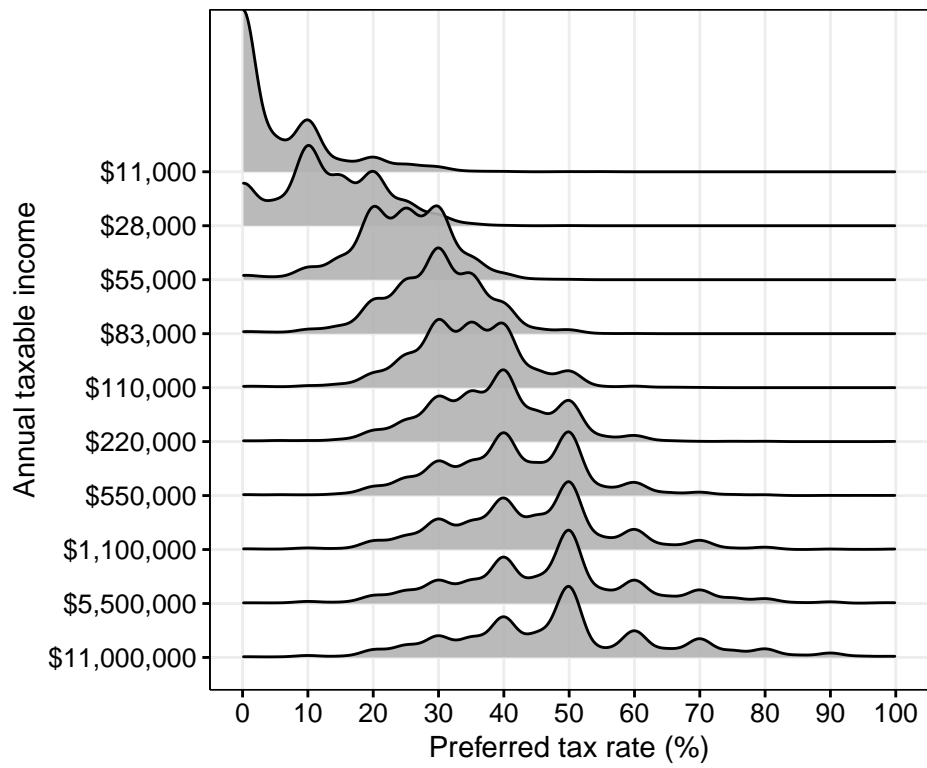
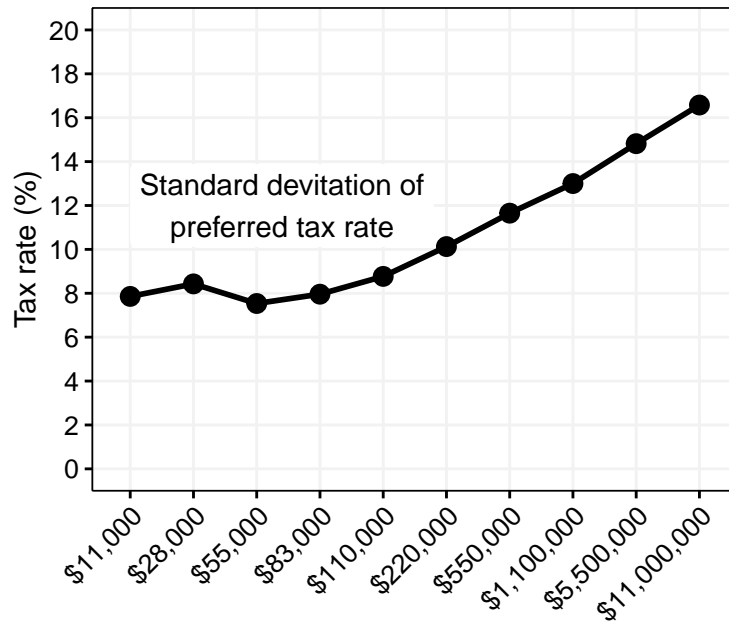Figure A2: Distributions of preferred tax rates for different annual incomes

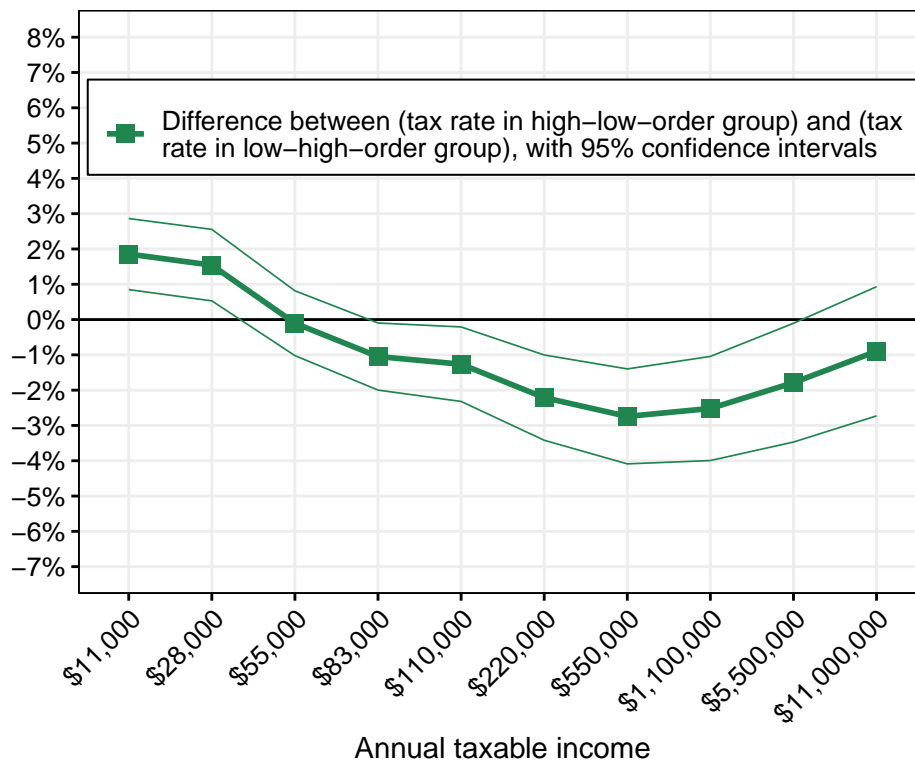Figure A3: Standard deviation of tax rate preferences for different annual incomes.

Figure A4: Limited effect of the order of incomes on average preferred tax rates

Figure A5: Actual tax rates for high incomes are closer to the preferences of high income respondents than the rest. Note: Estimates are regression coefficients for a dummy variable indicating whether the respondent belongs to the top 10 percent or bottom 90 percent of the income distribution. Control variables include education, occupation, age, gender, region, and tax rate knowledge. All except tax rate knowledge are included as factor variables using the original categories from the survey. See replication materials for full regression outputs.
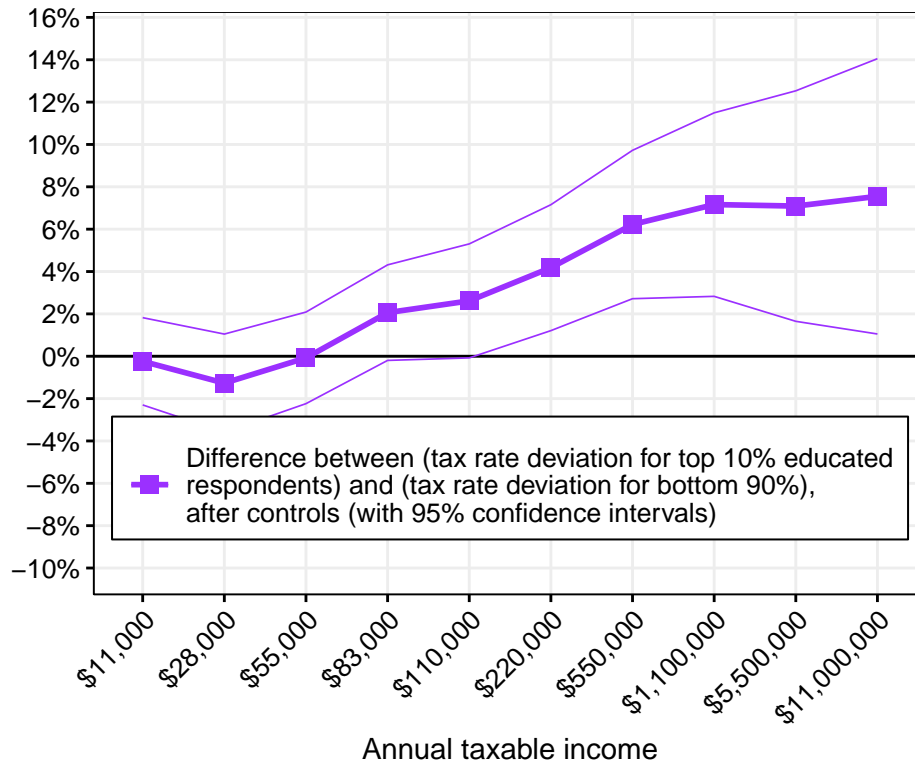
Figure A6: Actual tax rates for high incomes are farther away from the preferences of the highly educated than the rest. Note: Estimates are regression coefficients for a dummy variable indicating whether the respondent belongs to the top 10 percent or bottom 90 percent of the education distribution. Control variables include income, occupation, age, gender, region, and tax rate knowledge. All except tax rate knowledge are included as factor variables using the original categories from the survey. See replication materials for full regression outputs.
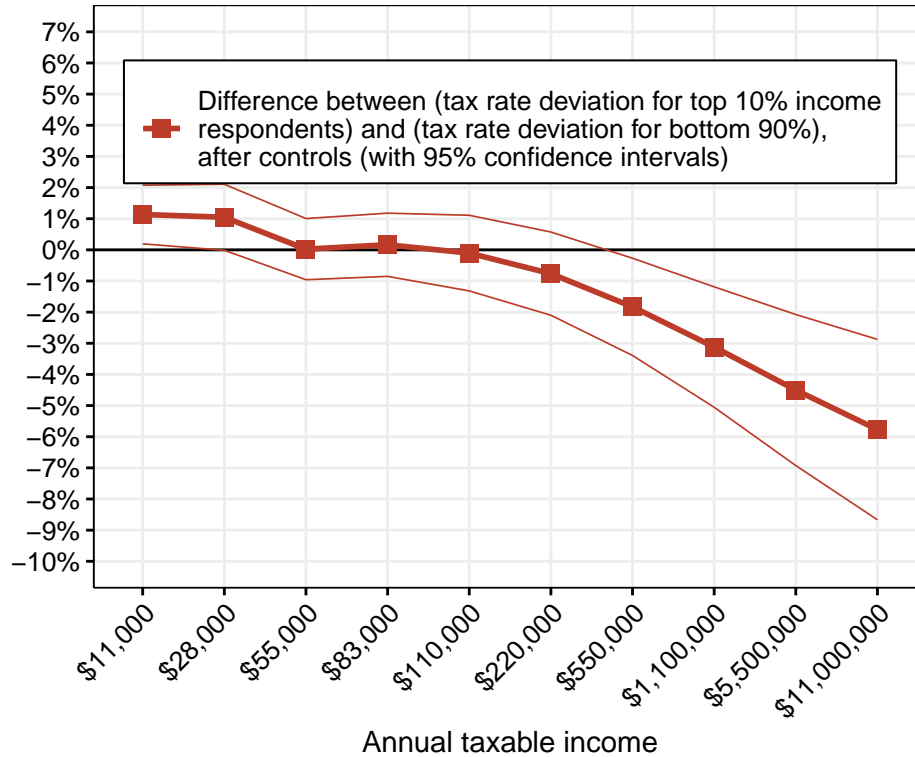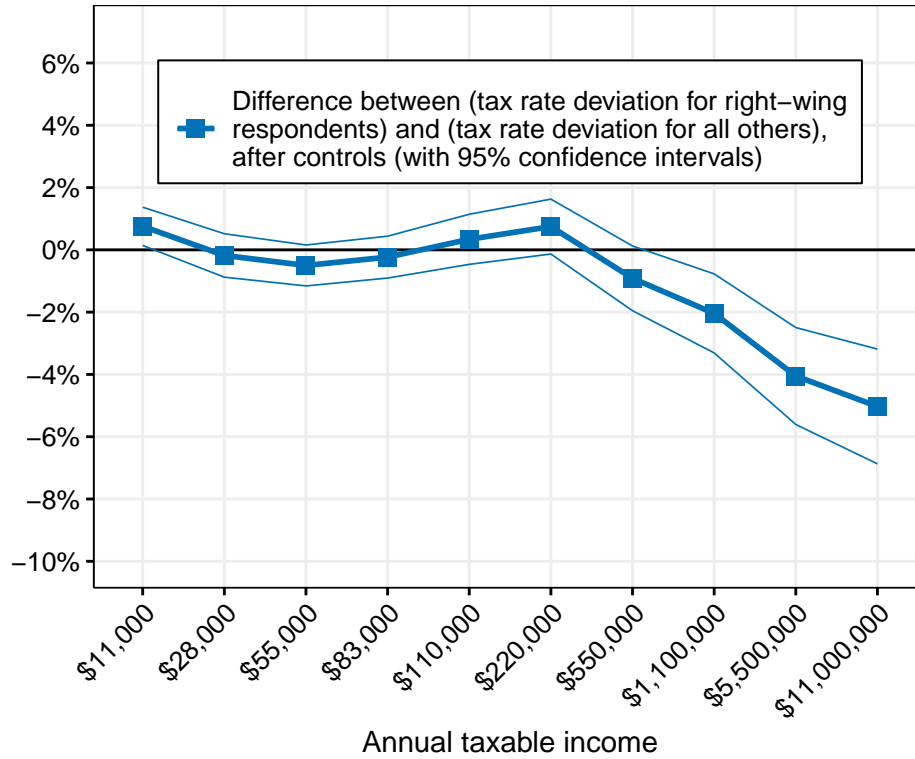
Figure A7: Actual tax rates for high incomes are closer to the preferences of right-party voters than the rest. Note: Estimates are regression coefficients for a dummy variable indicating whether the respondent voted for a right-wing party or not. Control variables include income, education, occupation, age, gender, region, and tax rate knowledge. All except tax rate knowledge are included as factor variables using the original categories from the survey. See replication materials for full regression outputs.
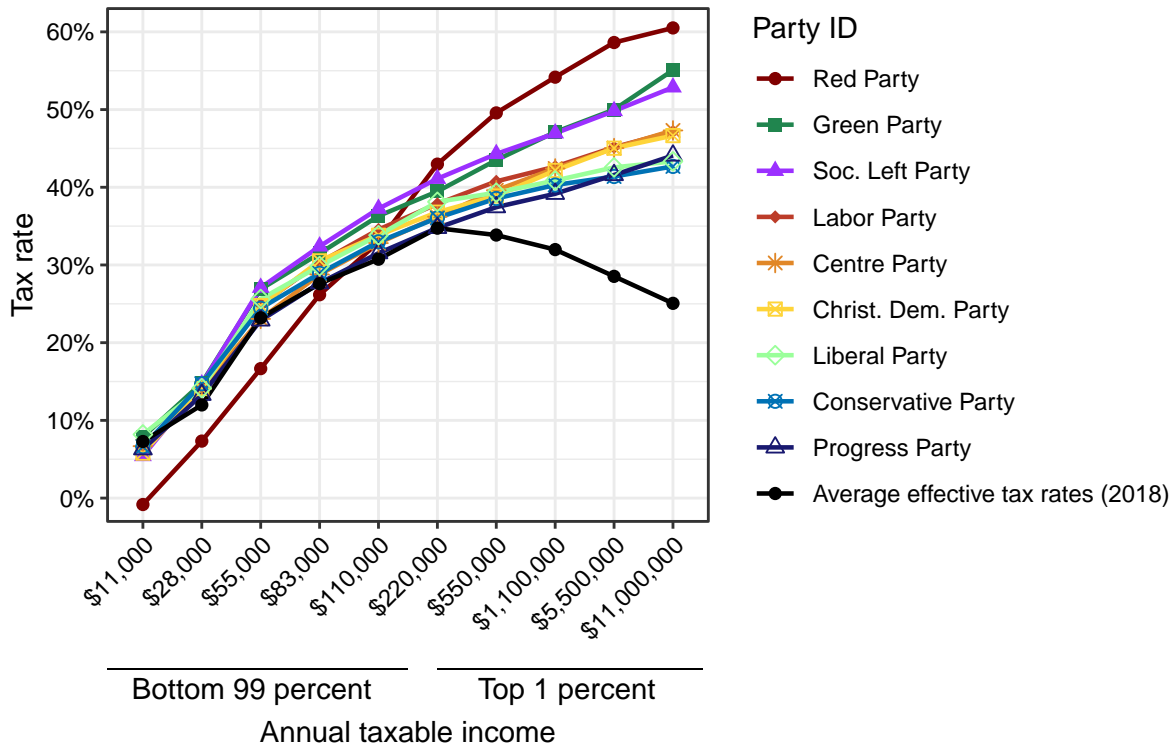
Figure A8: Actual tax rates compared to preferred tax rates, by respondent party ID.
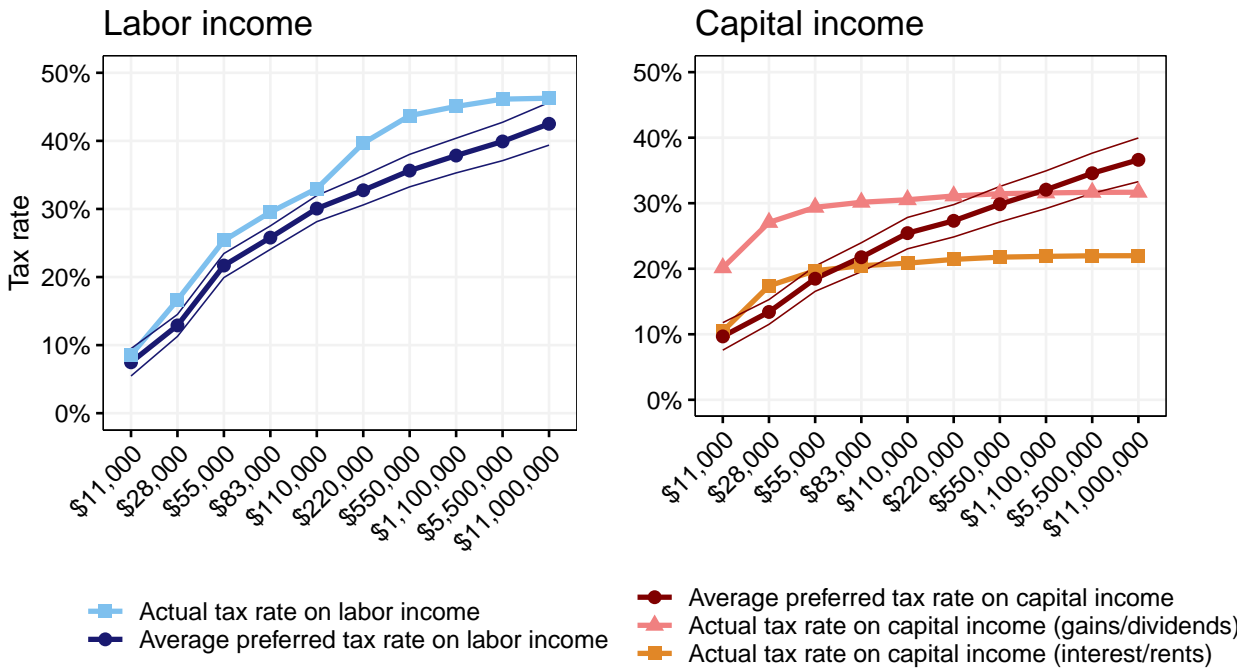
Figure A9: Preferred and effective tax rates for labor and capital income, only right-wing voters (H, FRP).
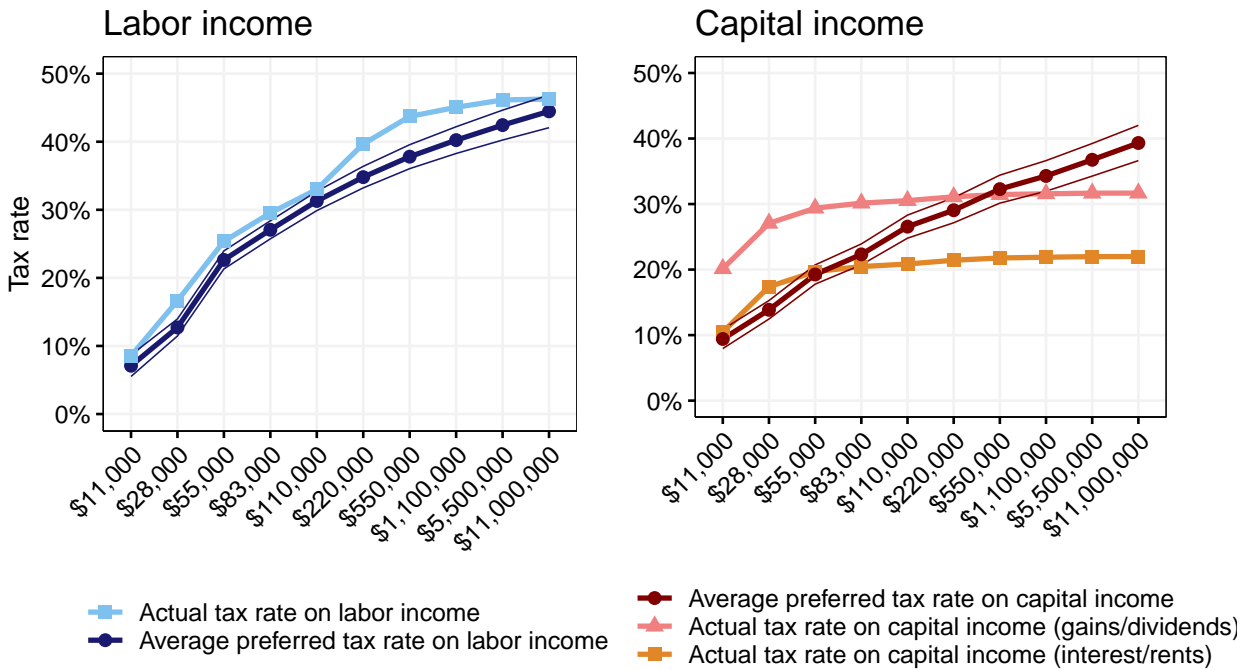
Figure A10: Preferred and effective tax rates for labor and capital income, only high income citizens (household income > USD 77,000.)
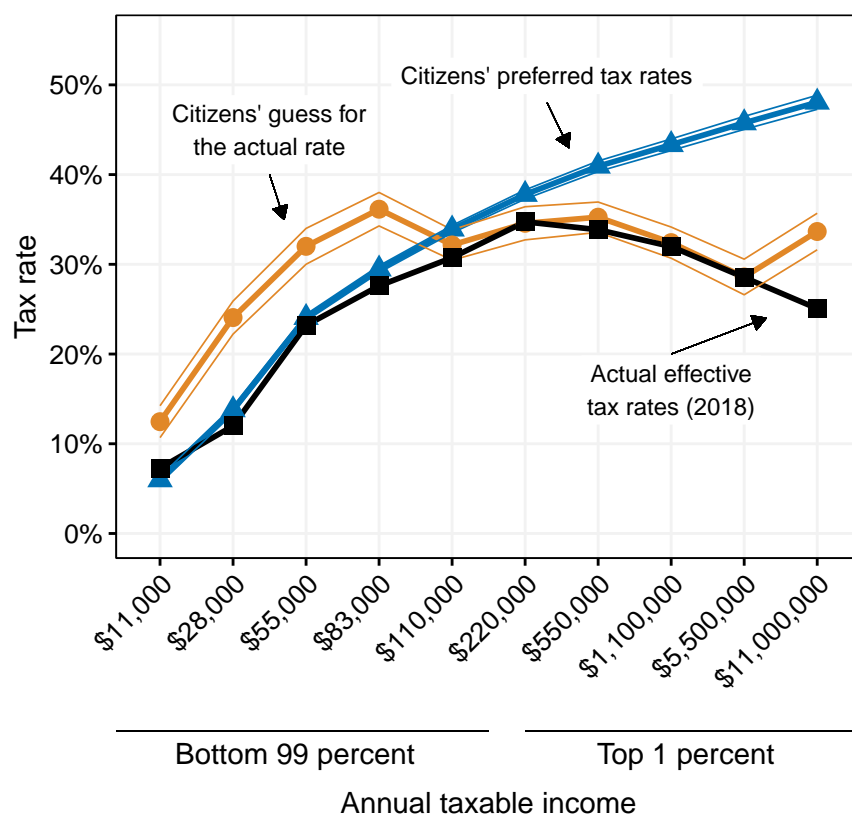
Figure A11: Preferred vs. actual vs. percieved actual tax rates. Thin lines indicate 95 percent confidence intervals (too small to be visible for some of the triangle line).

YouGov survey questionaire (Study 3)

The goal of the survey was to elicit respondents' preferred tax rates for specific incomes covering the full income distribution, broken down by the source of the income (labor vs. capital). The respondents are randomly assigned into either Group 1 or Group 2. The difference between the groups is that Group 1 evaluates first labor income then capital income, while Group 2 gets the opposite order. All respondents enter 10 tax rates in each of the batteries (one for each of the people in the table below the question text). The respondents are able to enter any integer between 0 and 100 (0, 1, 2,... 100). Numbers below 0 or above 100 are not allowed. Both questions are forced.

Question text for Group1_Q1:

> In the next two questions, we want to know how much you think different made-up people should pay in taxes on their income. We will first show you people who have their income solely from work, and then people who have their income solely from investments of capital.

> We first ask you to look at the list below, which contains a number of people with different annual incomes. Common to them all is that their income is earned income (i.e. wages they receive from their jobs).

> Please enter for each of them what you think the tax rate on their earned income should be, ie how much of the entire income you think they should pay in taxes. 0% will mean that you think the person should not pay any tax on the income.

Question text for Group1_Q2:

> In this question, we have also listed a number of imaginary people with different annual incomes. In this case, however, it is not a question of earned income, but so-called capital income (i.e. income the persons have received from investments, such as the sale of shares, dividends, or rental of housing).

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Please enter for each of them what you think the tax rate on their capital income should be, ie how much of the entire income you think they should pay in tax. 0% will mean that you think the person should not pay any tax on the income

Question text for Group2_Q1:

In the next two questions, we want to know how much you think different made-up people should pay in taxes on their income. We will first show you people who have their income exclusively from investments of capital, and then people who have their income exclusively from work.

We first ask you to look at the list below, which contains a number of people with different annual incomes. Common to them all is that their income is so-called capital income (that is, income the persons have received from investments, such as the sale of shares, dividends, or rental of housing).

Please enter for each of them what you think the tax rate on their capital income should be, ie how much of the entire income you think they should pay in tax. 0% will mean that you think the person should not pay any tax on the income.

Question text for Group2_Q2:

In this question, we have also listed a number of imaginary people with different annual incomes. In this case, however, it is not a question of capital income, but earned income (i.e. wages they receive from their jobs).

Please enter for each of them what you think the tax rate on their capital income should be, ie how much of the entire income you think they should pay in tax. 0% will mean that you think the person should not pay any tax on the income.

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References

Aaberge, Rolf, J Modalsli, and O Vestad. 2020. "Ulikheten—betydelig større enn statistikken viser." Oslo: SSB.

Article 3

Gender, economic inequality, and political power

Abstract

Despite decades of research on women's representation, we still know surprisingly little about the extent to which public policy responds unequally to the preferences of women and men. This article exploits two comparable datasets, one for the United States and one for Norway, together containing measures of gender-disaggregated public opinion, as well as public policy, on 2,650 specific proposals asked about in survey polls between 1964 and 2014. The data reveal a substantial gap in political influence between men and women, although larger in the US than in Norway. Part of the gap is accounted for by economic inequality between the genders, and poor women appear to be particularly powerless. In Norway, the gender-gap has virtually disappeared over time, a development that is attributable to the increasing share of women in parliament. In the US, the gap has remained remarkably stable over time.

Introduction

How unequal is political influence? While this question has long been recognized as essential for assessing the quality of democracy, political scientists have only recently begun exploring the issue empirically (Jacobs and Skocpol 2005). Thus far, the burgeoning literature on unequal responsiveness has mainly focused on differences in influence based on income (Bartels 2016; Elsässer, Hense, and Schäfer 2017; Gilens 2012; Rigby and Wright 2013; Schakel 2019), concluding almost unanimously that public policy is strongly tilted towards the preferences of the rich (Elkjær and Klitgaard 2021). However, few studies have looked at other types of unequal responsiveness, such as that which might exist between men and women (Peters 2018). To be sure, women's representation has always been central within the field of gender and politics, but studies within this literature usually deal with other questions than the direct relationship between public opinion and policy (Wängnerud 2009).

In this article, I aim to illuminate the policy influence of women and men. I argue that women are likely to enjoy less political influence than men in established democracies. This is first because they are almost invariably underrepresented in the political elite. Given that studies have found gender gaps in the opinions of politicians, comparable to those found in the general public (Lovenduski and Norris 2003; Poggione 2004), governing bodies disproportionately consisting of men can be expected to disproportionately serve the policy preferences of men. Second, women are highly underrepresented in the economic elite; more so than in the political elite. If the preferences of economic elites dominate policy making, as studies consistently find (Bartels 2016; Gilens 2012; Rigby and Wright 2013), and economic elites are mostly men, then by extension, public policy is disproportionately shaped by men.

My empirical analysis covers two cases, the United States and Norway. What makes these cases interesting to compare is that on the spectrum of established democracies, they are arguably at opposites when it comes to women's representation. For example, on the *Women's Power Index* for 2021, made by the Council on Foreign Relations, Norway ranks

8th, while the United States ranks 43rd.[1] Hence, it seems reasonable to consider the United States a most likely case for a gender influence gap, and Norway as a least likely case among established democracies.

I combine two datasets. For the United States I use Martin Gilens' dataset (Gilens 2012) containing public opinion and public policy outcome codings on some 2255 issues in the period 1964-2006; and for Norway I use my own dataset (395 issues in the period 1966-2014), constructed in order to be maximally comparable to the US data. In both datasets, observations are survey items about potential changes in national government policy extracted from pre-existing surveys. The level of support for each policy was disaggregated by gender. Furthermore, each proposed change was coded as either adopted or not adopted by government in the 4 years after the time of the survey question. The data allows me to estimate in each of the countries the extent to which policy follows the preferences of women and men (un)equally, and assess how much of the inequality is attributable to income differences.

I find that policy has been severely skewed towards the preferences of men in both the United States and Norway over the past 50 years. The data show substantial unequal policy responsiveness between the genders, part of which is accounted for by gender-based economic inequality. Lastly I find that the gender gap has virtually disappeared over time in Norway, a trend that is attributable to the increasing share of women in parliament. Meanwhile, in the US, the gap has remained remarkably stable over time.

The influence gap between men and women

If voting were the only way to influence political decision making, then there could hardly be much of a gap in influence between men and women. At least in first order elections, gender differences in voting have largely disappeared, or even reversed, in most established democracies (Kostelka, Blais, and Gidengil 2019). In the United States for example, women

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[1]Index available at https://www.cfr.org/article/womens-power-index (accessed 20 August 2021).

have reported to vote at higher rates than men in every presidential election since 1984.[2] Beyond voting however, research has shown that unequal representation of opinions and interests can arise through many other mechanisms, which are likely to be gendered to varying degrees.

Unequal presence in politics

Perhaps the most obvious (and most researched) mechanism for political inequality between the genders, is the descriptive underrepresentation of women in elected office. Anne Phillips famously argued in *The Politics of Presence* that female politicians are better able than their male colleges to represent women, because of their shared experiences throughout life. These shared experiences give rise to a set of common interest, for instance related to "child-bearing","sexual harassment and violence, their unequal position in the division of paid and unpaid labor and their exclusion from most arenas of economic or political power" (Phillips 1995:67–68). The expectation therefore is that women's descriptive representation (which tends to be far lower than that of men)[3] matters for their substantive representation (Pitkin 1967).

Numerous empirical studies have supported the idea of a link between women's descriptive and substantive representation (see Wängnerud 2009 for a literature review). Studies have for instance found that elected women are more likely than elected men to prioritize, introduce, and vote for bills pertaining to issues such as children and family matters (Thomas 1991), health care (Little, Dunn, and Deen 2001) and gender discrimination (Bratton and Haynie 1999; see Paxton, Kunovich, and Hughes 2007). Furthermore, a higher share of women in elected office is positively associated with improved maternity and childcare leave (Bratton and Ray 2002; Kittilson 2008), higher social spending (Bolzendahl 2009; Bolzendahl and Brooks 2007), reductions in poverty (Brady 2009) and women's social and political

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[2]https://www.pewresearch.org/fact-tank/2020/08/18/men-and-women-in-the-u-s-continue-to-differ-in-voter-turnout-rate-party-identification/, accessed 23 August 2021.

[3]In 2019, the global share of women in parliaments was still only 25 percent; and around 30 percent if we only look at Europe and the Americas (http://archive.ipu.org/wmn-e/world.htm, accessed 23 August 2021).

equality (Schneebaum et al. 2018). Public opinion studies have tended to recover the same sorts of opinion differences between ordinary men and women as those that have been found at the elite level (Lovenduski and Norris 2003; Poggione 2004).

However, scholars have noted that the concept of "women's interests" poses some challenges when assessing substantive representation. First, there is no objective or agreed-upon standard for determining what constitutes "women's interests" (Wängnerud 2009:53). Second, even if all researchers agreed on a definition, it is apriori unknown to what extent this definition would reflect the actual preferences of women (and in any case the answer to this question would surely vary between specific policies, across countries, and over time). Third, women's interests are usually defined within a narrow set of issues which often do not include the issues where there are large gender preference gaps in public opinion research (Mansbridge 1986; Page and Shapiro 1992:295–98; Shapiro and Mahajan 1986). The current paper takes a slightly different theoretical perspective. Instead of looking at women's interests, the point of departure is women's expressed policy preferences (a related but distinct concept), and how represented these preferences are compared to those of men. This perspective avoids the problems of having to define what constitutes women's interests, and takes into account that women have myriads of policy views arising from a range of different identities that go beyond their gender (Campbell, Childs, and Lovenduski 2010; Reher 2018).

The intersection of gender and economic affluence

A much less discussed mechanism is the intersection between gender and economic affluence. The simple logic of this mechanism is the following: a) If economic resources can be translated into political influence, and b) men control more economic resources than women, then c) men would have better opportunities to influence policy than women (all else equal). If there is additional bias against women's preferences—for example due to descriptive underrepresentation—it follows that poor women will be particularly powerless, and affluent men particularly influential.

The notion that economic resources can be translated into political influence is supported by a number of case studies and cross national studies showing that public policy in established democracies is substantively skewed towards the preferences of affluent citizens (Bartels 2016; Elsässer et al. 2017; Giger, Rosset, and Bernauer 2012; Gilens 2012; Peters and Ensink 2015; Rigby and Wright 2013; Schakel 2019). Furthermore, studies of political finance have found substantial relationships between election campaign spending and vote shares (not only in the US), suggesting that money can be used to boost the winning chances of a donor's favored electoral candidate (Bekkouche and Cagé 2018; Ferguson 1995; Ferguson, Jorgensen, and Chen 2019; Johnston 2014; Rekkas 2007).[4] Additionally, an old argument in the literature about the structural power of capital holds that wealthy investors might influence policy decision by threatening disinvestment, pressuring government to consider their interests more than the average citizen (Przeworski and Wallerstein 1988).

Next, the premise that men control more economic resources than women might seem rather obvious at first glance. According the United Nations, for example, women earn 23 percent less than men on average globally.[5] However the relevant economic difference might be more extreme than such average numbers would lead us to believe. An important feature of the economic inequality that exists in most societies today between men and women is that it gets more dramatic as one moves up the income scale (Atkinson, Casarico, and Voitchovsky 2018). Therefore, the relevance of the gender-affluence intersection depends a lot on where in the income/wealth distribution political influence is likely to be most concentrated. This is of course a very difficult question to answer. However, at least for the United States, Gilens (2012) finds that even the 70th income percentile seem rather powerless compared to the 90th percentile, suggesting that influence might be concentrated in a fairly small fraction at the top of the distribution. At that point (e.g. the top 10% or top 1%) gender differences are

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[4]Granted, there are still major obstacles to causal identification in this literature (due to the endogeneity of campaign spending and candidate popularity). One recent US study (Ferguson et al. 2019), however, implemented a clever research design to overcome the endogeneity problem—and indeed found a substantial, causally plausible, effect of spending on votes.

[5]https://www.un.org/en/observances/equal-pay-day (accessed November 19, 2021).

considerably larger than average differences—as we shall see below for the two cases studied here.

Lastly, data on donor contributions to US electoral candidates show that men account for much more of the financial contributions to both male and female candidates (Thomsen and Swers 2017). This means that to the degree to which campaign contributions boost the electoral chances of candidates (Ferguson et al. 2019), it does so disproportionately for the candidates favored by men. This mechanism is likely to be less relevant in Norway, where parties are mainly state-financed and campaign contributions play a lesser role in elections.

Related studies

There is no clear answer in the empirical literature as to whether policy responds unequally to men and women. Recently however, some studies have used public opinion data to measure women and men's expressed views and estimate their effect on different policy-related outcomes. A primary challenge with this approach is to find comparable measures of opinions and policy in existing data sources. So far, studies have opted for comparing opinions and policy using either broad measures of ideology (left-right self-placement being the most popular), or small samples of specific issues, producing mixed results. In terms of ideological congruence, Homola (2019) finds that European party platforms are biased in favor of men, while Bernauer, Giger, and Rosset (2015) finds no overall bias in the ideological orientations of parliaments in Europe. In terms of policy, Dingler, Kroeber, and Fortin-Rittberger (2019) finds that parliaments in Europe are actually biased in favor of the preferences of *women* on seven policy dimensions. In the United States, Griffin, Newman, and Wolbrecht (2012) "do not find a gender gap in dyadic policy representation" when looking at 19 roll-call votes in the US senate. However, there is a tendency that Republicans overrepresent men, and Democrats overrepresent women.

The existing work that comes closest to the current paper is Stefanie Reher's study

of policy congruence in Europe (Reher 2018). With comparable opinion and policy data on between 4 and 20 issues for each of 31 countries, she finds that "when [men and women] disagree, men's preferences are more likely to be represented". However, since the dataset only contains 62 cases where majorities of men and women disagree (two issues per country on average), it is hard know anything about the generalizability of the results to other issues; and how much of a gender gap there is in any specific country.

This study contributes to the existing empirical literature in two main ways. To the best of my knowledge, it is the first to consider the impact of men and women's preferences on a large and diverse set of policy issues (n=2255; n=395). Secondly, while existing studies have estimated *congrunece*, that is, the degree of overlap between opinions and policy at a cross-section in time, I here measure *responsiveness* - the extent to which public policy on specific issues changes over time according to public opinion. Arguably, responsiveness comes closer to the concept of *influence*, since influence would require that public opinion is capable of inducing changes in policy. Still, interpreting the regression coefficients reported below as influence is not without its issues, something I discuss further in the final section of the paper.

Case studies: The United States and Norway

To examine policy responsiveness to the views of ordinary men and women, I look at two cases: the United States and Norway. The two arguably constitute a least likely case (Norway) and a most likely case (the US) among established democracies, for finding political inequality between men and women. For example, time series for the United Nations Gender Inequality Index, and the V-Dem Women Political Empowerment Index (presented in Appendix E), both show that Norway has consistently been near the top on gender equality, while the US has been near the bottom, among 23 established democracies.

The expectation, based on the theoretical discussion above however, is more subtle

than simple *no inequailty* in Norway and *high inequality* in the US. I expect that in both countries, policy will respond disproportionately to the preferences of men, but that the difference is larger in the US than in Norway. This firstly has to do with the descriptive underrepresentation of women in elected office. If we look at the share of women in parliament over time (Figure 1), we see that women have been underrepresented in both countries during the whole period from WW2 till today, and dramatically so in the post-war period (with MP shares below 10% every year before 1970). However, while Norway saw a steep increase in the share of women from 1970 onward, reaching the current level of around 40 percent in 1993, the US development has been much slower: Not until 2019 did the share surpass 20 percent.
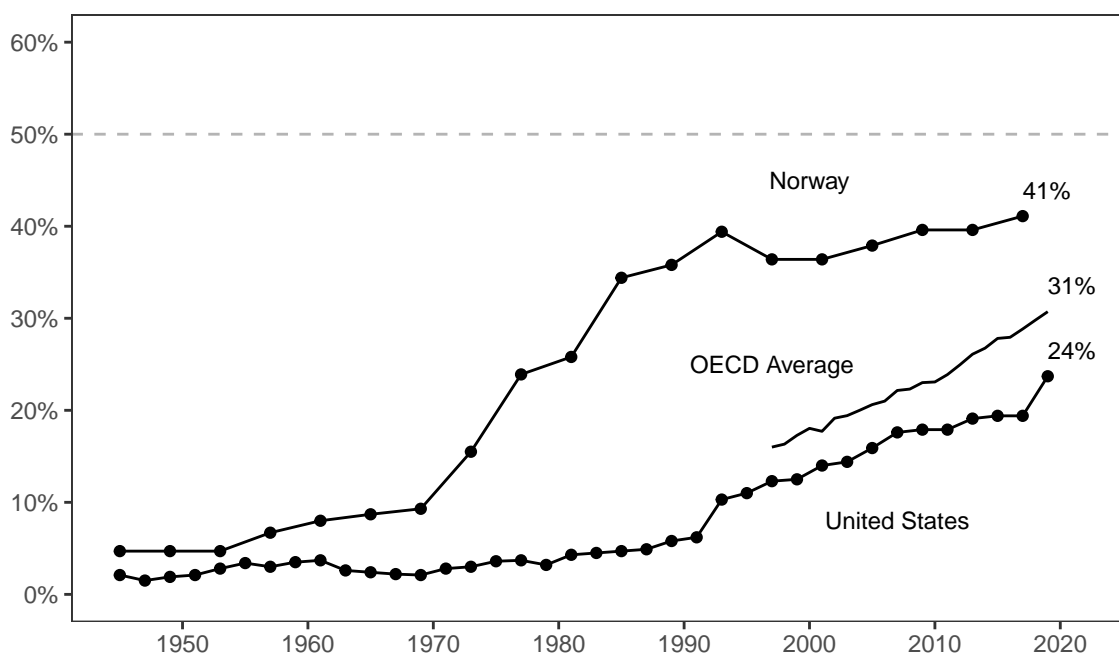
Figure 1: Share of women in parliament (US House of Representatives and the Norwegian Storting)

In both the US and Norway men receive more of total income than women, although the discrepancy is much larger in the US: According to wage-based estimates from the UN, the GDP per capita of women in Norway is 79 percent that of men, while in the US it is 66 percent, placing the countries at 7th and 62th place respectively in a ranking of 178 countries

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on the same metric.[6]

Perhaps even more important than average income differences between men and women though, is the extreme gender skew at the top of the income distribution. Figure 2 shows that the top 1 percent in both Norway and the US contain remarkably few women.[7] Even the most recent estimates (2013/2014) put the share at around 15% in both countries. If it is the case that policy influence is particularly concentrated at the top of the income distribution, then this would almost have to imply some sort of gendered responsiveness, since the top of the income distribution is so male dominated.
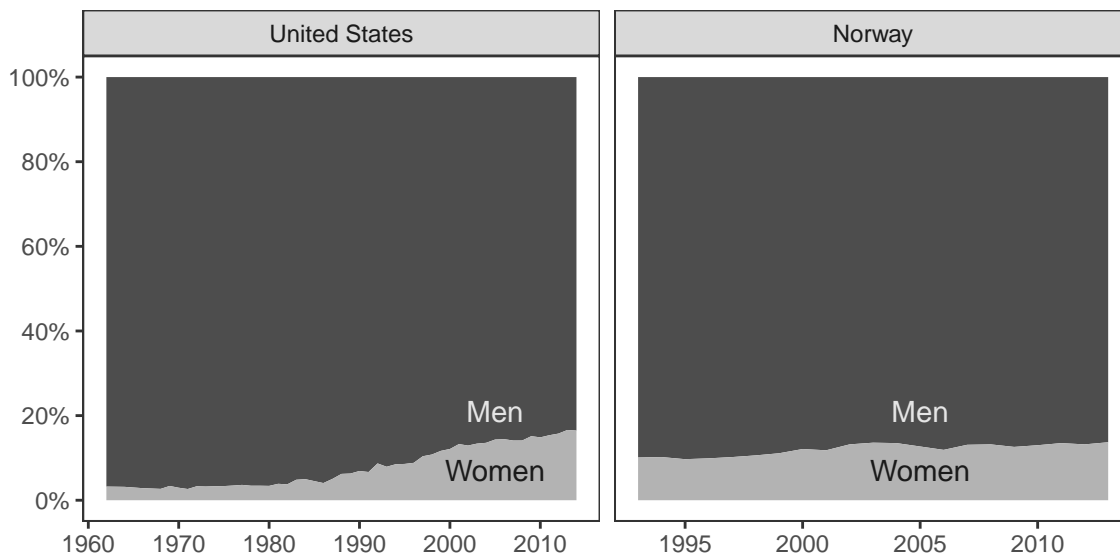
Figure 2: Gender composition of the top 1 percent of the income distribution

Additionally, in both countries the share of women in top business positions has been very low throughout most of the period under study. In the US, the Fortune 500 saw the first ever female CEO in 1972, but it was not until 2002 that the female share surpassed 1 percent.[8] Norway has historically had few female CEO's as well. And despite a mandatory

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[6]Norwegian men: 75,731$; Norwegian women: 60,153$; US men: 66,208$; US women: 43,899$. All amounts in 2011 US dollars at PPP. Estimates are from the Human development report 2019 (http://hdr.undp.org/en/composite/GDI, accessed 6 August 2020). Country ranking calculated by author.

[7]Data for the US available at http://gabriel-zucman.eu/usdina/, accessed 9 August, 2020); data for Norway are from Table A5 in Atkinson et al. (2018). The numbers are estimated somewhat differently so one should be cautious with interpreting small differences between the countries substantively.

[8]First woman: https://fisher.osu.edu/blogs/leadreadtoday/a-brief-history-female-fortune-500-ceos (ac-

quota of 40 percent women on corporate boards introduced in 2005, the female share of CEOs among 213 public limited companies was only 7 percent in 2017.[9]

In summary, both the descriptive underrepresentation of women in elected office and among economic elites should lead to policy outcomes more in line with the preferences of men. The influence gap is expected to be larger in the United States than in Norway, and in both cases it should be reduced if we compare men and women at the same level of income. Lastly, to the extent that the influence gap has changed over time, one would expect it to have declined more in Norway because of the more dramatic changes to the gender distribution in politics than in the US.

Research design

In order to estimate the link between the policy preferences of men and women on the one hand, and actual policy outcomes on the other, I employ two datasets. For the United States I use Martin Gilens' dataset containing public opinion, disaggregated by demographics, as well as outcome codings, on 2255 potential changes in national government policy (1964-2006).[10] For Norway, I use my own dataset on opinions and policies, collected using Gilens' guidelines to be maximally comparable to his data. My dataset contains a total of 431 potential policy changes. I here describe how my dataset was constructed. Comparable information on the US dataset can be found in Chapter 2 of Gilens (2012).

Data sources. Like Gilens (2012), I constructed my dataset by selecting policy questions from pre-existing surveys of representative population samples. Data were available for the period 1966-2014. Every question in the dataset is of the general type: "Do you support or oppose policy change X?"; this can be anything from "Should the right to abortion be extended to week 16", to "Should Norway send troops to Afghanistan?". To find these

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cessed May 11, 2022); share over time: https://www.pewresearch.org/social-trends/chart/women-ceos-in-fortune-500-companies-1995-2014/ (accessed May 11, 2022).

[9]https://www.ft.com/content/6f6bc5a2-7b70-11e8-af48-190d103e32a4 (accessed May 11, 2022).

[10]Available at https://www.russellsage.org/economic-inequality-and-political-representation (Accessed 3 August, 2020).

survey questions, I performed key word searches in the NSD Opinion Poll Archive.[11] The survey sources are commercial pollsters asking questions often on behalf of newspapers, usually when the issues are debated in public. The sources are thus comparable to the ones used by Gilens (2012).[12]

Selection of survey items. Survey items were selected to be part of the dataset if they satisfied the following four criteria (Gilens 2012:57–58): First, the question had to concern national government policy. This means that policy questions that would fall under the authority of the municipalities or the regions were not included. On the other hand, both policy proposals that would be fall under the authority of the legislator and the executive were included. Second, it had to present respondents with a dichotomous choice of either supporting or opposing a potential policy change.[13] If a question used a Likert scale from strongly agree to strongly disagree, responses were dichotomized into agree/disagree which would be equivalent to support/oppose. Third, the asked about policy change had to be specific enough so as to make it possible to reliably determine whether or not it was subsequently adopted by government.[14] And fourth, the question could not be conditional.[15] Some survey question have been asked multiple times. Identical questions were included in the dataset as long as they were asked in different calender years. As pointed out by Gilens, this ensures a sort of natural weighting scheme by which more salient topics - that are asked about in many different years - get more weight than the topics asked about only once or a few times.

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[11]Which archives survey data from the following five survey companies: TNS Gallup AS, Opinion, MMI, ACNielsen, and Respons Analyse AS. The main search words used were *bør* (should), *mot* (oppose) and *mener du* (do you think).

[12]Gilens' (2012) approach was to use archived survey data originally from commercial pollsters such as "Harris, Gallup, CBS, and *Los Angeles Times*" to generate "a broadly defined group of policies that plausibly represent the range of issues that were on the public agenda over this time period (. . .)" (Gilens 2012, 57; emphasis in original).

[13]In cases where a question asked about a policy already in place, the responses were reverse coded so that they would indicate support for repealing said policy.

[14]Therefore a question such as "Should government increase taxes?" would not be included, due to all the different types of taxes that could change in different directions. On the other hand, a more specific one, such as "Should the government raise the corporate tax rate?" would be included.

[15]A question such as "Should Norway join the EU if Sweden does?", would not be included.

Coding of policy outcomes. Policies were coded as either adopted or not within 4 years after the survey question was asked. This window was adopted from Gilens (2012) who chose it because, empirically, the vast majority of the proposed policy changes - if adopted - were adopted during this window. If a policy was adopted after the 4-year window had passed, it would still be coded zero. Some policies could in theory be partially adopted, and in this case it would get a score of 0.5. The rule for when to code as partially adopted was if a policy asked about a specific amount of something (money, soldiers, etc.) and between 20% and 80% of the amount was adopted. If under 20% or over 80% it would be coded as 0 or 1 respectively. Only 3 proposals were coded as partially adopted. These are dropped from the dataset in the analysis below. Also dropped are the 31 proposed policy changes that would require constitutional change (in accordance with Gilens' approach). This leaves us with 397 proposed policy changes, of which 395 came from surveys with information on respondent gender. Out of these 395 proposals, 26.6 percent were adopted within 4 years (31.2 percent in the US data). In determining whether a policy had been adopted by government according to the above criteria, we thoroughly examined the legislative archive Lovdata, and the archive of Norwegian newspapers at Retriever for the relevant period, to see if any law, executive order, or other government decision relevant to the proposal had been made.[16]

Variables. The main independent variables used in the analysis below are the level of support for a given policy among men and women. This is calculated simply as the number of men (women) who favored the policy change over the number of men (women) who answered the survey question (Don't knows are excluded). The dependent variable is a dichotomous measure of whether or not the proposed policy change was adopted within 4 years of the date of the survey question.

Lastly, I should highlight the consequences of the fact that the income variable in both data sets is household (as opposed to personal) income. This means that for households that include one adult man and one adult woman, the household income will be the same for both.

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[16]About half of the data were coded by myself; the other half was coded by a research assistant.

Table 1: Average preference distance by gender and income groups

	Average absolute difference in opinion (%-points)	
	Norway	United States
Men vs. women	6.9	6.2
Middle income (P50) vs. high income (P90)	6.4	5.9
Low income (P10) vs. high income (P90)	10.3	9.5

Thus, the differences in income between men and women in the data are driven by those who do not share a household with someone of the other gender. However, this measure is arguably preferable to personal income, since personal income would underestimate the economic status of people in higher income households but with low income themselves.

Findings

A prerequisite for measuring differences in levels of responsiveness across genders, is that men and women actually have distinctive policy views. One simple way to examine this is to calculate the average absolute distance in support between men and women across all the survey items (Table 1). The average distance is 6.9 percentage points in Norway, and somewhat lower, 6.2, in the US. By themselves these numbers do not tell us much. However, it is informative to compare these distances with distances across economic groups, where policy disagreements are more obvious. As shown in Table 1, in both countries women and men actually diverge slightly *more* in their preferences than what the middle-class (50th income percentile) and the affluent (90th percentile) do. Still, the divergence is considerably smaller than that between the affluent and the poor (10th percentile).

Next, I examine the overall relationship between public opinion and policy in the full datasets. Table 2 presents results from linear probability regression models (OLS) where

Table 2: Policy reponsiveness to men and women overall

	United States			Norway		
	All	Men	Women	All	Men	Women
Effect (regression coefficient)	0.41***	0.49***	0.31***	0.39***	0.41***	0.33***
Standard error	0.05	0.05	0.04	0.1	0.1	0.1
P-value	<.001	<.001	<.001	<.001	<.001	<.001
Predicted probability of policy change at 20% support	0.17	0.14	0.2	0.16	0.16	0.18
Predicted probability of policy change at 80% support	0.42	0.44	0.39	0.4	0.4	0.38
Relative change in probability	2.4	3.1	1.9	2.4	2.6	2.1
Observations	2255	2255	2255	395	395	395

Note:
Linear probability models. The observations are proposed policy changes asked about in nationally representative surveys of the US population in the period 1964-2006 (Gilens 2012), and the Norwegian population in the period 1966-2014. The dependent variable is a dichotomous measure of whether or not the policy change was adopted within four years of the time of the survey question. *p<0.1; **p<0.05; ***p<0.01

policy outcome (0/1) is regressed on the policy support of all respondents, men, and women, in Norway and the US.[17] The results firstly show that aggregate public opinion has a moderate, statistically significant, impact on policy in both countries. Predicted probabilities tell us that unpopular policies, that is, those support by 20% of Americans (Norwegians) have an estimated 17 (16) percent change of getting adopted. Popular policies on the other hand, favored by 80% of Americans (Norwegians), have a 42 (40) percent change of being adopted. Public opinion clearly matters, but with a strong status quo bias. When disaggregating opinion by gender, we see that the effect on policy is somewhat larger for men than women in both countries. Going from low to high popularity among men is associated with a 30 (24) percentage point increase in the probability of policy adoption in the US (Norway). Similarly, the support of women implies a change of 19 (20) points.

However, it is essential we recognize the high correlation between the opinion estimates of men and women in the full dataset.[18] This is partially explained by the fact that men and women often want the same from government, but also by the correlated measurement error that arises when the preferences of two groups are aggregated from the same survey datasets (Achen 1985). Consequently, the moderate responsiveness to the preferences of women seen in Table 2 could merely be explained by the partial overlap with the preferences of men. In order to obtain a more precise estimate of the gender bias in responsiveness, this overlap must be accounted for.

My main strategy for dealing with the colinearity between the preferences of men and women is to use linear probability models where policy outcome is regressed on the non-absolute support difference between men and women (*support_men* - *support_women*), while controlling for overall support (see Schakel, Burgoon, and Hakhverdian 2020 for details). This way, the preferences of both men and women are incorporated simultaneously in the model.

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[17]Appendix F reports the main analyses of the paper using logistic regression instead of OLS; these produce very similar results.

[18]The Pearson correlation between the policy support of men and women is 0.93 in the US and 0.92 in Norway; approximately the same as the correlation between the preferences of the 50th and 90th income percentiles.

Table 3: How the probability of policy adoption is affected by preference difference between men and women (gender gap in responsiveness)

	DV: Policy adopted within 4 years of survey (1, 0)			
	US	US	Norway	Norway
	(1)	(2)	(3)	(4)
Overall support	0.408***	0.525***	0.388***	0.401***
	(0.047)	(0.048)	(0.099)	(0.098)
Diff. Men-Women		0.972***		0.473*
		(0.124)		(0.242)
Constant	0.089***	0.026	0.085*	0.078
	(0.027)	(0.028)	(0.051)	(0.051)
Observations	2,255	2,255	395	395
R²	0.033	0.058	0.038	0.047

*p<0.1; **p<0.05; ***p<0.01

Note: Linear probability models. Variables beginning with 'Diff.' measure the support difference between two groups, calculated as (support of group A) - (support of group B).

If the relationship between this variable and policy outcome is positive, it means that the probability of policy adoption goes up on the proposals with relatively high support among men, and down on those with relatively high support among women (i.e. bias in favor of men). A coefficient estimate of 0 would indicate equal responsiveness. This approach has the major advantage that the full datasets can be utilized despite the high colinearity. I also report results from a different approach, which has been more common in the literature (Elsässer et al. 2017; Gilens 2012; Schakel 2019). Namely to subset the datasets keeping only policy proposals where preferences diverge by a certain level (e.g. 10 points), and then run bivariate models for men and women.

In Table 3, the positive coefficients for *Diff. Men-Women* reveal that in both the US and Norway, the proposals that are relatively popular among men have a significantly higher probability of being adopted than the ones that are relatively popular among women. The effect is twice as large in the US as it is in Norway, but the effects are substantial in both countries. For example, in the US, a policy that men support 20 points more than women has a 51% predicted probability of being adopted, whereas a policy that *women* support 20 point more than men only has a 12% chance to pass (overall support at its mean). In Norway, the comparable numbers are 36% chance for the former, and 17% for the latter.[19] This means that there are exceptional cases where policy does lean more towards the preferences of women,[20] but that most of the time it is biased towards the preferences of men.

Another way of understanding the gender gap is by subsetting the dataset and only analyze the proposals where the preferences of men and women diverge by at least 10 points (in either direction). In this subset, the support of women has no detectable effect on policy at all in the US, and a moderate (although not statistically significant; p=0.25) effect in

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[19]Further analyses in Appendix A suggest that inequality is even higher if "Don't Know" responses are part of the support calculation. There also seems to be substantial heterogeneity across policy areas (see Appendix A for details).

[20]The exceptions are interesting and often involve important issues, such as allowing homosexuals to serve in the military in the US, or the abolishing of the war time death penalty in Norway. In general, these exceptions tend to be within moral issues in the US, and within moral and economic issues in Norway (see Appendix Table A1).

Norway. In both countries, the preferences of men have stronger effects on policy than the preferences of women. Figure 3 displays predicted probabilities of policy change at various levels of support among men and women for this subset of the data. The bivariate regression models that these predictions are based on are reported in Appendix Table B1.[21]
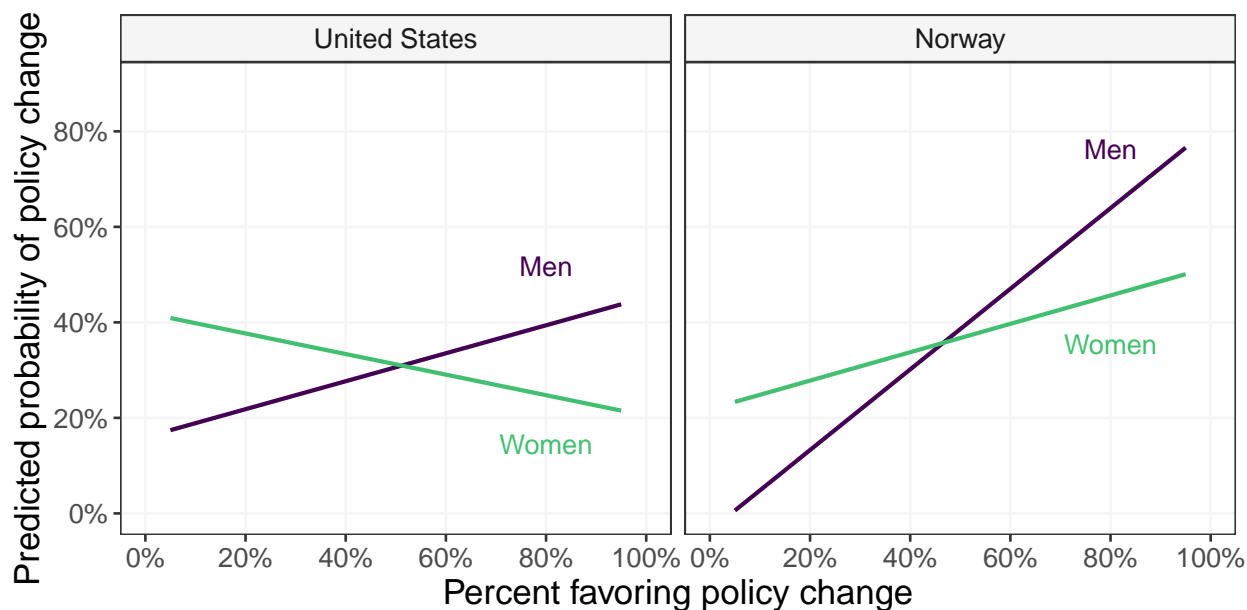
Figure 3: Policy responsiveness to men and women when their preferences diverge by more than 10 percentage points in the US and Norway.

To make sure that these patterns are not affected by the somewhat arbitrary cutoff point of 10 percentage points, I ran regressions of the same kind as above for twelve different thresholds. The results (plotted in Appendix Figure B1) show essentially the same pattern in both countries: As we increasingly zoom in on the issues where men and women disagree, the difference in responsiveness to men and women becomes larger and larger in men's favor.[22]

To what extent is the unequal policy responsiveness between men and women explained by the fact that men are more economically resourceful than women? To test this, I once again regressed policy outcome on the men-minus-women-difference, and then added

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[21]For these subsets of the data, the adoption rate is 30.9% in the US, and 35.7% in Norway.

[22]Although, in the US it appears that for the proposals with the highest preference divergence between men and women, there is no responsiveness to men and negative responsiveness to women (that is, inequality, but with a very low baseline level of responsiveness). I discuss possible explanations for this in Appendix B.

Table 4: The gender gap in responsiveness when accounting for unequal responsiveness between income groups

	DV: Policy adopted within 4 years of survey (1, 0)					
	US	US	US	Norway	Norway	Norway
	(1)	(2)	(3)	(4)	(5)	(6)
Overall support	0.525***	0.436***	0.541***	0.401***	0.394***	0.390***
	(0.048)	(0.049)	(0.052)	(0.098)	(0.098)	(0.099)
Diff. Men-Women	0.972***		0.824***	0.473*		−0.120
	(0.124)		(0.146)	(0.242)		(0.286)
Diff. P90-P50		0.673***	0.438***		0.746***	0.784***
		(0.131)	(0.136)		(0.280)	(0.295)
Diff. P50-P10		0.314**	−0.006		0.685**	0.739**
		(0.122)	(0.134)		(0.287)	(0.316)
Constant	0.026	0.070**	0.016	0.078	0.093*	0.096*
	(0.028)	(0.028)	(0.029)	(0.051)	(0.051)	(0.051)
Observations	2,255	2,255	2,255	395	395	395
R^2	0.058	0.049	0.063	0.047	0.081	0.082

*p<0.1; **p<0.05; ***p<0.01

Note: Linear probability models. Variables beginning with 'Diff.' measure the support difference between two groups, calculated as (support of group A) - (support of group B). P90, P50 and P10 represent the 90th, 50th and 10th income percentile (90th is the richest).

two comparable variables that measure preference differences across income groups: the support of the 90th income percentile minus the support of the 50th income percentile, and the 50th minus the 10th (Table 4). The coefficients for these two variables can be interpret like the coefficient for men-minus-women, that is, a positive coefficient indicates responsiveness bias in favor of the first group. Just like Gilens (2012) and others (e.g. Bartels 2016), I find substantial gaps in responsiveness across income groups in the US, but also in Norway (see Models 2 and 5). In both countries the gap between the affluent (P90) and the median (P50) is larger than that between median and poor (P10). What happens when both gender bias and income bias are considered in the same model? In the US, the gender bias is only slightly reduced when controlling for differences across income groups (the coefficient moves from 0.97 to 0.82, representing a 16% reduction). This suggests that income differences explain little of the observed gender bias in responsiveness in the US. In Norway on the other hand, the gender bias completely disappears (in fact it even changes sign, going from 0.47 to -0.12), when controlling for differences across income groups. In other words, the observed gender bias in policy responsiveness in Norway seems to be entirely attributable to economic differences between men and women.[23]

To investigate specific intersections of gender and income, Figure 5 shows estimates of policy responsiveness for men and women at three levels of income (see Appendix C for methodological details). Interestingly, in the US, the preferences of men have a statistically and substantively meaningful effect on policy regardless of their place in the income distribution (although the size of the effect does increase with income). Women's preferences on the other hand are less represented than men's at all levels of income, even at the top of the distribution (90th percentile), where their coefficient is about half the size of the one for men. It is somewhat surprising that even when comparing affluent men and women, there appears to be policy bias in favor of men. Among the affluent in Norway, there is no clear

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[23]Appendix C reports results from an alternative method for estimating what is explained by income. These results suggests that income explains 24% of the gender difference in the US, and 49% in Norway (Table C4).
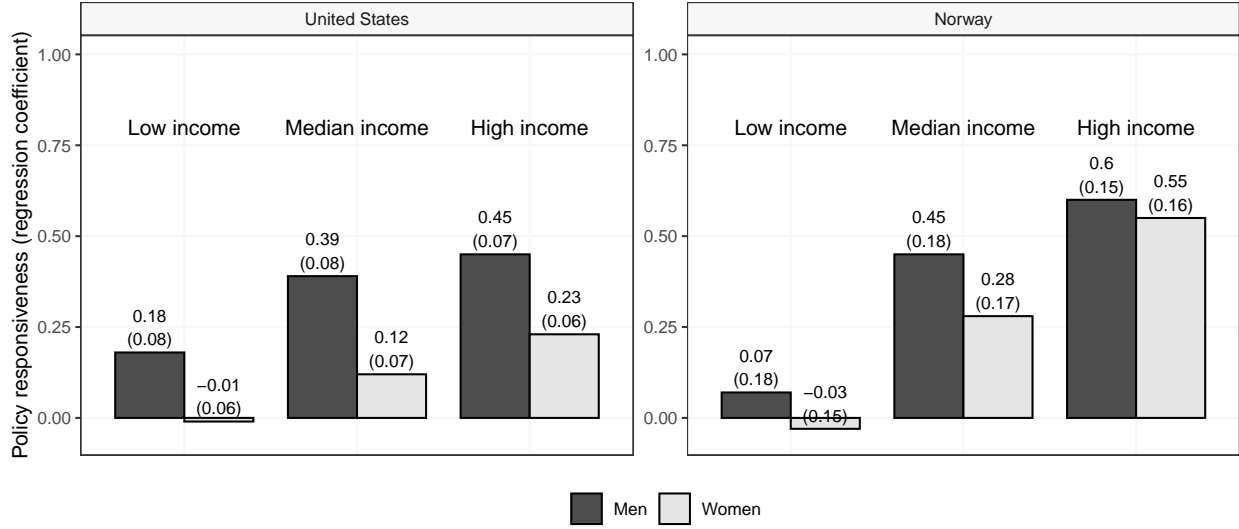
21

Figure 4: Policy responsiveness to men and women by income percentile and country. Coefficients are estimated from twelve bivariate OLS models (one for each combination of country, income and gender). Data include cases where preference diverege by more than 10 percentage points either between men and women, or between the 90th and 10th income percentile. 'Low', 'median' and 'high' refer to the 10th, 50th and 90th income percentile respectively. Standard errors in parentheses. Full regression results reported in Appendix Table C1.

gender bias in whose preferences government follows.[24] At median income there are visible differences between men and women, although not as much as in the US. Finally, among the poor in Norway, neither group's preferences are statistically related to policy.

How has unequal responsiveness between men and women evolved over time? Table 5 shows results from linear probability models where the men-minus-women distance is interacted with the year of the survey question. This model controls for the interaction between overall support and years, since overall responsiveness might change over time independent of the changing gender responsiveness gap. For the US, the interaction (-0.009) implies less unequal responsiveness over time, but the effect is weak and statistically insignificant. For Norway, the interaction (-0.032) is more than three times the size of the one for the US, and

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[24]This pattern could arise if affluent women and men have more similar preferences than poorer women and men. However, to account for this possibility, the results in Figure 5 are estimated with a fixed gender preference distance. Furthermore, disagreement is actually higher for men and women at the highest income level (see Appendix C).

Table 5: Gender gap in responsiveness conditioned by time and the share of women in parliament

| | DV: Policy adopted within 4 years of survey (1, 0) | | | | | |
| | US | US | US | Norway | Norway | Norway |
	(1)	(2)	(3)	(4)	(5)	(6)
Diff. Men-Women x Year	−0.009		−0.007	−0.032*		0.046
	(0.011)		(0.044)	(0.019)		(0.044)
Diff. Men-Women x W. MP%		−2.192	3.946		−5.380*	−12.677*
		(2.500)	(10.644)		(2.737)	(6.564)
Additional controls						
Overall sup. x Year	✓		✓	✓		✓
Overall sup. x Women MP%		✓	✓		✓	✓
Diff. P90-P50 x Year			✓			✓
Diff. P50-P10 x Year			✓			✓
Diff. P90-P50 x Women MP%			✓			✓
Diff. P50-P10 x Women MP%			✓			✓
Observations	2,255	2,255	2,255	395	395	395
R^2	0.074	0.078	0.087	0.076	0.076	0.117

*$p<0.1$; **$p<0.05$; ***$p<0.01$

Note: Linear probability models. Variables beginning with 'Diff.' measure the support difference between two groups, calculated as (support of group A) - (support of group B). P90, P50 and P10 represent the 90th, 50th and 10th income percentile (90th is the richest). Full regression results reported in Appendix Table D1

it narrowly clears the 10% level of statistical significance (p=0.092). Predicted probabilities based on these models (Appendix Figure D1) show that the gender gap in Norway in the 1960's was comparable in size to that in the US. However, the gap sharply decreased over time and eventually disappeared altogether towards the end of the period under study.

One plausible explanation for the over-time reduction of the gender responsiveness gap in Norway is the dramatic increase in the number of women in parliament over time (see Figure 1 above). To test this explanation, I interacted the men-minus-women difference with a variable, *Women MP%*, measuring the mean share of women in parliament for a period corresponding to the year of the survey question plus the subsequent 4 calender years.[25] Models 2 and 5 (Table 5) suggest that the gender gap was indeed reduced as the share of women in parliament increased in Norway, but not so much in the US. Figure 5 plots conditional effects from the model, illustrating that in Norway, policy responsiveness is predicted to be virtually equal at 40% women in parliament.

Finally, Model 6 (Table 5) shows that the observed over-time reduction in the gender gap in Norway disappears when controlling for the effect of women in parliament (i.e. the over-time reduction is entirely accounted for by this factor). The moderating effect of women in parliament is robust to controls for the overall time-trend, and also the time trend for un-equal responsiveness across income groups. In fact, after including these and other controls, the effect is even larger and still reasonable precisely estimated.

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[25]This is the period that most closely approximates the 4-year outcome window used in the research design (the outcome window extends 4 years from the time of the survey question, date-to-date).
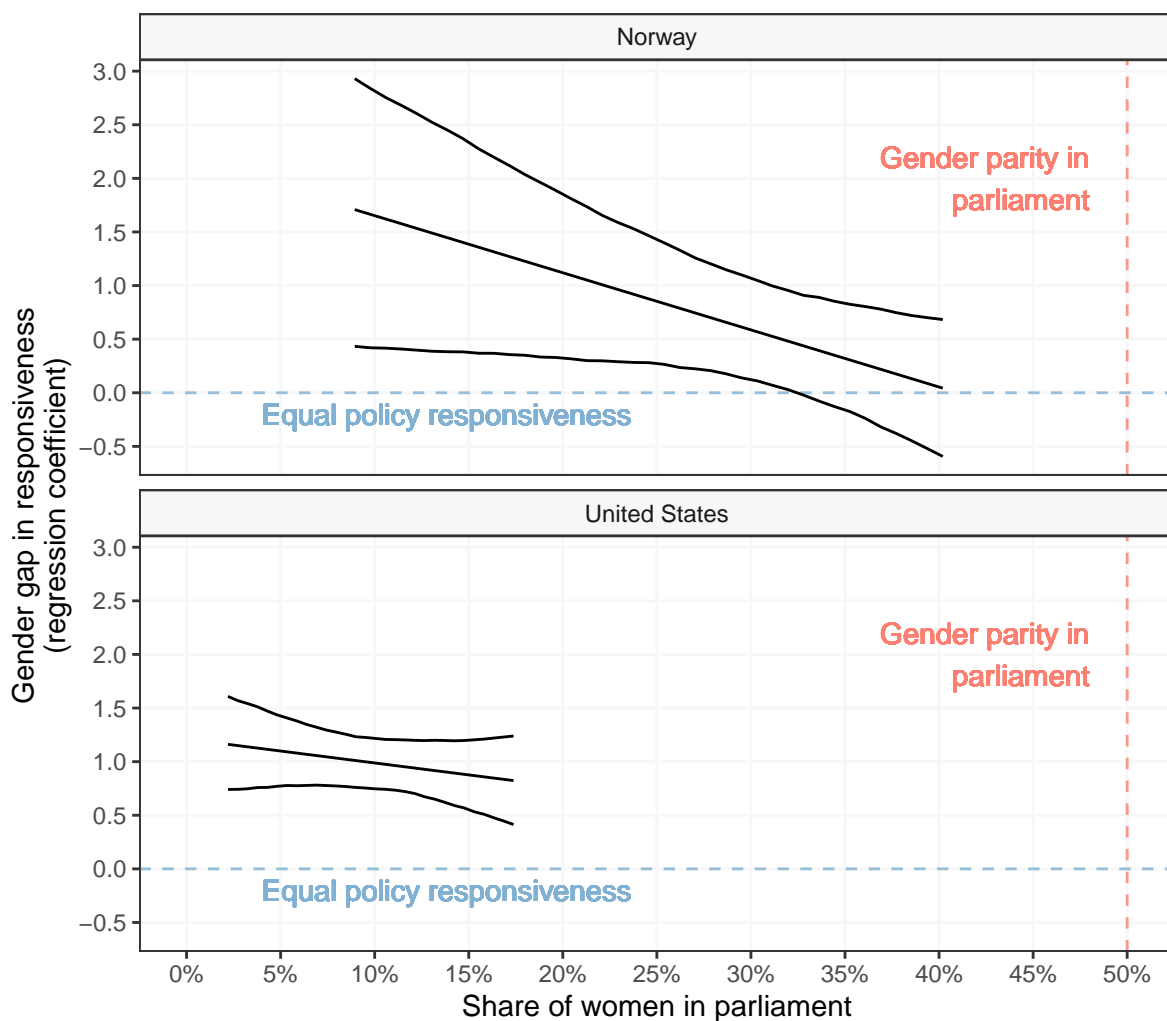
Figure 5: Gender gap in policy responsiveness as the share of women in parliament increases. Note: Conditional effects based on the regression models reported in Table 5 (models 2 and 5). Upper and lower lines indicate 95 percent confidence intervals. The length of the lines indicate the extent of variation on the independent variable for the period covered by the data. That is, Norway had between 9 and 40 percent women in parliament in the period 1966-2014, while the US had between 2 and 16 percent in the period 1964-2006.

Conclusion

An increasing number of studies have examined differences in political influence between economic groups, using large datasets of specific policy proposals (Elsässer et al. 2017; Gilens 2012; Schakel 2019). This study is one of the first to use such data to try to assess the extent of unequal responsiveness to men and women.

My main finding is that the policy preferences of women have been severely under-represented in public policy in both the United States and Norway over the last 50 years. Overall, the data show large inequalities in policy responsiveness between the genders. On the issues where men and women diverged in what they wanted from government, the preferences of men usually had substantial effects on policy. The preferences of women on the other hand, appear to have had little or no effect at all in the United States, and a moderate (although not statistically significant) effect in Norway. The study further shows that economic inequality between the genders likely explains most of the unequal responsiveness between men and women in Norway, but a more modest proportion in the US. These results suggests that if women and men had had the same level of income, policy responsiveness might have been less skewed in men's favor.

Looking at over-time change, the gender inequality in responsiveness in Norway appears to have been virtually wiped out over the period under study (1966-2014). In this period, Norway saw a large increase in the share of women in parliament, a factor that correlates with inequality of responsiveness, and accounts for the whole time trend. In the US on the other hand, gendered unequal responsiveness seems to have been highly stable of time, and women's descriptive representation appears to have made little difference. What explains this pattern? While the estimated effect of descriptive representation in the US is quite limited, so is the over-time variation in the share of women in parliament (at its highest, the House of Representatives had 17% women for the period covered by the data). It is imaginable that the US could see more equal responsiveness at higher numbers of women in

parliament if the effect has some sort of non-linear form (sometimes called a critical mass).[26] Another possibility is that regardless of the share of women, politicians in the US might be more constrained than politicians in Norway to act based on their gender identities because of the importance of political finance in the US. The necessity of private campaign funders— who are still predominantly men (Thomsen and Swers 2017)—means that candidates (both male and female) are strongly incentivized to run on platforms that are likely to attract the support of such funders (Ferguson 1995; Ferguson et al. 2019). This might leave little room to advance the interests of ordinary women; at least compared to Norway, where campaign funding does not matter as much.

It is important to highlight that the estimates of policy responsiveness reported here do not necessarily reflect a causal effect of opinions on policy. While this is usually the interpretation of opinion-policy links in the literature, there is evidence suggesting that reversed causality could play a role here as well: Citizens partially form their opinions based on cues from political elites, and groups who are more attentive to such cues might be more influenced by them (Lupia, McCubbins, and Arthur 1998; Zaller 1992). Information asymmetries might also matter, with more informed citizens showing stronger opinion-policy links (Elkjær 2020). While these points are usually raised with respect to higher educated and affluent citizens, they could be relevant in the case of gender as well. On average, men report to be more interested in politics than women (Fraile and Sánchez-Vítores 2020; Rinehart 2013), which could imply that they be more receptive to political elite cues and have more politically relevant information. However, this seems unlikely to be the whole—or even a major—explanation for my results. Policies shaping opinions unequally, or informational asymmetries, provides no obvious explanation as to why gender inequality in the opinion-policy link has changed so much over time in Norway;[27] why it is correlated with the share

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[26]Figure D2 in the appendix shows some suggestive evidence of this kind of non-linearity in Norway, by which there is little reduction in the gender responsiveness gap before Norway reached 20% women in parliament.

[27]From NES 1965 to NES 2005 (see Appendix Figure E3), women's political interest increased by five percentage points (0.26-0.31), while men's interest was stable (0.41-0.41); a relatively modest transformation compared to the dramatic reduction in unequal responsiveness over time.

of women in parliament; or why it is lower in Norway than in the United States in recent years. These findings seem to be more reconcilable with the notion that opinions impact policies, and that women's opinions carry more weight under certain circumstances.

While this study has documented gender-based differences in policy responsiveness in two revealing cases, much work remains to establish firm knowledge about how this gender gap varies across different contexts. Since large-n datasets containing measures of public opinion and public policy are scarce, one avenue for future research would be to gather such data for more countries. With more data, we might eventually be able to measure variation in political inequality across space and time with a comparable level of reliability that economists now are able to measure variation in economic inequality (Piketty 2020). It would then be possible to draw more general conclusions about which mechanisms account for gender and income gaps in political influence, and which reforms might eliminate it.

References

Achen, Christopher H. 1985. "Proxy variables and incorrect signs on regression coefficients." *Political Methodology* 299–316.

Atkinson, Anthony B., Alessandra Casarico, and Sarah Voitchovsky. 2018. "Top incomes and the gender divide." *The Journal of Economic Inequality* 16(2):225–56.

Bartels, Larry M. 2016. *Unequal democracy: The political economy of the new gilded age.* Princeton: Princeton University Press.

Bekkouche, Yasmine and Julia Cagé. 2018. "The Heterogeneous Price of a Vote: Evidence from France, 1993-2014." *Institute for New Economic Thinking Working Paper Series* (68).

Bernauer, Julian, Nathalie Giger, and Jan Rosset. 2015. "Mind the gap: Do proportional electoral systems foster a more equal representation of women and men, poor and rich?"

International Political Science Review 36(1):78–98.

Bolzendahl, Catherine. 2009. "Making the implicit explicit: Gender influences on social spending in twelve industrialized democracies, 1980–99." *Social Politics* 16(1):40–81.

Bolzendahl, Catherine and Clem Brooks. 2007. "Women's political representation and welfare state spending in 12 capitalist democracies." *Social Forces* 85(4):1509–34.

Brady, David. 2009. *Rich democracies, poor people: How politics explain poverty.* Oxford University Press.

Bratton, Kathleen A. and Kerry L. Haynie. 1999. "Agenda setting and legislative success in state legislatures: The effects of gender and race." *The Journal of Politics* 61(3):658–79.

Bratton, Kathleen A. and Leonard P. Ray. 2002. "Descriptive representation, policy outcomes, and municipal day-care coverage in Norway." *American Journal of Political Science* 428–37.

Campbell, Rosie, Sarah Childs, and Joni Lovenduski. 2010. "Do women need women representatives?" *British Journal of Political Science* 40(1):171–94.

Dingler, Sarah C., Corinna Kroeber, and Jessica Fortin-Rittberger. 2019. "Do parliaments underrepresent women's policy preferences? Exploring gender equality in policy congruence in 21 European democracies." *Journal of European Public Policy* 26(2):302–21.

Elkjær, Mads Andreas. 2020. "What drives unequal policy responsiveness? Assessing the role of informational asymmetries in economic policy-making." *Comparative Political Studies* 53(14):2213–45.

Elkjær, Mads Andreas and Michael Baggesen Klitgaard. 2021. "Economic Inequality and Political Responsiveness: A Systematic Review." *Perspectives on Politics* 1–20.

Elsässer, Lea, Svenja Hense, and Armin Schäfer. 2017. ""Dem Deutschen Volke"? Die ungleiche Responsivität des BundestagsGovernment for the People? – Unequal Responsiveness of

the Bundestag." *Zeitschrift Für Politikwissenschaft* 27(2):161–80.

Ferguson, Thomas. 1995. *Golden rule: The investment theory of party competition and the logic of money-driven political systems.* Chicago: University of Chicago Press.

Ferguson, Thomas, Paul Jorgensen, and Jie Chen. 2019. "How money drives US congressional elections: Linear models of money and outcomes." *Structural Change and Economic Dynamics.*

Fraile, Marta and Irene Sánchez-Vítores. 2020. "Tracing the gender gap in political interest over the life span: A panel analysis." *Political Psychology* 41(1):89–106.

Giger, Nathalie, Jan Rosset, and Julian Bernauer. 2012. "The poor political representation of the poor in a comparative perspective." *Representation* 48(1):47–61.

Gilens, Martin. 2012. *Affluence and influence: Economic inequality and political power in America.* Princeton: Princeton University Press.

Griffin, John D., Brian Newman, and Christina Wolbrecht. 2012. "A gender gap in policy representation in the US Congress?" *Legislative Studies Quarterly* 37(1):35–66.

Homola, Jonathan. 2019. "Are Parties Equally Responsive to Women and Men?" *British Journal of Political Science* 49(3):957–75.

Jacobs, Lawrence R. and Theda Skocpol. 2005. *Inequality and American democracy: What we know and what we need to learn.* Russell Sage Foundation.

Johnston, Ronald John. 2014. *Money and votes: Constituency campaign spending and election results.* Routledge.

Kittilson, Miki Caul. 2008. "Representing women: The adoption of family leave in comparative perspective." *The Journal of Politics* 70(2):323–34.

Kostelka, Filip, André Blais, and Elisabeth Gidengil. 2019. "Has the gender gap in voter

turnout really disappeared?" *West European Politics* 42(3):437–63.

Little, Thomas H., Dana Dunn, and Rebecca E. Deen. 2001. "A view from the top: Gender differences in legislative priorities among state legislative leaders." *Women & Politics* 22(4):29–50.

Lovenduski, Joni and Pippa Norris. 2003. "Westminster women: the politics of presence." *Political Studies* 51(1):84–102.

Lupia, Arthur, Mathew D. McCubbins, and Lupia Arthur. 1998. *The democratic dilemma: Can citizens learn what they need to know?* Cambridge University Press.

Paxton, Pamela, Sheri Kunovich, and Melanie M. Hughes. 2007. "Gender in politics." *Annu. Rev. Sociol.* 33:263–84.

Peters, Yvette. 2018. "Democratic representation and political inequality: how social differences translate into differential representation." *French Politics* 16(3):341–57.

Peters, Yvette and Sander J. Ensink. 2015. "Differential Responsiveness in Europe: The Effects of Preference Difference and Electoral Participation." *West European Politics* 38(3):577–600.

Phillips, Anne. 1995. *The politics of presence.* Clarendon Press.

Piketty, Thomas. 2020. *Capital and Ideology.* Cambridge: Harvard University Press.

Pitkin, Hanna F. 1967. *The concept of representation.* Vol. 75. Univ of California Press.

Poggione, Sarah. 2004. "Exploring gender differences in state legislators' policy preferences." *Political Research Quarterly* 57(2):305–14.

Przeworski, Adam and Michael Wallerstein. 1988. "Structural dependence of the state on capital." *The American Political Science Review* 11–29.

Reher, Stefanie. 2018. "Gender and opinion–policy congruence in Europe." *European Political*

Science Review 10(4):613–35.

Rekkas, Marie. 2007. "The impact of campaign spending on votes in multiparty elections." *The Review of Economics and Statistics* 89(3):573–85.

Rigby, Elizabeth and Gerald C. Wright. 2013. "Political parties and representation of the poor in the American states." *American Journal of Political Science* 57(3):552–65.

Rinehart, Sue Tolleson. 2013. *Gender consciousness and politics.* Routledge.

Schakel, Wouter. 2019. "Unequal policy responsiveness in the Netherlands." *Socio-Economic Review.*

Schakel, Wouter, Brian Burgoon, and Armen Hakhverdian. 2020. "Real but unequal representation in welfare state reform." *Politics & Society* 48(1):131–63.

Schneebaum, Alyssa, Miriam Rehm, Katharina Mader, and Katarina Hollan. 2018. "The gender wealth gap across European countries." *Review of Income and Wealth* 64(2):295–331.

Thomas, Sue. 1991. "The impact of women on state legislative policies." *The Journal of Politics* 53(4):958–76.

Thomsen, Danielle M. and Michele L. Swers. 2017. "Which women can run? Gender, partisanship, and candidate donor networks." *Political Research Quarterly* 70(2):449–63.

Wängnerud, Lena. 2009. "Women in parliaments: Descriptive and substantive representation." *Annual Review of Political Science* 12:51–69.

Zaller, John R. 1992. *The nature and origins of mass opinion.* Cambridge: Cambridge University Press.

Appendix for Article 3

Appendix for: Gender, economic inequality, and political power

Appendix A: Policy areas and 'Dont Know' responses

Models broken down by policy area (Table A2) suggest that the inequality in both countries is driven by foreign policy and miscellaneous (uncategorized) issues, and not issues pertaining to morality (sometimes called cultural issues). In the US, economic policy also contributes, while in Norway, economic policy appears to have been biased in the opposite direction (i.e. more in favor of women's preferences). The latter result might reflect the fact that Norway has seen significant welfare state expansion during the period under study (part of the economic policy realm), and such policies tend to receive more support among women than men.

Table A1: Gender gap in responsiveness, by policy area.

	DV: Policy adopted within 4 years of survey (1, 0)							
	U.S. Economy	U.S. Moral	U.S. Foreign	U.S. Other	Norway Economy	Norway Moral	Norway Foreign	Norway Other
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Overall support	0.563***	0.782***	0.759***	0.317***	0.368*	0.163	0.803***	0.476*
	(0.074)	(0.173)	(0.101)	(0.087)	(0.190)	(0.148)	(0.224)	(0.255)
Diff. Men-Women	0.599**	−0.268	1.569***	0.672***	−1.267**	−0.029	1.254**	1.946***
	(0.237)	(0.382)	(0.224)	(0.203)	(0.610)	(0.355)	(0.536)	(0.467)
Constant	−0.025	−0.219**	0.067	0.048	0.165*	0.136*	−0.047	−0.005
	(0.044)	(0.103)	(0.055)	(0.051)	(0.098)	(0.078)	(0.109)	(0.136)
Observations	944	183	568	560	108	164	68	55
R^2	0.058	0.109	0.132	0.032	0.084	0.008	0.230	0.292

*p<0.1; **p<0.05; ***p<0.01
Note: Linear probability models. Variables beginning with 'Diff.' measure the support difference between two groups, calculated as (support of group A) - (support of group B). The 'Economy' area refers to policies partaining to the economy and social welfare (which are treated as seperate categories in Gilens (2012)).

Table A2: How the probability of policy adoption is affected by preference difference between men and women (gender gap in responsiveness), with Dont Know's included.

| | DV: Policy adopted within 4 years of survey (1, 0) | | | |
| | U.S. | U.S. | Norway | Norway |
	(1)	(2)	(3)	(4)
Overall support	0.359***	0.495***	0.107	0.132
	(0.049)	(0.050)	(0.152)	(0.150)
Diff. Men-Women		1.114***		0.874***
		(0.123)		(0.298)
Constant	0.126***	0.044	0.195***	0.170**
	(0.027)	(0.028)	(0.075)	(0.074)
Observations	2,255	2,255	205	205
R^2	0.023	0.058	0.002	0.043

*p<0.1; **p<0.05; ***p<0.01

Note: Linear probability models. Variables beginning with 'Diff.' measure the support difference between two groups, calculated as (support of group A) - (support of group B).

Appendix B: Policy responsiveness to men and women on the issues where preferences diverge
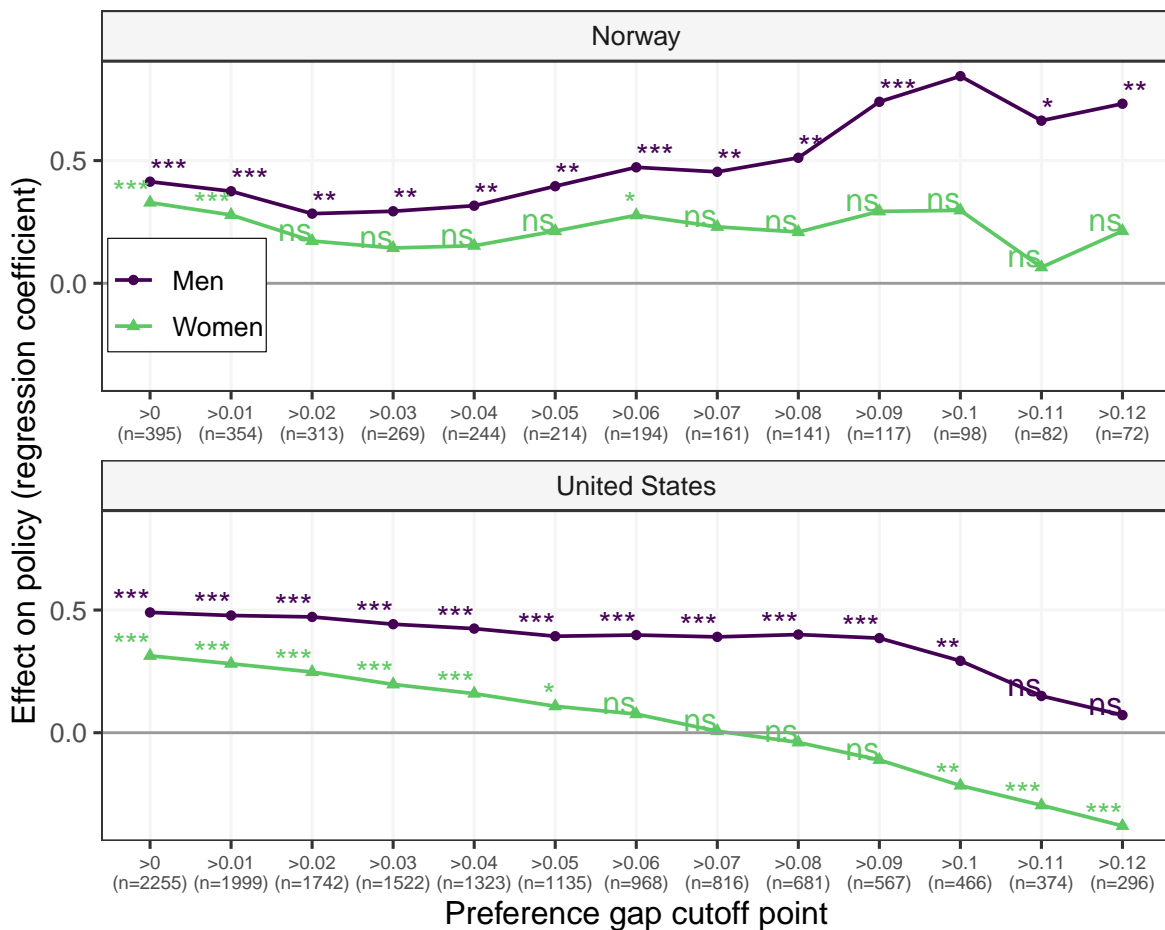
Figure B1: Policy responsiveness to men and women at different cutoff-points for preference gap. Note: Regression coefficients from bivariate OLS models estimated the same way as the models reported in Appendix Table B1. *p<0.1; **p<0.05; ***p<0.01

In Figure B1, it is striking to see for the US panel that on the issues where the preferences of men and women diverge by more than 11 or 12 percentage point, there is little responsiveness to the preferences of men and significant *negative* responsiveness to the preferences of women (in other words, there is low responsiveness to overall opinion: b=-0.32, se=-0.16). What explains this pattern? It is important to keep in mind that small non-random subsets of larger datasets often will have idiosyncrasies on important variables

Table B1: Policy reponsiveness to men and women when their preferences diverge.

	United States		Norway	
	Men	Women	Men	Women
Effect (logit coefficient)	0.29**	-0.22**	0.84***	0.3
Standard error	0.15	0.1	0.28	0.26
P-value	.046	.026	.004	.249
Predicted probability of policy change at 20% support	0.22	0.38	0.13	0.28
Predicted probability of policy change at 80% support	0.39	0.25	0.64	0.46
Relative change in probability	1.8	0.7	4.8	1.6
Observations	466	466	98	98

Note:
Bivariate OLS models on subsetted data. Observations are the policy proposals where support diverge by more than 10 percentage points between men and women. *p<0.1; **p<0.05; ***p<0.01

making them not fully comparable to the larger dataset. This means that one cannot necessarily generalize findings from small subsets to apply for the larger data as a whole. This is one obvious drawback of the subsetting method when estimating responsiveness. What are the idiosyncrasies in this case? The subset of the US data where men and women diverge by more than 12 percentage points have roughly the same adoption rate as the full dataset (28.4% vs. 31.2% in the full data); policy question are distributed very similarly across time (M=1990/1991, $Q1$=1982/1983, $Q3$=2000/2000); and the share of 'Dont Know' responses (a plausible measure of saliency) is similar (6.8% vs. 7.9%). Where the subset differs from the mother data is on policy area. It is well known that there tends to be large opinion differences between men and women when it comes to guns and the use of force (Page and Shapiro 1992:295). It is therefore no surprise that the subset contains much larger shares of questions about the topics "foreign policy" (28%) and "guns" (18%) than the full data (foreign policy: 16%; guns: 4%).

What is puzzling however, is that for the full dataset, these areas do not show particularly low responsiveness to overall opinion (b_foreign=0.54; b_guns=0.49). It is thus something about the specific policies where men and women disagree on these topics that makes for the low overall responsiveness. To find out which specific policies are driving the low responsiveness, we must look at the adopted policies with low overall support, and the non-adopted policies with high support. A qualitative assesment of these proposals suggest that in the adopted category, they largely consist of military aid and US military missions that had very low popular support ($<30\%$; such as aid to the Nicaraguan Contras and bombing in Vietnam). The non-adopted category largely consists of proposals to restrict gun laws (e.g. by mandating safety locks) that were very popular ($>70\%$), but were still not adopted.

Because of these differences in topical distribution and overall responsiveness between the high disagreement subsets and the overall dataset, these subsets are probably not very informative about the *levels* of responsiveness to men and women in general. However, they can still be informative about the *inequality* of responsiveness between the genders; and, consistent with the results presented in the manuscript, policy outcomes appear to be considerably *more* out of tune with the preferences of women than the preferences of men.

Appendix C: Policy responsiveness at the intersections of income and gender

Because of the structure of mine and Gilens' (2012) data, estimating policy responsiveness at particular combinations of income and gender is not as straightforward as it may seem. Specifically, the datasets have an aggregate structure in which observations are survey items, and not respondents. For each survey item, the datasets contain information about 1) the number of respondents who support/oppose a policy change by household income percentile, and 2) that same information broken down by gender; bot no information about the relationship between income and gender. In order to estimate policy preferences for combinations of income and gender, I adopted a solution that is equivalent to the one Gilens used when looking at combinations of income and education (Gilens 2012:93–95). Hence, I estimated the joint relationship between gender and income on policy support from a variance-covariance matrix for every survey item. The datasets contain almost all the necessary components for this: they have the covariance of gender and policy support, and income and policy support. What is missing is the covariance between gender and income. I estimated this from each of the countries' national election study series (NES) for all the relevant years. While Gilens (2012) used the General Social Survey (GSS) for the covariance between income and education, there is no such equivalent for Norway, and since the GSS only goes back to 1972, I used the election studies instead. Since these are only implemented in tandem with elections, I imputed the gender-income covariance for the in-between years using locally estimated scatter plot smoothing (LOESS).

How reliable is the approach of using income-gender-covariances from NES data in the variance-covariance matrices? One way to get at this, is to compare the variances obtained from the election study data with those that are in the opinion-policy datasets. Such a comparison is shown in Figure C1. We see that the variances for gender are virtually identical across the two data sources. Income also shows quite similar variances across the

7

two sources, albeit in both countries the variances from the NES are somewhat lower.[1] This could have something to do with the NES surveys typically using larger samples, and a higher number of income categories, than the commercial polls that constitute the opinion-policy datasets. The NES variances are also somewhat more stable over time, but this is at least partially an artifact of the LOESS method used to fill in non-election years. Overall, the variances from the NES data appear to be fairly good approximations of the variances in the opinion-policy datasets, which is one indication that the covariances between income and gender might not be so different across the two sources.
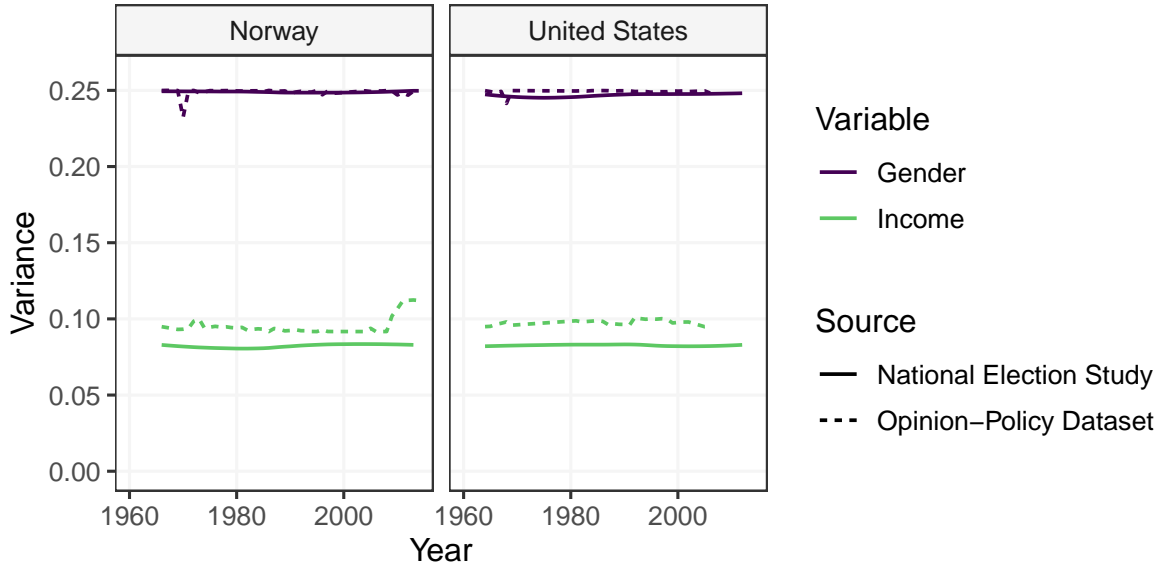
Figure C1: Variances for income and gender from two different data sources. Note: NES variances for every year estimad using LOESS, opinion-policy dataset variances are the average variances each year.

For each survey item then, I used the now complete variance-covariance matrix to estimate an OLS regression model with policy support as DV, and income, income squared, and gender as IV's. From this model, I predicted the policy support of men and women at the 10th, 50th and 90th income percentile. In a second application of this approach, I predicted support from a model that also included the interactions *income and gender* and

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[1]The income variable categories have been transformed to percentile midpoints in both survey income distributions for comparability.

income squared and gender.

Before estimating policy responsiveness to these combinations of income and gender, in order to deal with the high correlation between the opinion measures, I adopted the same solution as Gilens (2012) did for education and income: namely subsetting the data to only include policy proposals where preferences diverged by more than 10 percentage points either between men and women, or between the 90th and the 10th income percentile. This leaves us with 1161 observations for the US and 207 observations for Norway.

Table C1 shows the full regression results for the 12 bivariate linear probability models where I regress policy outcome on the imputed support of each combination of gender and income and country (visualized in Figure 4 in the manuscript). Table C2 shows this same table, but with imputed support based on the alternative model that include the interactions *income and gender* and *income squared and gender*. As shown in Table C3, average preference divergence is actually *higher* among affluent women and men than middle-class women and men, in both the US and Norway. Because of this, responsiveness is in fact more gender equal at the top of the income distribution when holding the men-women preference divergence constant across income groups (i.e. Table C1, and Figure 4 in the manuscript), than when it is allowed to vary (Table C2).

How much is the gender gap in responsiveness diminished when taking into account gender differences in income? In the manuscript, I used a control variable approach (Table 4) showing that the gender gap in the US was only marginally reduced when controlling for income differences in responsiveness, while in Norway the gender gap disappeared completely. An alternative way to estimate this is to use the information in Table C1 here. With this, we can compare difference in the responsiveness coefficients of men and women at the same levels of income, with the difference between men and women overall (not accounting for income). Using this approach, the gap between the coefficients for men and women in the US is reduced by an estimated 24% when adjusting for income differences. In Norway it is reduced by 49%. This can be interpreted as gender income differences explaining more of the

observed unequal responsiveness between men and women in Norway than in the US. This results, although less dramatic than the results from the control variable method employed in the manuscript, suggest, like those results, that income differences explain a lot of the observed gender inequality in responsiveness in Norway, but less in the US.

Table C1: Full regression results for Figure 4: Policy responsiveness to men and women by income percentile and country.

	Effect (OLS coefficient)	Standard error	Predicted probability of policy change at 20% support	Predicted probability of policy change at 80% support	Relative change in probability	N
US: Men						
Income P10	0.18**	0.08	0.25	0.36	1.4	1161
Income P50	0.39***	0.08	0.18	0.41	2.3	1161
Income P90	0.45***	0.07	0.16	0.43	2.7	1161
US: Women						
Income P10	-0.01	0.06	0.31	0.3	1	1161
Income P50	0.12*	0.07	0.27	0.34	1.3	1161
Income P90	0.23***	0.06	0.23	0.37	1.6	1161
Norway: Men						
Income P10	0.07	0.18	0.29	0.33	1.1	207
Income P50	0.45**	0.18	0.19	0.46	2.4	207
Income P90	0.6***	0.15	0.15	0.51	3.3	207
Norway: Women						
Income P10	-0.03	0.15	0.32	0.3	0.9	207
Income P50	0.28*	0.17	0.24	0.41	1.7	207
Income P90	0.55***	0.16	0.17	0.5	3	207

Note:

Linear probability models. Observations are the proposed policy changes where preference diverge by more than 10 percentage points either between men and women or between the 90th and 10th income percentile in each country respectively. *p<0.1; **p<0.05; ***p<0.01

Table C2: Policy responsiveness to men and women by income percentile and country, with support variables estimated using an interaction term

	Effect (OLS coefficient)	Standard error	Predicted probability of policy change at 20% support	Predicted probability of policy change at 80% support	Relative change in probability	N
US: Men						
Income P10	0.19**	0.08	0.25	0.36	1.5	1161
Income P50	0.39***	0.08	0.18	0.41	2.3	1161
Income P90	0.44***	0.07	0.16	0.42	2.6	1161
US: Women						
Income P10	-0.01	0.06	0.31	0.3	1	1161
Income P50	0.11*	0.07	0.27	0.34	1.3	1161
Income P90	0.24***	0.06	0.23	0.37	1.6	1161
Norway: Men						
Income P10	0.06	0.17	0.3	0.33	1.1	207
Income P50	0.43**	0.18	0.19	0.45	2.3	207
Income P90	0.62***	0.15	0.15	0.52	3.5	207
Norway: Women						
Income P10	-0.03	0.15	0.32	0.3	0.9	207
Income P50	0.28*	0.17	0.24	0.4	1.7	207
Income P90	0.51***	0.16	0.18	0.49	2.7	207

Note:

Linear probability models. Observations are the proposed policy changes where preference diverge by more than 10 percentage points either between men and women or between the 90th and 10th income percentile in each country respectively. *p<0.1; **p<0.05; ***p<0.01

Table C3: Mean absolute support distance (in %-points) between men and women, by income group

Income group	United States	Norway
P10 (poor)	6.6	7.1
P50 (middle)	6.0	6.8
P90 (affluent)	6.6	7.4

Note:
Support for each gender/income combination imputed based on the variance/covariance procedure that included an interaction term (described in Appendix C).

Table C4: Policy responsiveness to men and women before and after adjusting for income

Estimate	United States			Norway		
	Men	Women	Gap	Men	Women	Gap
A. Unadjusted effects and gap	0.4***	0.1	0.3	0.46**	0.25	0.21
B. Both at low income (P10)	0.18**	-0.01	0.19	0.07	-0.03	0.1
C. Both at median income (P50)	0.39***	0.12*	0.27	0.45**	0.28*	0.17
D. Both at high income (P90)	0.45***	0.23***	0.22	0.6***	0.55***	0.05
E. Average adjusted gap			0.23			0.11
F. Change in gap (row A to E)			-24.4 %			-49.2 %

Appendix D: Interactions with time and share of women in parliament
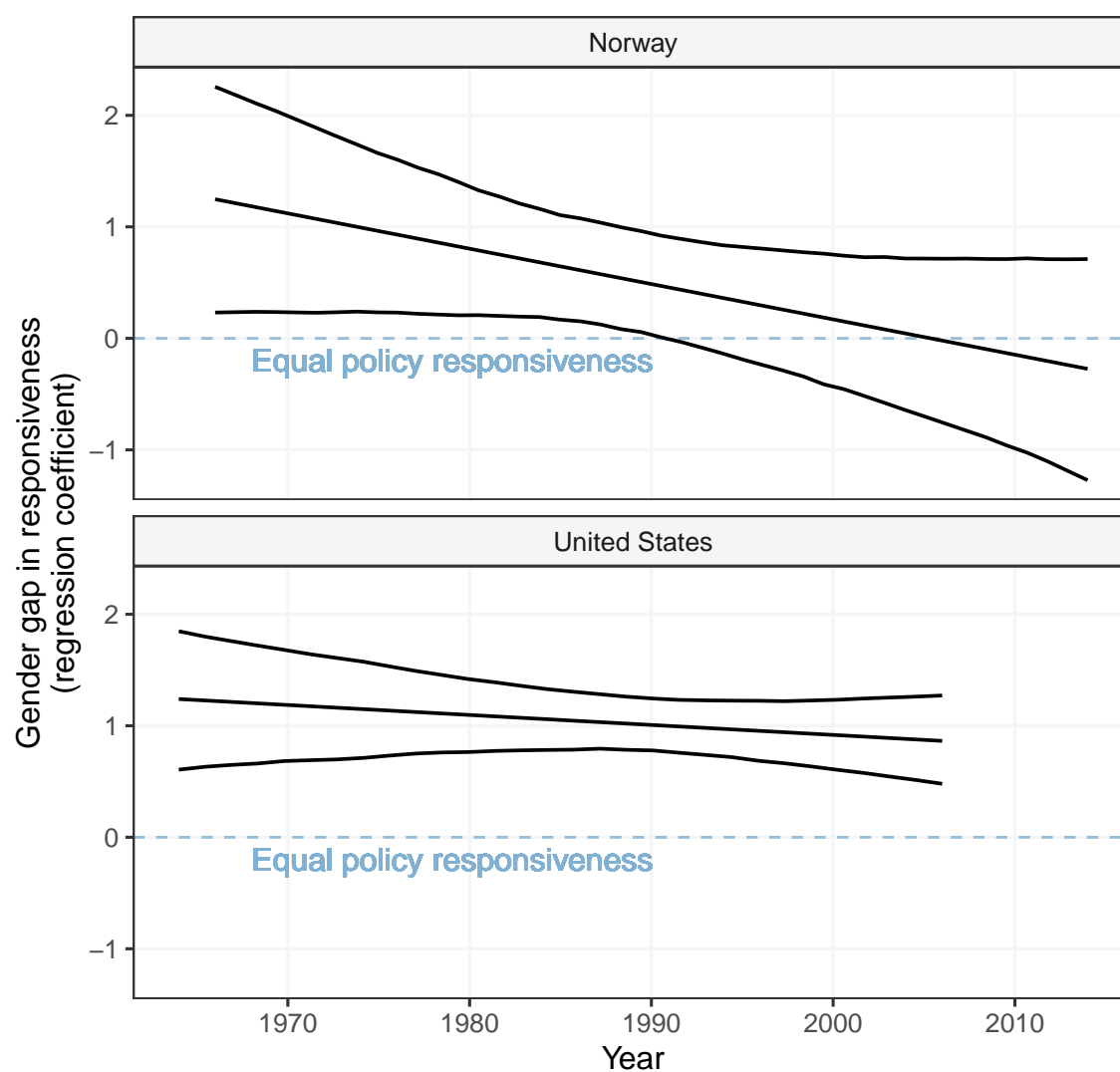

Figure D1: Gender gap in policy responsiveness over time. Note: Conditional effects based on the regression models reported in Table 5 (models 1 and 4). Upper and lower lines indicate 95 percent confidence intervals.

Table D1: Full regression results for 'Table 5: Gender gap in responsiveness conditioned by time and the share of women in parliament'

	DV: Policy adopted within 4 years of survey (1, 0)					
	U.S.	U.S.	U.S.	Norway	Norway	Norway
	(1)	(2)	(3)	(4)	(5)	(6)
Diff. Men-Women	1.002***	0.926***	0.886**	0.473*	1.512***	2.387*
	(0.123)	(0.143)	(0.352)	(0.241)	(0.571)	(1.297)
Year	−0.004***		0.004	−0.004**		−0.004
	(0.001)		(0.003)	(0.002)		(0.004)
Women MP%		−1.219***	−2.149***		−0.552**	−0.081
		(0.195)	(0.649)		(0.239)	(0.516)
Overall support	0.575***	0.636***	0.619***	0.334***	0.784***	0.415
	(0.049)	(0.057)	(0.114)	(0.104)	(0.196)	(0.444)
Diff. P90-P50			0.120			−0.648
			(0.323)			(1.298)
Diff. P50-P10			−0.017			−0.778
			(0.311)			(1.549)
Diff. Men-Women x Year	−0.009		−0.007	−0.032*		0.046
	(0.011)		(0.044)	(0.019)		(0.044)
Overall sup. x Year	0.007*		0.006	−0.019**		−0.016
	(0.004)		(0.014)	(0.008)		(0.018)
Diff. P90-P50 x Year			0.043			−0.056
			(0.041)			(0.050)
Diff. P50-P10 x Year			−0.013			−0.022
			(0.039)			(0.057)
Diff. P90-P50 x W. MP%			−13.370			7.250
			(9.929)			(6.412)
Diff. P50-P10 x W. MP%			−1.603			7.305
			(9.349)			(7.647)
Diff. Men-Women x W. MP%		−2.192	3.946		−5.380*	−12.677*
		(2.500)	(10.644)		(2.737)	(6.564)
Overall sup. x W. MP%		1.993**	1.173		−2.284**	−0.317
		(0.961)	(3.445)		(1.018)	(2.217)
Constant	0.306***	0.268***	0.239***	0.283***	0.389***	0.308***
	(0.010)	(0.011)	(0.023)	(0.023)	(0.047)	(0.103)
Observations	2,255	2,255	2,255	395	395	395
R^2	0.074	0.078	0.087	0.076	0.076	0.117

*p<0.1; **p<0.05; ***p<0.01

Note: Linear probability models. Variables beginning with 'Dist' measure the support difference between two groups, calculated as (support of group A) - (support of group B). P90, P50 and P10 represent the 90th, 50th and 10th income percentile (90th is the richest). The variables overall support, year, and Women MP% have been centered on their overall means for the combined dataset.
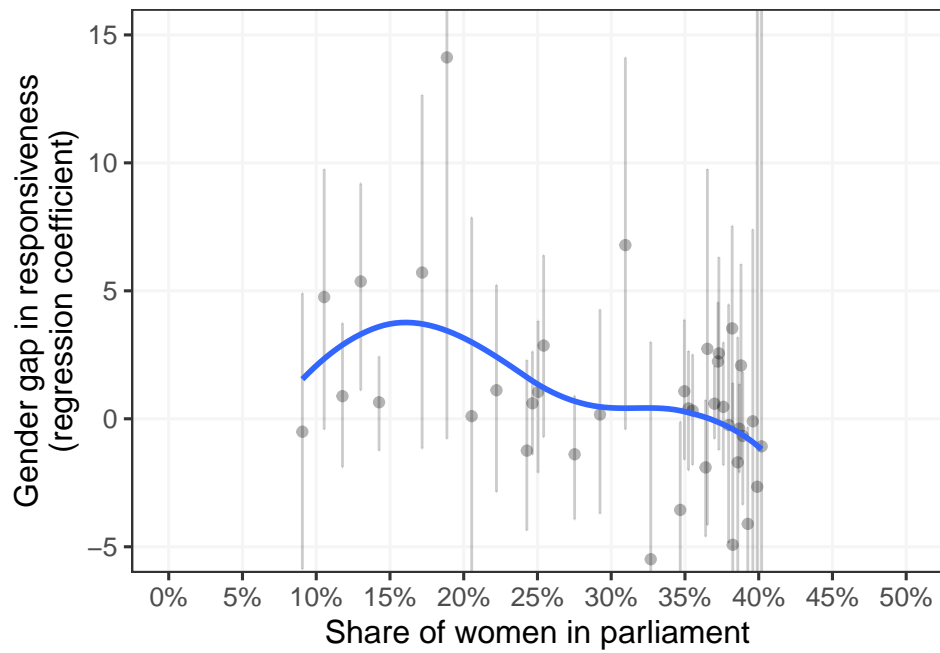
Figure D2: Gender gap in policy responsiveness as the share of women in parliament increases, non-linear effect. Note: Conditional effects based on regression models like those reported in Table D1 (models 1 and 4), but where each unique value of the share of women in parliament is treated as a dummy.

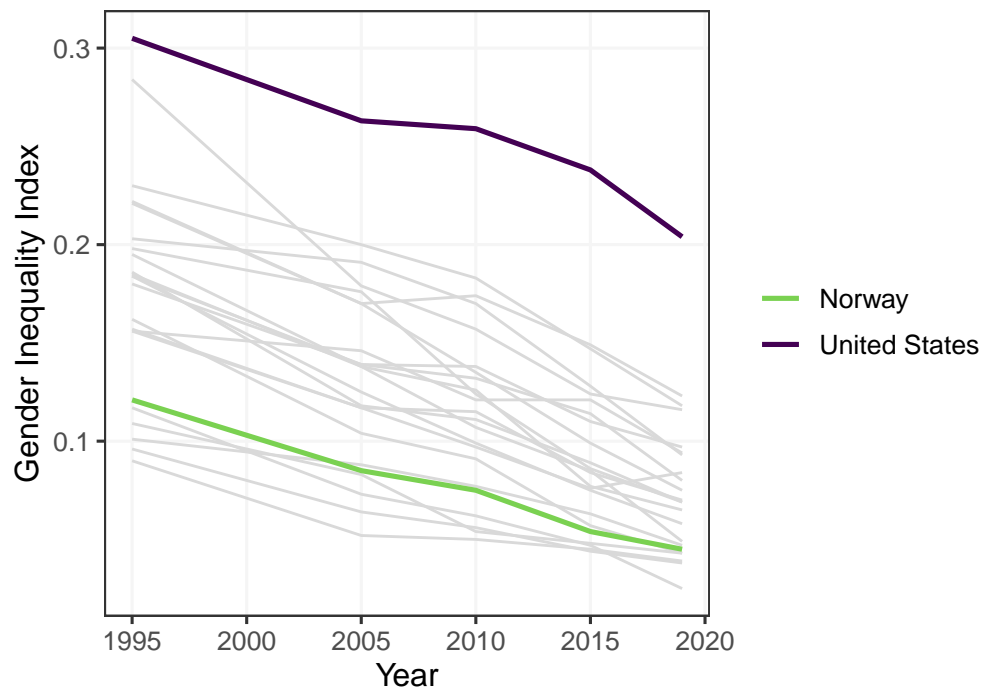# Appendix E: Gender equality over time in both country cases

Figure E1: The United Nations Gender Inequality Index (GII), 1995-2019 for Norway, the US, and other established democracies. Note: Other countries include all in Western Europe + CA, AU, NZ, and JP (n=23). Averaged across the whole time period, Norway is #6 most equal, and the US is #23. Data downloaded from https://hdr.undp.org/en/indicators/68606#, May 5, 2022
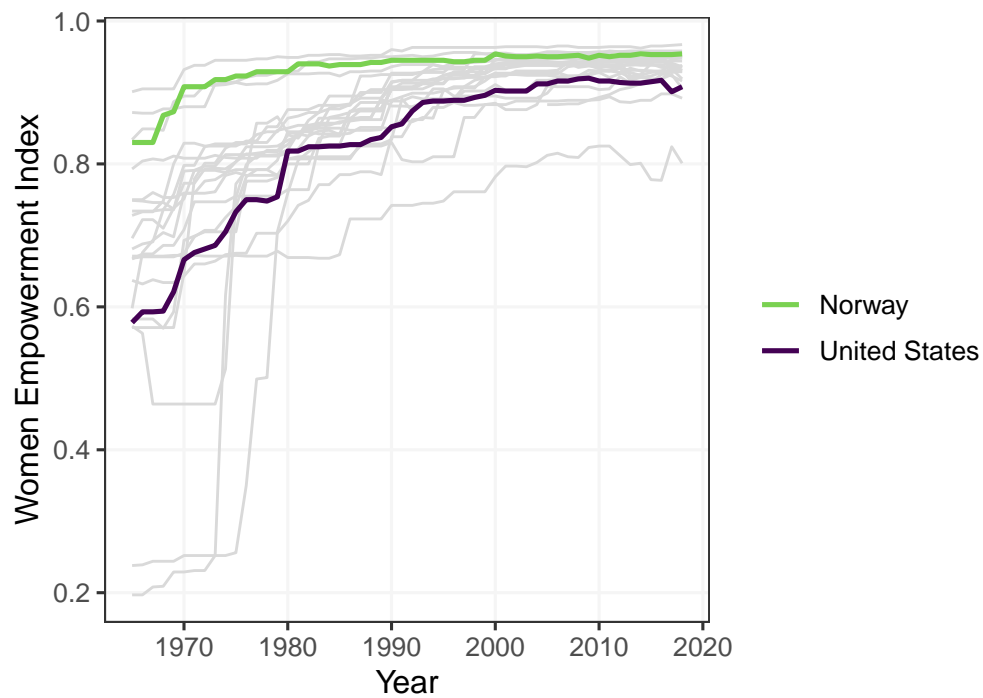
Figure E2: The V-Dem Women Political Empowerment Index, 1964-2018 for Norway, the US, and other established democracies. Note: Other countries include all in Western Europe + CA, AU, NZ, and JP (n=23). Averaged across the whole time period, Norway is #3 on women's empowerment, and the US is #18.
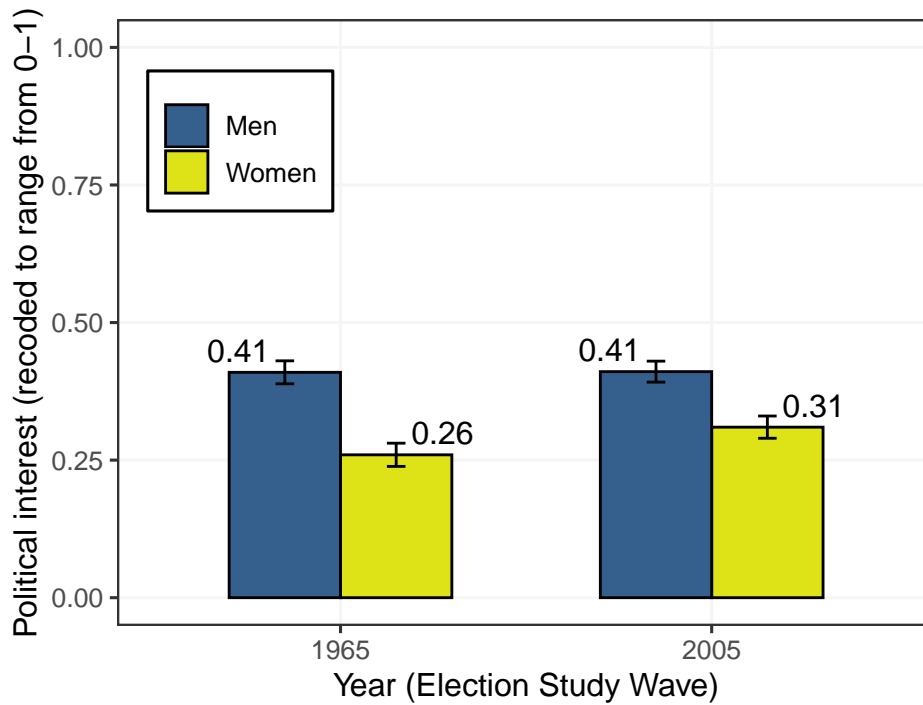
Figure E3: Political interest by gender over time, in Norway. Note: data from the 1965 and 2005 National Election Studies. 1965 is the election study that is closest to the beginning of the Norwegian opnion-policy dataset (1966). 2005 is shown because it is our best guess for when the gender gap in responsiveness reached zero (see Figure D1). Whiskers show 95% confidence intervals.
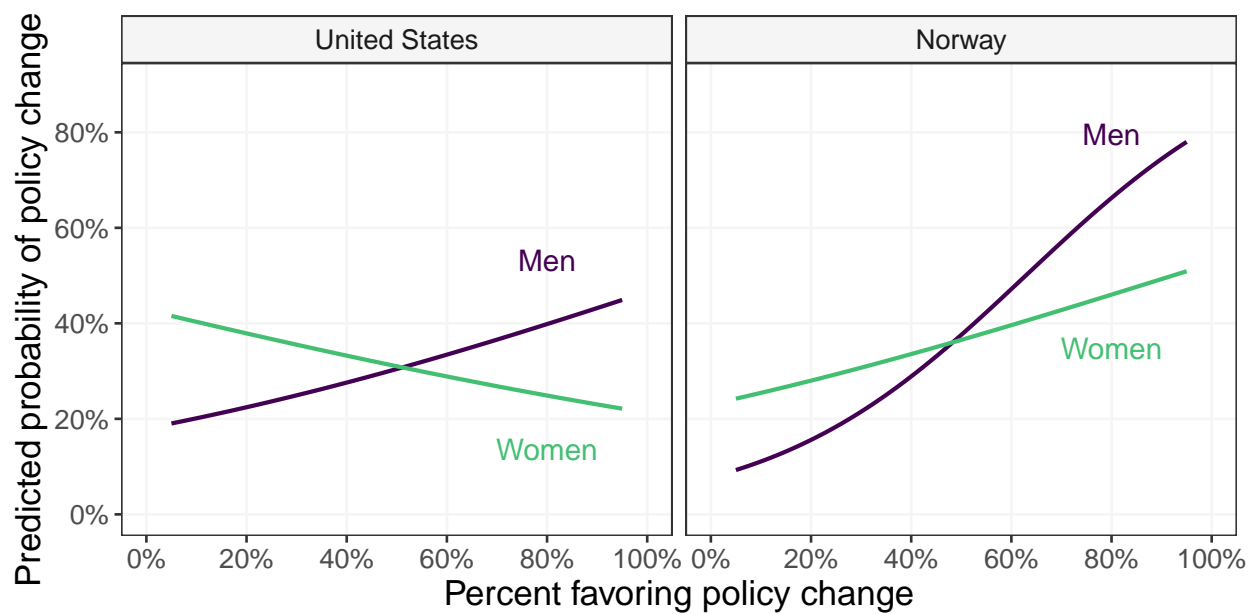
Appendix F: Logistic models

Figure F1: Policy responsiveness to men and women when their preferences diverge by more than 10 percentage points in the US and Norway.

Table F1: Policy reponsiveness to men and women when their preferences diverge.

	United States		Norway	
	Men	Women	Men	Women
Effect (logit coefficient)	1.38**	-1.02**	3.94***	1.31
Standard error	0.7	0.46	1.43	1.13
P-value	.047	.027	.006	.247
Predicted probability of policy change at 20% support	0.22	0.38	0.16	0.28
Predicted probability of policy change at 80% support	0.4	0.25	0.66	0.46
Relative change in probability	1.8	0.7	4.3	1.6
Observations	466	466	98	98

Note:
Bivariate logistic regression models on subsetted data. Included are policy proposals where support diverged by more than 10 percentage points between men and women. *p<0.1; **p<0.05; ***p<0.01

Table F2: Policy reponsiveness to men and women overall

	United States			Norway		
	All	Men	Women	All	Men	Women
Effect (logit coefficient)	1.97***	2.39***	1.5***	2.03***	2.18***	1.71***
Standard error	0.23	0.25	0.21	0.53	0.53	0.51
P-value	<.001	<.001	<.001	<.001	<.001	<.001
Predicted probability of policy change at 20% support	0.18	0.16	0.21	0.17	0.16	0.18
Predicted probability of policy change at 80% support	0.42	0.45	0.39	0.4	0.41	0.38
Relative change in probability	2.3	2.8	1.9	2.4	2.6	2.1
Observations	2255	2255	2255	395	395	395

Note:
Bivariate logistic regression models. The observations are proposed policy changes asked about in nationally representative surveys of the US population in the period 1964-2006 (Gilens 2012), and the Norwegian population in the period 1966-2014. The dependent variable is a dichotomous measure of whether or not the policy change was adopted within four years of the time of the survey question. *p<0.1; **p<0.05; ***p<0.01

Table F3: The gender gap in responsiveness when accounting for unequal responsiveness between income groups, logistic models

	DV: Policy adopted within 4 years of survey (1, 0)					
	US	US	US	Norway	Norway	Norway
	(1)	(2)	(3)	(4)	(5)	(6)
Overall support	2.637***	2.156***	2.723***	2.118***	2.126***	2.105***
	(0.254)	(0.247)	(0.270)	(0.538)	(0.553)	(0.555)
Diff. Men-Women	4.982***		4.223***	2.528*		−0.741
	(0.649)		(0.757)	(1.305)		(1.591)
Diff. P90-P50		3.354***	2.174***		4.031**	4.288**
		(0.653)	(0.688)		(1.572)	(1.671)
Diff. P50-P10		1.595***	−0.011		3.639**	3.982**
		(0.603)	(0.668)		(1.599)	(1.764)
Constant	−2.288***	−2.034***	−2.342***	−2.067***	−2.049***	−2.034***
	(0.155)	(0.149)	(0.162)	(0.300)	(0.306)	(0.308)
Observations	2,255	2,255	2,255	395	395	395

*p<0.1; **p<0.05; ***p<0.01

Note: Logistic regression models. Variables beginning with 'Diff.' measure the support difference between two groups, calculated as (support of group A) - (support of group B). P90, P50 and P10 represent the 90th, 50th and 10th income percentile (90th is the richest).

Table F4: Gender gap in responsiveness conditioned by time and the share of women in parliament, logistic models

	DV: Policy adopted within 4 years of survey (1, 0)					
	US	US	US	Norway	Norway	Norway
	(1)	(2)	(3)	(4)	(5)	(6)
Diff. Men-Women x Year	−0.004		−0.070	−0.171		0.262
	(0.056)		(0.220)	(0.109)		(0.252)
Diff. Men-Women x W. MP%		1.935	39.607		−28.020*	−70.605*
		(13.360)	(53.690)		(15.633)	(37.161)
Additional controls						
Overall sup. x Year	✓		✓	✓		✓
Overall sup. x Women MP%		✓	✓		✓	✓
Diff. P90-P50 x Year			✓			✓
Diff. P50-P10 x Year			✓			✓
Diff. P90-P50 x Women MP%			✓			✓
Diff. P50-P10 x Women MP%			✓			✓
Observations	2,255	2,255	2,255	395	395	395

*p<0.1; **p<0.05; ***p<0.01

Note: Logistic regression models. Variables beginning with 'Diff.' measure the support difference between two groups, calculated as (support of group A) - (support of group B). P90, P50 and P10 represent the 90th, 50th and 10th income percentile (90th is the richest).

References

Gilens, Martin. 2012. *Affluence and influence: Economic inequality and political power in America*. Princeton: Princeton University Press.

Page, Benjamin I. and Robert Y. Shapiro. 1992. *The rational public: Fifty years of trends in Americans' policy preferences*. University of Chicago Press.