

Do citizens make inferences from political candidate characteristics when aiming for substantive representation? ☆

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ABSTRACT

We elicit citizens' preferences over hypothetical candidates by applying conjoint survey experiments within a probability-based online panel of the Norwegian electorate. Our experimental treatments differ in whether citizens receive information about candidates' social characteristics only, candidates' issue positions only, or both. From this, we identify whether citizens are able to infer substantive policy positions from the descriptive characteristics of potential representatives and use that information to make candidate choices that achieve substantive representation. We find that candidate choice is driven more by knowledge about candidates' issue positions than by knowledge about their social characteristics and that citizens value substantive representation more robustly than descriptive representation. Importantly, while the direct experimental test of whether voters use the information they obtain from descriptive markers to choose a candidate that gives them substantive representation is inconclusive, we find that voters form beliefs about candidates' issue positions based solely on candidates' social characteristics.

1. Introduction

Representation is the mainstay of modern democracies, and the study of descriptive representation – political representation based on shared social characteristics – has often been at the centre of scholarly attention (Mansbridge, 1999, 2003; Bratton and Ray, 2002; Reynolds, 2013). Many studies have concluded that descriptive representation is crucial in supporting the principles of democracy: Citizens tend to be more willing to accept a political decision made by a representative body that descriptively reflects society (Arnesen and Peters, 2018), have more trust in such an institution (Pitkin, 1967; Bobo and Gilliam, 1990), feel symbolically represented by it (Schwindt-Bayer and Mishler, 2005), see this institution as more responsive (Fenno, 1978; Pantoja and Segura, 2003; Banducci et al., 2004; Sanchez and Morin, 2011), and are more likely to seek political participation in it (Gay, 2002; Broockman, 2014). A lack of descriptive representation has been linked to policy outcomes biased against, for example, women and minorities (Bratton and Ray, 2002; Franck and Rainer, 2012).

The mechanism by which descriptive representation may exert such positive effects is well theorized: In contexts in which politically

disadvantaged groups distrust elected officials or the interests of such groups are not clearly articulated, a descriptively representative politician may be better able to gain trust, communicate with the group, and, mostly through shared experience, comprehend and represent the groups' interests (Mansbridge, 1999). In this way, descriptive representation is inherently linked to substantive representation – political representation based on shared political preferences (Pitkin, 1967).¹

Our study provides an empirical test of the existence of this link between descriptive and substantive representation. In particular, we consider whether citizens are able to infer substantive policy positions from the descriptive characteristics of potential representatives. We also examine whether citizens use the information entailed in descriptive representation to make candidate choices that achieve substantive representation.

Our experimental design elicits how candidate characteristics and issue positions drive citizens' decision-making, whether citizens value descriptive representation, substantive representation, or both, and whether citizens infer candidates' issue positions from candidates' social characteristics. In combination, these measures allow us to gain insights

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¹ To be precise, a citizen is descriptively represented when the citizen shares important social characteristics with the representative and is substantively represented when s/he shares similar policy preferences. We consider the “selective” (Mansbridge, 1999, 632) version of descriptive representation, in which citizens choose among those candidates that are fit for office the one that most closely represents their social characteristics. This definition of descriptive representation does not imply a perfect match of representatives and voters (through, for example, a random sample of the electorate selected as representatives).

into whether citizens use the information entailed in being descriptively represented to choose representatives that share their substantive interests. We embed two conjoint experiments in two waves of the Norwegian Citizen Panel (NCP).² The respondents in experiment 1, the first wave, are offered a series of choices between a pair of hypothetical candidates while seeing, in random order, the candidates' social characteristics only, the candidates' political preferences only, or both. In experiment 2, the second wave, we show respondents additional candidate profiles containing social characteristics only and elicit whether they infer candidates' issue positions from the information provided. The hypothetical choice situation that respondents face is calibrated to closely reflect the features of existing political competitions in Norway. The respondents are given the candidates' policy positions on the empirically salient issues of income inequality, refugee rights, and emissions reductions. The candidates' social characteristics are age, gender, relationship status, educational level, religion, region of residence, and occupation, representing traditional or current cleavages.

In experiment 1, we find that, on average, the respondents are more likely to choose a middle-aged candidate than a young or elderly candidate, are more likely to choose a female candidate than a male candidate, are more likely to choose a candidate with a doctorate than one without higher education, and are more likely to choose a Christian or non-religious candidate than a Muslim candidate. Citizens also prefer representatives who share their religious or educational background. The respondents tend to reject representatives who disagree that the state should reduce income inequality and tend to dislike representatives who agree that refugees should have the same right to social assistance as native Norwegians. They prefer substantive representation by candidates who share their policy preferences on income inequality and reducing greenhouse gas emissions. Importantly, when respondents observe both the candidates' social characteristics and policy preferences, the influence of social characteristics on candidate choice decreases. This finding speaks to the argument that voters use descriptive information to make inferences about candidates' policy preferences, and this information is no longer needed when information on candidates' issue positions is also provided. While we obtain inconclusive findings on the direct test embedded in experiment 1 of whether voters use the information they obtain from descriptive markers to choose a candidate that gives them substantive representation, experiment 2 indicates that voters form beliefs about candidates' issue positions based solely on candidates' social characteristics.

Our study adds to the literature that seeks to clarify the relationship between descriptive and substantive representation theoretically (Mansbridge, 1999, 2009; Pitkin, 1967) or empirically (see, among others, Gay (2002); Bratton and Ray (2002); Hayes and Hibbing (2017)). In particular, our experimental design allows for better identification of that relationship. The results reveal that voters infer policy positions based solely on the social backgrounds of political candidates. We further extend the empirical literature on representation to consider the case of Norway, a country that has inspired prominent past work on social cleavages (Lipset and Rokkan, 1967) that remain influential in their effect on political attitudes and behaviors, but also a country with an increasingly diverse population asking for adequate political representation. Notably, in the current Norwegian context, Muslim candidates are less likely to be preferred by the voters than non-religious or Christian candidates. While a Muslim candidate faces significant hurdles with Norwegian voters, this religious identity decreases in importance as citizens learn about the candidate's issue positions.

²In a conjoint experiment, respondents are asked to choose between options characterized by a bundle of attributes. Researchers are able to elicit respondents' preferences as a function of variation in attributes because the exact realizations of each attribute across options shown to each respondent vary randomly.

2. Theory

2.1. Candidate choice and descriptive representation

Candidate choice, even when a decision has to be made between party lists, has always been to a large degree about selecting between alternative representatives, their social characteristics, their personalities, and the policy positions they represent (Campbell et al., 1960; Popkin and Popkin, 1994; Stokes, 1966; Hayes, 2009). When making this choice, voters certainly consider a large set of candidate attributes, including shared social markers, candidates' issue positions and other characteristics of candidates, such as their party, competence, looks, personality traits, celebrity status, incumbency status, and prior experience in office. The literature has extensively studied the question of how such features determine candidate choice (for an overview, see Dalton (2013)).

Extant literature has argued for the importance of each of these candidate characteristics: Incumbency status is said to increase candidates' electoral prospects (Berry et al., 2000; Burden, 2004; Cox and Katz, 1996; Hogan, 2008; Stone et al., 2010; Gelman and King, 1990), as are certain personality traits (Chen et al., 2012; Patterson et al., 1992; Klein and Rosar, 2005) or social characteristics (Cutler, 2002; Greenwald et al., 2009; Sanbonmatsu, 2002), especially when voters share these characteristics (i.e., gender (Burrell, 2010; Dolan, 2003, 2010) but see Sanbonmatsu (2002); or ethnicity/race (Chandra, 2004; Kaufmann, 2004)), and policy positions close to voters' preferences ensure electoral success (Macdonald and Rabinowitz, 1989). While this literature provides rich insights, interaction effects among those candidate characteristics in determining voters' choices create challenges for identification.

Employing experimental designs similar to ours, some works attempt to separate the competing and interacting candidate characteristics that influence candidate choice. In a conjoint experiment, Horiuchi et al. (2017) examine Japanese voters to explain how, in addition to social characteristics such as age and gender, local ties, prior experience, dynastic families ties, and celebrity status affect vote choice. They find that voters dislike older and celebrity candidates but are indifferent to candidates' gender or dynastic family ties. Kirkland and Coppock (2017) use a similar design to investigate whether candidates' experiences become a stronger determinant of voters' decision-making once information about candidates' partisanship is no longer available and find that it does. While conjoint experimental designs to study candidate choice do not directly mimic real-world election situations of the countries in which they have been conducted, they successfully tease out citizens' preferences over candidate characteristics (Schwarz et al., 2018).

For citizens to consider individual candidates by any kind of attribute, they need experience with an electoral system that is sufficiently personalized that citizens can include such considerations about candidates' individual characteristics into their decision-making. Electoral systems vary in the incentives for casting preference votes for individual candidates (Adams, Grofman and Merrill, 2005a). While single-member district electoral systems, such as those found in the United States or the United Kingdom, arguably link constituents to individual representatives quite well, we also currently observe a personalization across established European democracies. Even formerly strictly party-centered political systems are introducing more elements of direct candidate choice; that is, we see an increasing degree to which the electoral rules allow citizens to choose which individual candidates win seats within the legislature (Renwick and Pilet, 2016; Rahat and Kenig, 2018). Norway is also experiencing a rejuvenated debate about personalizing the national electoral system, aligning it further with the country's municipal electoral system (Mjelde et al., 2016). In such personalized electoral systems, preferences regarding candidates' attributes, resulting in a reduced influence of candidates' partisanship, become a matter of direct concern for citizens. In other words, judgments

about individual candidate characteristics are possible.

When choosing between candidates, voters may make judgments about potential representatives with respect to whether the candidates share social characteristics with them. Descriptive representation, then, allows voters to elect an in-group politician.

2.2. Linking descriptive and substantive representation

Considerations pertaining to the citizens' preferred characteristics of representatives set the stage for a discussion of whether citizens wish to be descriptively or substantively represented and whether there is in fact, as frequently proposed, a meaningful link between those two aspects of representation. Scholars who explore the relationship on the supply side are not as convinced that descriptive representation translates into substantive representation. Homola (2017) establishes that descriptive representation (of women) does not imply substantive representation in the legislatures of Western democracies, despite assumptions to the contrary (Bratton, 2005; Wängnerud, 2009), and Swain (1993) makes a similar case for African Americans in the US. On the demand side, to which our study speaks, we may expect to find such a link. For citizens, trust in an elected representative's actions once in office, the representative's ability to learn the interests of the constituency and implement meaningful policies that benefit the group depend greatly on characteristics shared between the citizens and the representative. Understanding elections as selection mechanisms (Fearon, 1999; Mansbridge, 2009) requires citizens to infer candidates' abilities, trustworthiness, or future policy-making from observable attributes. Descriptive representation provides citizens with a candidate who shares their social characteristics. Therefore, citizens from under-represented groups should prefer to be represented by politicians who share their group membership over candidates who do not, so citizens can be better represented substantively.

Empirically, however, characterizations of the relationship between descriptive and substantive representation are inconclusive. Several studies, particularly on the US, have identified stark variation in the value that different social groups attach to descriptive representation. This value is lower for Hispanics (Henderson et al., 2016) and women (West, 2017) than for African Americans. It also varies strongly with partisanship (Casellas and Wallace, 2015) and whether the winning candidate comes from a voter's social group (Bowler, 2017). Additionally, Carnes and Lupu (2016) find variations in voters' valuations of representation by working-class politicians across countries.

As the closest test of a link between descriptive and substantive representation in determining candidate choice using observational data, Gay (2002) shows in the US context that among Black voter, the valuation of descriptive representation decreases after controlling for the confounding influences of representatives' policy positions. This finding indicates perhaps that aspects of substantive representation condition the reach of descriptive representation. More in line with our research design, Hayes and Hibbing (2017) find in a series of survey experiments that descriptive but not substantive representation affects African Americans' senses of being symbolically represented.

These two aspects of representation appear to be interdependent, but their effects on candidate choice are not yet fully understood. What mechanism linking descriptive and substantive representation should we expect to find?

2.3. Descriptive representation as a facilitator of substantive representation

Most voters do not care much about political candidates and their positions per se and use informational shortcuts and heuristics to guide their electoral decision-making (Downs, 1957; Popkin, 1991; Lupia and McCubbins, 1998, 2000; Kirkland and Coppock, 2017). Voters use shared social characteristics as cues, and group identity becomes instrumental in electoral decisions (Rahn, 1993; Chandra, 2004; Eifert et al., 2010). They may directly prefer candidates with particular social

characteristics (Campbell and Cowley, 2014; Sanbonmatsu, 2002) or those with markers that are associated with personal features such as competence and quality (Schaffner et al., 2001; Lim and Snyder, 2015). Men tend to be seen as better leaders and more competent than women (Holman et al., 2011, 2017; Burrell, 2008; Paul and Smith, 2008). With instrumental group identities, citizens may think of descriptive representation as a mere proxy for substantive representation (Phillips, 1995; Box-Steffensmeier et al., 2003; Gay, 2002).

Generally, citizens seem to infer candidate attributes from social characteristics such as gender (Koch, 2002). For example, in the US context, women are often seen as less conservative than men (McDermott, 1997, 1998). Voters discount the actions they expect representatives to implement once in office given candidates' attribute profiles (Adams et al., 2004; Adams, Grofman and Merrill, 2005b). Such inferences may mean that voters attribute shared preferences to representatives who share their social characteristics. In the work most similar to our study and design, Jones (2016) tests whether voters infer policy positions from a candidate's race by endowing hypothetical representatives with racial/ethnic identities and preferences on five policy issues. That study finds that descriptive representation increases the perception of substantive representation, but respondents generally erroneously attribute shared preferences to co-racial/co-ethnic candidates. We demonstrate that for a broader range of salient group markers in Norway, survey respondents are often able to correctly predict candidates' policy preferences based on candidates' social characteristics.

Hypothesis. The main objective of the paper is to understand the link between descriptive and substantive representation in determining candidate choice. We argue that citizens can and do take social characteristics as cues for political candidates' policy positions. In this way, descriptive representation facilitates substantive representation.

In particular, we test

whether citizens use information about political candidates as entailed in descriptive representation as cues to infer candidates' policy positions to achieve substantive representation.

2.4. Testing the hypothesis

To establish evidence for our hypothesis about how descriptive representation links to preferences for representation of shared policy preferences, we evaluate several claims about citizens' behaviors: (1) Candidate choice is driven by social characteristics; (2) citizens prefer political candidates who share their social characteristics; (3) citizens prefer candidates who represent their policy preferences; (4) citizens infer candidates' policy positions from information about candidates' social characteristics; and (5) when citizens learn candidates' policy positions in addition to their social characteristics, preferences for representatives are less driven by candidates' social characteristics than they are when citizens know social markers only.

If candidate choice is less driven by social markers once policy preference information becomes available, then citizens may utilize descriptive representation as a proxy for substantive representation. When social characteristics are influential, independent of whether issue positions are shown, descriptive representation does not allow instrumental motivations to drive candidate choice. For (5) to support our hypothesis, though, citizens need to (1) pay attention to social markers, (2) value representation by candidates who share their social characteristics, and (3) value representation of shared policy preferences. In addition, we need to show that (4) citizens infer candidates' policy positions from descriptive markers only. Otherwise, we cannot rule out that absent evidence for (5), citizens simply may be unable to form beliefs about candidates' preferences based solely on the candidates' social characteristics. Such an ability is the prerequisite both for the existence of instrumental motivations driving candidate choice and for descriptive representation being a facilitator of substantive

representation.³

The proper evidence for identifying such a mechanism may best be derived from experimental data for several reasons. First, the social characteristics and policy positions of candidates are often correlated, making it impossible to separate the two as a determinant of candidate choice using observational data only. Second, when respondents are presented with hypothetical candidates, even though doing so diminishes the significance of their choice, we can present any reasonable combination of social characteristics and policy positions and completely characterize respondents' preferences regarding those candidate profiles. Finally, assessing the ways in which minority candidates are perceived through observational data is a particularly difficult endeavor. Most surveys reach only a small number of minorities, and even if the sample of minority respondents is sufficiently large, linking survey responses to the few existing minority representatives may not be sufficient to learn about voters' preferences.

2.5. Scope of the study

To summarize, in this study, we examine how candidates' social characteristics and policy positions manifest in citizens' preferences for representatives. We do not consider several mechanisms that have proven important for candidate choice, including incumbency advantage, which existing research suggests increases the electoral prospects of individual candidates (Gelman and King, 1990; Ferreira and Gyourko, 2009). We also refrain from using party labels when characterizing candidates (but see our discussion of the robustness of our findings in Section 6.0.0.2). Previous work on candidate choice (Hainmueller et al., 2014; Franchino and Zucchini, 2015) has argued for the exclusion of party labels, referring to the fact that participants' opinions of a given party may either be correlated with existing attributes or be proxies for attributes that are omitted.

Generally, the scope of our study is relevant to prospective voting. Certainly, voting also works retrospectively (Fiorina, 1976), but our framework does not specifically investigate this mechanism. We elicit the determinants of citizens' prospective decision-making, acknowledging that such prospective reasoning is informed by observations from the past (Banks and Sundaram, 1998; Woon, 2012).

Finally, our experimental vignettes do not offer the option to abstain from voting. We are not modeling participation but are interested in which factors drive candidate choice.

3. The case of Norway

Political representation based on social characteristics is likely more important to voters when differences between groups within a country are substantial, and descriptive representation matters most in countries with a significant minority group that is politically under-represented. The large volume of studies on such cases such as the United States or India (Gay, 2002; Pantoja and Segura, 2003; Chauchard, 2014; Pande, 2003) speaks to this observation. In Norway, social characteristics and descriptive representation are arguably less influential on candidate choice. Nevertheless, the case of Norway is relevant for answering our research question for several reasons. First, evidence exists of a systematic link between descriptive and substantive representation on the supply side: Child care provision varies significantly with female representation (Bratton and Ray, 2002). Second, if the results reveal that candidates' social characteristics matter for representation and descriptive representation is valued by voters, and if there is a link between descriptive and substantive representation on the demand side, we may conclude that similar relationships exist in other cases in which group cleavages are more salient.⁴ Third, although

Norway is fairly racially and ethnically homogeneous, it features significant group cleavages along religious, geographic, class, and gender divisions. While race and ethnicity are frequently discussed in the literature on descriptive representation, gender divisions receive equally broad attention. We are aware that it may not be possible to generalize from our findings to other cases in which certain social cleavages are more salient than in Norway.

Significant sociopolitical cleavages have historically formed in Norway along the dimensions of economic class (workers vs. capitalists), religion (Christian vs. secular), and geography (centre vs. periphery) (Lipset and Rokkan, 1967), and mass parties organized along these lines have formed at critical junctures in the nation's history (Rokkan and Hagtvet, 1987). Scholars during the last decades of the 20th century observed a de-alignment of traditional socio-political voting patterns across Europe, which were replaced with so-called post-material values without socio-structural links (Dalton, 2013; Inglehart, 1997), and similar trends were observed in Norway (Aardal, 2011). We still regard occupational backgrounds as relevant to voters and as a potential heuristic for citizens in determining which candidate is more likely to align most closely with their political preferences. Fig. 1 shows that policy positions among citizens vary significantly based on their occupational background. The categorization of the occupational background of the candidates (none/farmer/care worker/oil worker/IT consultant) is based on the goal of including some of the broad occupational categories of the International Standard Classification of Occupations (ISCO-08).⁵

Changing voting patterns have also given rise to scholarly debate about new, emerging cleavages on other socio-structural dimensions (Knutsen, 2004). For example, education is steadily emerging as a salient social cleavage in Western democracies (Kitschelt, 1994; Kitschelt and McGann, 1997; Kriesi, 1998; Kriesi et al., 2006). Analyses of Danish election surveys and party manifestos reveal the existence of an educational cleavage by demonstrating a link between voters' educational levels, their values, and their votes for authoritarian or libertarian parties (Stubager, 2010, 2013).

Furthermore, equal representation is, in many ways, an integral part of Norwegian society. For example, in public committees, the law requires both genders to have at least forty percent representation, and private companies have requirements that oversight boards be composed of at least forty percent of each gender. Nevertheless, while Norway is considered a progressive country in terms of gender equality, women have historically been excluded from politics, and even at present, women's political representation is lower than that of men (Ringkjøb et al., 2008), making women a politically marginalized group. In a recent study on political representation in contemporary Norway, Arnesen and Peters (2018) find that women report a greater desire than men to be descriptively represented by political candidates that share their gender. Moreover, citizens living in peripheral regions are more concerned with geographical representation than citizens who live in the capital, and senior citizens find it most important to be represented by a politician who is approximately their same age. In particular, geographical representation has been a key area of conflict, and the current electoral system incorporates this feature by adjusting for county population and area when distributing electoral district seats.

In this study, we consider candidates' occupations, educational levels, religions, regions of residence (to capture religious and centre vs. peripheral divides), and genders and relationship statuses (to capture

³ Citizens may hold incorrect beliefs but still believe that they achieve substantive representation.

⁴ We thank one of the reviewers for identifying this point.

⁵ The farmer belongs to major group 6 in ISCO-08 – skilled agricultural, forestry, and fishery workers; the care worker belongs to major group 5 – service and sales workers; the oil worker belongs to major group 8 – plant and machine operators and assemblers; and the IT consultant belongs to major group 2 – professionals.

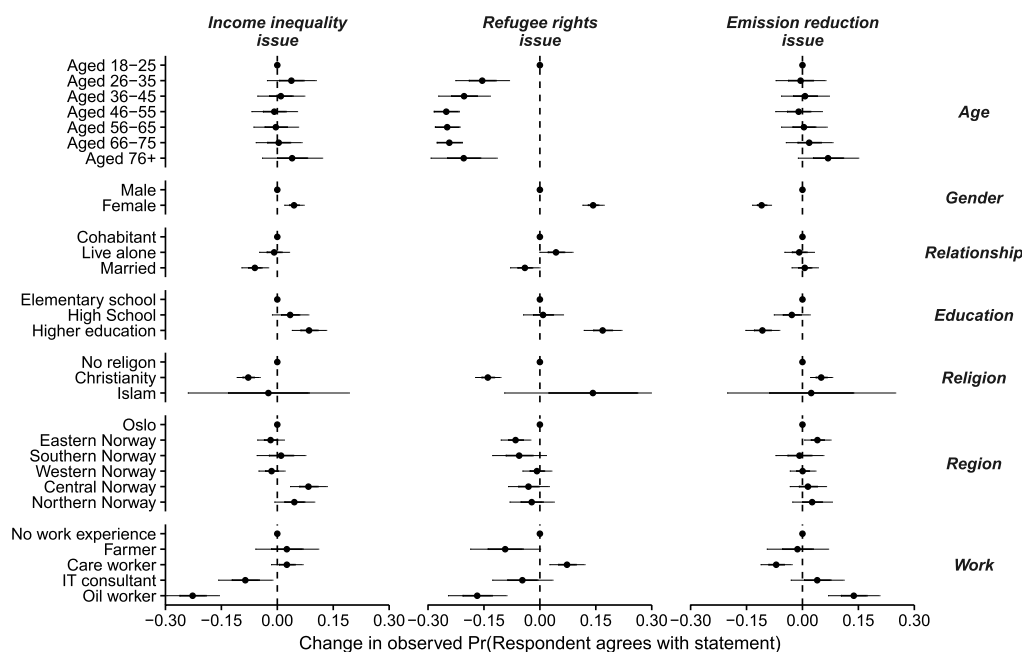


Fig. 1. Change in the predicted probability of agreeing with three policies based on a change in respondents' social characteristics from a reference category. Observed respondent attributes in the sample by respondents' preferences on three policy issues. The dotted line denotes the reference category for each attribute. Bars show one and two standard errors of the distribution of observed responses.

the influence of gender roles). We do not include race because racial minorities represent a small share of the population in Norway, and, in our judgment, do not constitute a socio-political dimension in the current political environment.⁶

The religious attribute, however, is fairly relevant given the recent waves of Muslim immigration and because Islam signals ethnicity and immigrant status in addition to being a marker of religious denomination.

Beyond characterizing the hypothetical candidates with social characteristics that matter, we also endow candidates with policy preferences on three issues: reduction of income inequality, extension of the right to welfare to refugees, and reduction of greenhouse gas emissions. These three issues are considered salient by panel respondents in the most recent wave of the NCP (2017). Fig. 1 illustrates the relationship between respondents' social attributes and their preferences on the three policy issues. It shows the change in the predicted probability of whether a respondent agrees with a policy when we consider a change in an attribute from a reference category. For example, the second-to-top marker associated with the income inequality issue (left-most panel in Fig. 1) tells us that in comparison to respondents in 18–25 year age group, respondents in the 26–35 year age group show a .6 higher probability of agreeing with the statement that income inequality needs to be reduced. In general, the figure shows that respondents' social characteristics are significantly correlated with their issue attitudes on the three policies. The respondent's age, gender, relationship status, educational level, religion, region of residence, and occupation all matter for his or her issue preferences.⁷

While Norway's electoral system is more party-centered than, say, the single-member district systems in the US or the UK, there is a lively

⁶ Norway's experience does not feature extreme, historically based differences among racial or ethnic groups; however, the country has become more heterogeneous over time. While it traditionally had a net outflow of migrants, Norway became a steady net recipient of immigrants in the 1970s (Strom and Svåsand, 1997). According to Statistics Norway (2018), 17.3 percent of the Norwegian population immigrated to Norway or were born to immigrant parents.

⁷ The only issue on which respondents' attributes do not exert a significant effect on attitudes is emissions reduction. No systematic variation exists between age or occupation groups in the probability of agreeing with the statement that emissions should be reduced.

discussion on representation and a debate on the personalization of the national electoral system. The Norwegian electoral system is currently again under review by an Electoral Law Commission, and one of the mandates of this commission is to offer recommendations of opportunities for voters to influence the election of individual candidates, including to the Storting (the national parliament).⁸ One option under consideration is to increase the personalization of the electoral system, increasing the similarity of the electoral system at the national level to the Norwegian local-level electoral system and to other electoral systems in Europe. Personal voting is commonplace in Norwegian municipal elections and has increased over time, with approximately 40 percent of the voters casting a personal vote in municipal elections (Mjælde et al., 2016).

Recognizing the debate about representation in the Norwegian electoral system and the effects of looming personalization, a range of studies have already investigated the effect of adjustments to the representation of particular groups on the Norwegian party system (Christensen and Midtbø, 2007; Bergh et al., 2016; Duverger, 1955; Hellevik, Skard and van der Ros, 1985; Hellevik, 2003; Hellevik and Bjørklund, 1995). Bergh et al. (2016), for example, examine the potential consequences of introducing preferential voting in Storting elections but find no influence on gender representation. Similarly, Christensen and Midtbø (2007) cannot establish a significant effect of gender, age, or educational level on the voters' candidate preferences within the context of the Norwegian local electoral system, where voters influence individual candidate choice (Karvonen, 2004). These results align with other comparative studies drawing on observational data that challenge the scope and existence of a gender-biased electorate (Norris et al., 1992; Black and Erickson, 2003) but contrast with conjoint experimental work, in particular that on the effect of a candidate's gender on candidate choice (Schwarz et al., 2018), which finds

⁸ This is not the first time the issue of personalization has been up for debate; an earlier Electoral Law Commission – appointed in 1997 – recommended such a change, in which candidates would move to the top of the list if they secured support from at least five percent of those voting for their list (Valgløvetvalget, 2001). The government rejected the proposed change, fearing a lack of balance in representation based on social characteristics and particularly based on gender. To date, no list order at any Storting election has ever been changed as a result of the voters' rankings, strike-outs, or additions of individual candidates (Matthews and Valen, 1999).

a robust pro-female candidate bias among voters.

4. Research Design

We present two conjoint experiments implemented in two separate waves of the NCP, during the spring and fall of 2016 (Ivrsflaten et al., 2016a; b), with 1139 participants in experiment 1 and 1077 participants in experiment 2. In a conjoint experiment, survey respondents are presented with one or more choices between two or more alternatives in which the options are characterized by a bundle of attributes. The exact realizations of each attribute vary randomly across the alternatives within a choice, and which attributes are shown varies across choices. In this way, the researcher can elicit respondents' preferences for the alternatives contingent on variation in attributes. In this study, we elicit citizens' preferences for potential representatives given a bundle of candidate attributes on social characteristics and/or policy positions. A conjoint experiment is an appropriate tool to give us an unbiased estimate of such preferences.

Conjoint experiments were introduced into marketing and sociological research in the late 1970s and in the last few years have become a prominent feature of survey-based research in political science (Bansak et al., 2018). They can handle complex choice situations wherein several attributes have a meaningful influence on judgment (Auspurg et al., 2017; Hainmueller et al., 2014) and have been frequently implemented to study candidate choice (e.g., Schwarz et al. (2018); Kirkland and Coppock (2017); Carlson (2015); Franchino and Zucchini (2015); Carnes and Lupu (2015)). Conjoint experiments allow us to separately estimate the relative effects of a large set of factors on citizens' decisions.⁹

The NCP is a probability-based general population survey panel administered by the Digital Social Science Core Facility (DIGSSCORE) at the University of Bergen (UiB). The panel currently consists of approximately 6000 active participants, and is representative of the Norwegian population. For this panel, the entire population of Norway has an equal, non-zero likelihood of being recruited to participate, which allows us to draw a representative sample of the Norwegian electorate. Recruitment was conducted by post in November 2013 and October 2014, and only invited individuals may participate. The response rates from the postal recruitment were 20 and 23 percent, respectively. We refer to the methodology reports for further details on the specific survey waves 6 and 7 (Skjervheim and Høgestøl, 2016a,b).¹⁰

4.1. Experiment 1

In conjoint experiment 1, we ask the respondents which of two hypothetical candidates they would prefer to represent them in the national parliament. We give respondents six choices, one after the other, between two alternative candidates who vary in their attributes (e.g., social characteristics and/or policy positions). Each individual choice presents respondents with one of three types of information about the two candidates (representing three different treatments): (1) The candidates are randomized with respect to the social characteristics of age, gender, relationship status, education level, religion, region of

residence, and occupation (*group* treatment); (2) candidates vary in their stated preferences on three policy issues, income inequality, refugee rights, and emissions reductions (*issue* treatment); and (3) candidates are described by both social characteristics and political preferences (*both* treatment). All potential values across the attributes are shown in Table 1.¹¹ Which of the three types of information about the two candidates is shown in a particular choice situation varies randomly.

With this series of decisions, we can elicit respondents' preferences for candidates given candidates' social characteristics and/or their issue positions, and we can learn how preferences change with variations in candidate attributes. The respondents' decision is framed, on the screen, by the following words: "Imagine that you had to choose one of these two to represent you personally in parliament." With this wording, we prompt respondents' consideration of their own social characteristics and issue positions in relation to those presented for the potential representatives. Priming respondents in this way may also induce heightened concern for the social group with which the respondent identifies.

In experiment 1, the *group* treatment shows only social background attributes. This experiment has seven attribute dimensions, and given the number of potential values for each attribute, the number of possible candidate profiles is $7 \times 2 \times 4 \times 6 \times 3 \times 3 \times 6 = 18,144$. The respondents see a randomly drawn sample of two of these variations in the profiles and are asked to compare the two. The respondents are then asked to choose which of the two alternative candidates they would prefer to represent them in the national parliament. The *issue* treatment shows only the candidates' political preferences on three issues, and this treatment has $7 \times 7 \times 7 = 343$ possible combinations of unique candidate profiles. As in the *group* treatment, the respondents are asked to choose which candidate they prefer of the two presented within each decision task. In the *both* treatment, the respondents are also asked to make a decision between two candidates, but in this treatment, respondents have information about both the social background attributes and political views of the candidates. Thus, respondents choose between two profiles that are randomly drawn from a universe of $7 \times 2 \times 4 \times 6 \times 3 \times 3 \times 6 \times 7 \times 7 = 6,223,392$ possible candidate profiles. Clearly, the respondents evaluate only a fraction of the possible profiles. Since the profiles are randomly sampled from the profile universe with a uniform probability distribution, we can nevertheless estimate the average likelihood that the respondent chooses a candidate with a certain characteristic on each dimension.

4.2. Experiment 2

In conjoint experiment 2, the respondents are presented with a scenario identical to the *group* treatment in experiment 1; that is, respondents are given two profiles of hypothetical candidates characterized by age, gender, relationship status, educational level, religion, region of residence, and occupation. As in experiment 1, candidate profiles are drawn from a universe of 18,144 different profiles. Respondents are then asked to guess which of the two candidates they think agrees most with one of the three policy issues (shown in random order).¹²

⁹ We did not pre-register our two experiments. All results reported are on the full set of observations, and no additional treatments were conducted. The codebook and data are fully available by contacting the Norwegian Centre for Research Data at <http://www.nsd.uib.no/>.

¹⁰ The data in our analysis come from the "Norwegian Citizen Panel Wave 6, 2016" and "Norwegian Citizen Panel Wave 7, 2016." The survey was financed by the UiB and Uni Rokkan Centre. The data are provided by the UiB, prepared and made available by Ideas2Evidence, and distributed by Norwegian Social Science Data Services (NSD). Neither UiB, Uni Rokkan Centre nor NSD are responsible for our analyses/interpretations. Section B in the appendix gives descriptive data on our sample.

¹¹ An example of the screen displayed to respondents is given in Figure A1 in the SI.

¹² Additionally, respondents are randomly assigned to groups that present a hypothetical decision either between two "politicians" or two "persons." This assignment enables us to measure whether people perceive politicians as having different views than non-politicians; our results show that they do not (see Figure C2 in the SI).

Table 1
Attribute dimensions and their corresponding values in experiment 1.

ID	Dimension	Values
Social group characteristics		
age	Age	[22 years/30 years/40 years/50 years/60 years/70 years/80 years]
gender	Gender	[Male/Female]
education	Completed education	[Elementary school/High school/University degree/Ph.D.]
region	Region of residence	[Oslo area/Eastern Norway/Southern Norway/Western Norway/Middle Norway/Northern Norway]
civil	Civil status	[Living alone/Cohabitant/Married]
religion	Religion	[Christianity/Islam/No religion]
work	Work experience outside of politics	[None/Care worker/Farmer/Oil worker/Self-employed/IT consultant]
Political issue attitudes		
inequality	The state should reduce income inequality	[Strongly agree/Agree/Somewhat agree/Neither agree nor disagree/Somewhat disagree/Disagree/Strongly disagree]
refugee	Refugees should have the same right to social assistance as citizens	[Strongly agree/Agree/Somewhat agree/Neither agree nor disagree/Somewhat disagree/Disagree/Strongly disagree]
emissions	Most of the carbon emissions reductions should be done abroad	[Strongly agree/Agree/Somewhat agree/Neither agree nor disagree/Somewhat disagree/Disagree/Strongly disagree]

4.3. Identification and presentation of results

The identification of the relative effect of any attribute, social characteristics or issue position on the outcome variables and the identification of treatment effects rest on a few assumptions.

First, within each treatment, we estimate the relative importance of one attribute assigned to the candidate over others. Specifically, following Hainmueller et al. (2014), we estimate the Average Marginal Component Effect (AMCE) using an OLS regression of candidate choice on each factorized attribute, omitting a reference category, with respondent-clustered standard errors and in which respondent-level idiosyncrasies are relegated to the error term. The AMCE measures the effect of a specific attribute category on the outcome variable (either candidate preference in experiment 1 or belief about whether a candidate holds a particular policy position in experiment 2) when we change the attribute value from the reference category to that specific attribute category. For example, the AMCE of a female candidate is the change in the predicted probability of choosing a female over a male candidate (the reference category for the gender attribute).

All results are based on such regressions of the outcome variable on a set of dummy variables for each social attribute and/or policy position included (excluding a reference category). Throughout this section, we present the results graphically given the large number of coefficient estimates (all regression results are available in Tables 7–10 in the SI). The estimate of the relative effect of each attribute value over a reference category is displayed on the x-axis with the associated one- and two-standard-deviation confidence intervals.

Second, to obtain an unbiased estimate of the AMCE, we then assume that the order of vignettes shown to respondents and the order of attributes within displayed profiles are irrelevant to a respondent's choice. To satisfy this assumption, we randomize the order of vignettes and attributes across respondents and control for order in our regressions. Additionally, the randomization of attributes and realizations of the values of attributes need to be carried out in such a way that respondents' choices are statistically independent of the vignette assignment (accomplished by randomization within the NCP).

Third, we assume that the number of attributes does not change responses; a larger number of attributes per profile should not lead to satisficing, in which respondents use choice heuristics to break down the complexity of excessive information.¹³

Fourth, we assume that respondents interpret information about candidates' political preferences as given and do not infer from these preferences about a social marker (e.g., interpreting a candidate's

preference on income inequality as a reflection of, say, a candidate's social class or partisanship).

Experiment 1 allows us to estimate the AMCE of candidates' social characteristics and candidates' policy preferences on candidate choice and enables us to elicit whether shared social characteristics and shared policy preferences inform citizens' decisions. From this information, we can learn whether respondents pay attention to candidates' social characteristics when choosing between potential representatives, whether they value representatives who share their social characteristics, and whether they value representation of shared policy preferences. Randomly assigned variation in whether citizens see social characteristics only, policy preferences only, or both provides us with a robustness test of the AMCE and gives us a tool, in combination with experiment 2, for understanding whether respondents infer policy positions from candidates' social characteristics and use descriptive representation to infer substantive representation. Experiment 2, more specifically, provides more evidence of whether citizens actually form such beliefs connecting candidates' social characteristics and their issue positions.

5. Results

5.1. Do citizens pay attention to candidates' social characteristics when choosing a representative?

Result 1 *Citizens' preferences for candidates are shaped by candidates' social characteristics but less so when citizens also learn candidates' policy positions.*

When citizens see candidates' social characteristics only (the results of the *group* treatment are shown in the left panel of Fig. 2), all candidate attributes except for region have statistically significant effects on candidate choice (at $\alpha < .1$). The strongest relative effect, a decrease in the estimated vote probability of .15 (.10, .20), arises for a Muslim candidate versus a candidate with no religious affiliation (95 percent confidence intervals are reported in parentheses). On average, the respondents are more likely to choose a middle-aged candidate than a young or elderly one, a female candidate than a male one, a candidate with a doctorate than one without higher education, and a Christian or non-religious candidate than a Muslim one.

Citizens strictly prefer a candidate that has work experience outside politics but do not differentiate based on occupation. We also find no effect of the relationship status of the candidate on his or her chances of being selected by citizens.

Once citizens also see candidates' issue positions, the effect of social characteristics (that is the difference in outcome measure from the reference category) on the probability of a candidate being chosen decreases in strength, and the significance of the effects disappears. This is

¹³ Bansak et al. (2018) find that choice tasks with up to 30 attributes do not lead to meaningful changes in the estimates of the relative importance of any one attribute; our number of attributes is well below this figure.

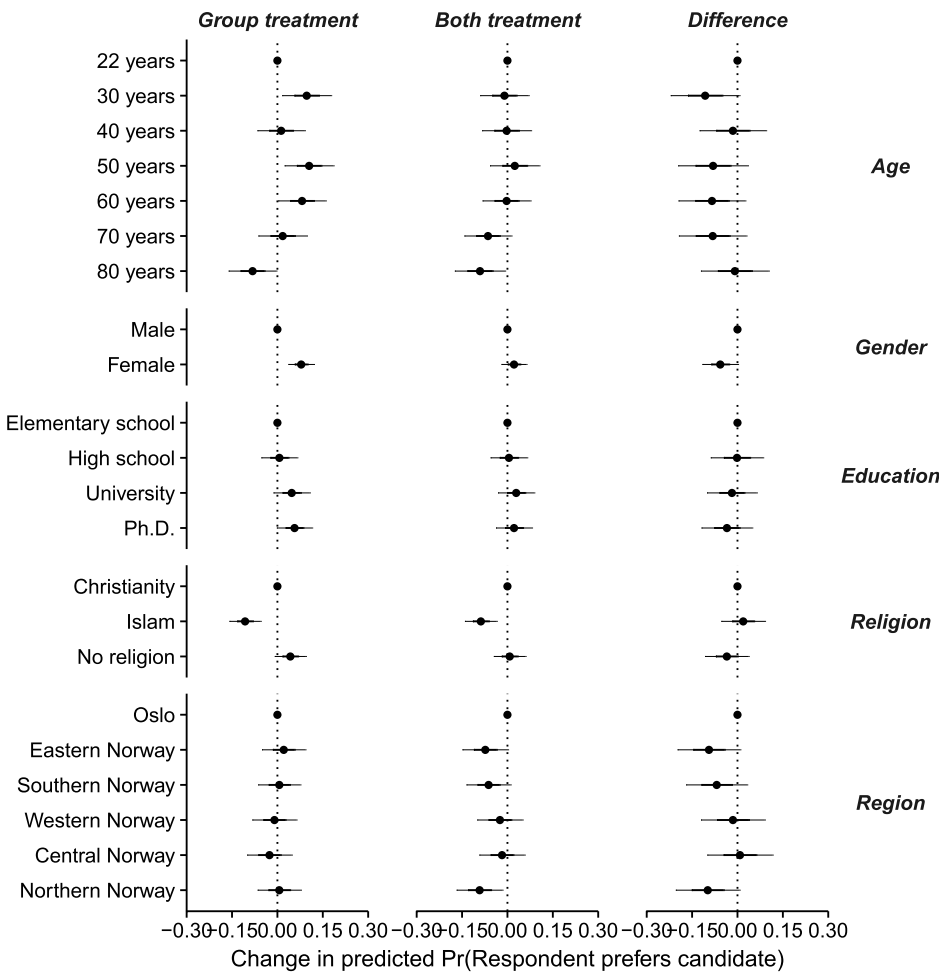


Fig. 2. Change in the predicted probability of preferring a candidate based on information about the candidates' social characteristics (AMCE) for *group* (left panel) and *both* treatments (middle panel) and the difference in the change in the predicted probability of preferring a candidate between treatments (right panel). In the *group* treatment, respondents see candidates' social characteristics only, while in the *both* treatment, they are shown candidates' social characteristics and policy preferences. For all figures that follow, the estimates are based on an OLS regression of respondents' choices against a set of dummies for each attribute realization (omitting a reference category) with standard errors clustered at the respondent level. The dotted line denotes the reference category for each attribute. Bars show one and two standard errors of the estimates.

true for all social characteristics except religion. The AMCE of social characteristics shown to respondents alongside candidates' policy preferences in the *both* treatment can be found in the middle panel of Fig. 2, and the difference in AMCE between *group* and *both* treatment is shown in the right panel (that is, the difference in the relative effect of each attribute on vote choice in the *group* and *issue* treatments). The estimated effects of social characteristics over the reference category move toward the zero line. The strongest change in the relative effect of any attribute on the probability that a candidate is chosen is associated with gender (female over male candidates) and region of residence (living in remote Eastern and Northern Norway over Oslo). While there is a positive and significant relative effect of being a female candidate (vs. a male candidate) on candidate preference in the *group* treatment, there is no relative effect of variation in gender in the *both* treatment. In contrast, while there is no effect of living in Oslo vs. other regions of Norway in the *group* treatment, respondents significantly penalize candidates who do not reside in Oslo in the *both* treatment. The treatment effect on the AMCE is .06 (.00, .11) with $p = .05$ for female vs. male candidates, and for living in remote Eastern and Northern Norway vs. Oslo, it is $-.09 (-.19, .00)$ with $p = .07$ and $-.10 (-.20, .10)$ with $p = .06$, respectively. The effect of religion on candidate choice remains sizable; controlling for candidates' issue positions does not crowd out the negative impact a candidate receives for being Muslim.¹⁴

Interestingly, citizens' preferences for candidates change less when comparing their candidate choice in the *issue* treatment (respondents see candidates' policy preferences only) and *both* treatment in contrast

to the difference between the *group* and *both* treatments. Irrespective of whether citizens know candidates' social backgrounds, they reject candidates who disagree that the state should reduce income inequality and candidates who agree that refugees should have the same right to social assistance as native Norwegians. Fig. 3 places the AMCE of candidates' issue positions on candidate choice in *issue* and *both* treatments side by side.

Only the income inequality issue resulted in the *both* condition having a significant treatment effect on the AMCE on issue position values, that is, the difference in AMCE of some of the issue position values between the *issue* and *both* treatments is statistically significant. Once citizens see candidates' social characteristics in addition to candidates' policy preferences, citizens' preferences decreased only for candidates who agree with the statement that the state should reduce income inequality. The treatment effect of the *both* condition is a .17 (.06, .27) reduction in the probability of electing a candidate who agrees ($p < .01$) and a .12 (.01, .23) reduction for candidates who somewhat agree, ($p < .05$).

5.2. Do citizens value descriptive and substantive representation?

Result 2 We find a preference for descriptive representation, but the desire for substantive representation is more robust.

When shown only social characteristics in the *group* treatment, respondents discriminate in favor of in-group candidates on some social characteristics. Fig. 4 shows the estimates of the effect of shared vs. different social characteristics. In the *group* treatment, a candidate with the same educational level faces a .04 (.00, .08) higher probability of being chosen ($p = .06$). Candidates featuring the same religious

¹⁴We should also note here that the number of Muslim candidates in Norwegian elections is very small.

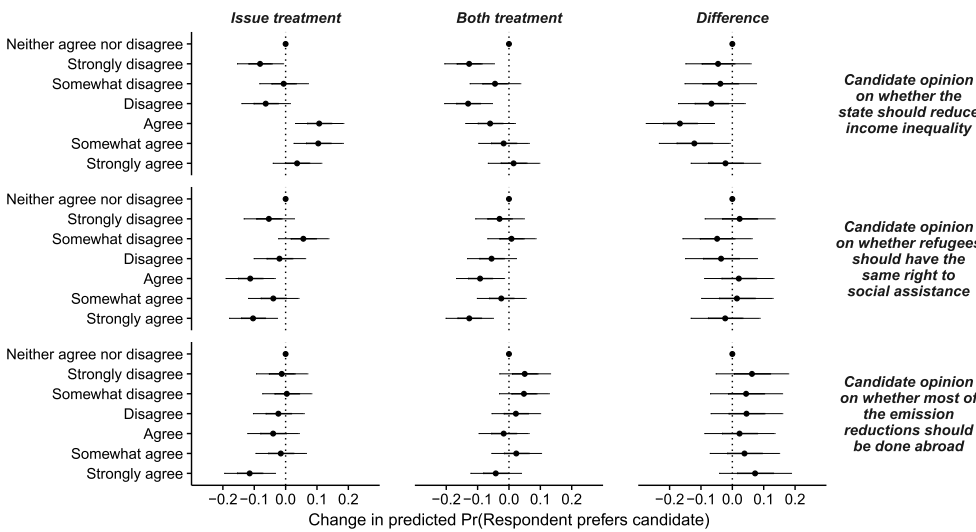


Fig. 3. Change in the predicted probability of preferring a candidate based on information about the candidates' policy preferences in the *issue* (left panel) and *both* treatments (middle panel) and the difference in the change in the predicted probability of preferring a candidate between treatments (right panel). In the *issue* treatment, respondents see candidates' policy preferences only, while in the *both* treatment, they are shown candidates' social markers and policy preferences.

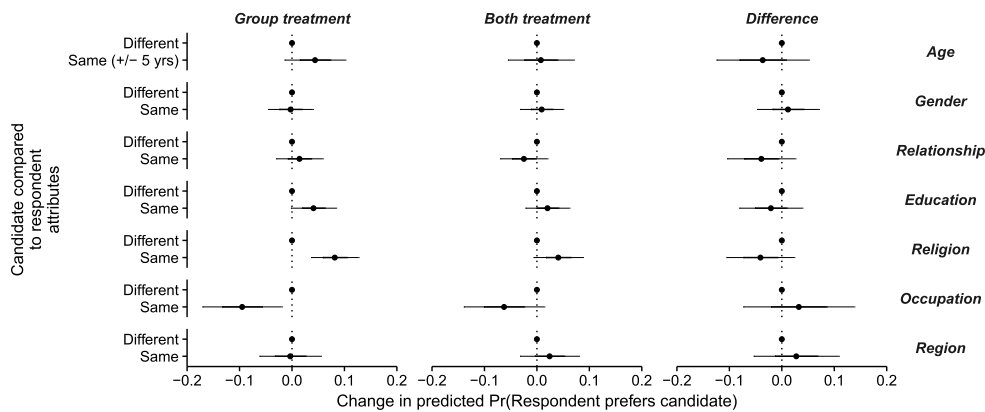


Fig. 4. Change in the predicted probability of preferring a candidate when the candidate's social markers are the same as those of respondents for the *group* (left panel) and *both* treatments (middle panel) and the difference in the change in the predicted probability of preferring a candidate between treatments (right panel).

affiliation are more often elected, with an estimated increase in the probability that voters prefer an in-group candidate of .08 (.04, .13), $p < .01$. Citizens' preferences for candidates who work in the same occupation are significantly lower than for candidates working in a different occupation. This last effect of a decrease in probability of .10 (.02, .17; with $p = .01$) is driven by the difference between candidates without work experience outside politics and those with such work experience.¹⁵

Respondents also choose candidates with similar political preferences. Fig. 5 shows estimates of the effect of the distance between the respondents' own and the candidate's issue positions on candidate choice. In the *issue* treatment, respondents see only the issue positions of the candidates, and the predicted probability of choosing a candidate significantly increases as the political distance between the candidate and respondent decreases. On a seven-point scale, the change from a large distance ($\pm 4,5,6$) to sharing the same preference as the candidate significantly increases the vote probability, by .21 (.13, .30) for income inequality, .26 (.18, .34) for refugee rights, and .17 (.07, .26) for emissions reductions ($p < .01$).¹⁶ In the *both* treatment, only the preference

distance on refugee rights is no longer statistically significant.

Whether citizens demonstrate a robust preference for in-group candidates or candidates with similar policy preferences needs to be judged across all treatment conditions. Here, respondents' valuation of descriptive representation loses its empirical support in the *both* treatment for any of candidates' social characteristics (see Fig. 4), while their preference for substantive representation remains mostly intact.

5.3. Do citizens use the information entailed in descriptive representation to achieve substantive representation?

Result 3 Citizens are able to infer candidates' policy positions from the candidates' social characteristics but do not clearly use the information they obtain from descriptive markers to make a candidate choice that gives them substantive representation.

The results from experiment 1 establish that people discriminate between candidates based on candidates' social characteristics, and they prefer in-group candidates on some attribute dimensions; this result implies a valuation of descriptive representation on these attributes. We find a strong preference for candidates who share the same political preferences as the respondents. These observations raise a number of questions. Why is the effect of having knowledge about shared social characteristics on candidate choice more responsive to also knowing that the candidate shares citizens' issue preferences than

(footnote continued)

for the income inequality and emission reduction issues in the *both* treatment.

¹⁵ Note that our sample is too small to measure moderating effects of the respondents' social markers.

¹⁶ We reproduce Fig. 5 in Figure C.1 in the SI displaying the full range of differences between candidate and respondent. The interpretation of the results shown in the figure in the SI remains the same as that shown in the figure in the main text: Respondents prefer candidates who are closer to them in policy positions on all issues in the *issue* treatment, and that preference remains intact

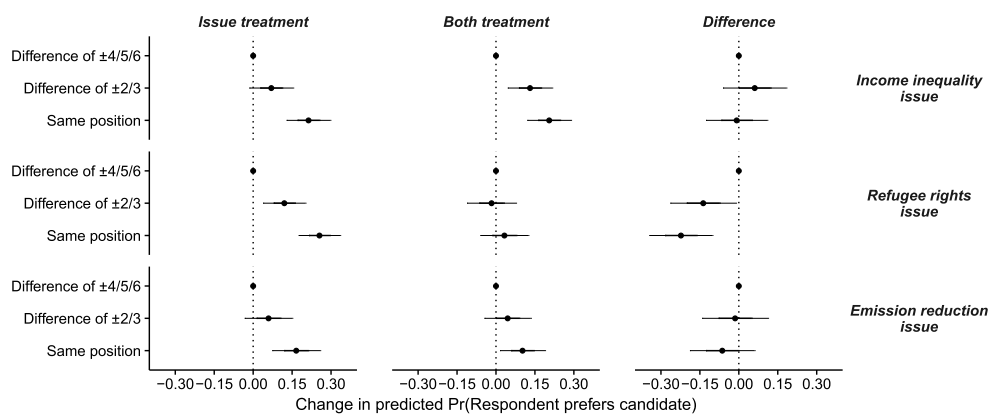


Fig. 5. Change in the predicted probability of preferring a candidate when the candidate's issue positions are the same as or different from those of the respondents for the *issue* (left panel) and *both* treatments (middle panel) and the difference in the change in the predicted probability of preferring a candidate between treatments (right panel).

vice versa? In other words, why is there an effect of the *both* treatment on the influence of shared social characteristics (as elicited in the *group* treatment) but not so much on the influence of shared policy preferences (as elicited in the *issue* treatment)?

One mechanism, we argue, is that information provided by descriptive representation on shared social markers may function as a heuristic from which citizens infer candidates' issue positions. We claim that descriptive representation may serve as such a proxy for substantive representation when social characteristics lose their power to predict candidate choice after information about candidates' policy positions becomes available. The middle column of Fig. 4 shows the effects estimates of both the respondent and candidate having the same social characteristics when issue positions are also shown (the *both* treatment). The right column shows the difference between the *group* and *both* treatments, where a statistically significant negative difference would provide robust evidence that social characteristics are used as cues for candidates' political preferences. We find no statistically significant effect at $\alpha = .05$ of the social characteristics shared between the voter and the candidate on candidate choice in the *both* treatment, whereas shared educational levels, religions, and occupations influenced citizens' decisions in the *group* treatment. In the *both* treatment, the AMCE of shared educational level is $.02 (-.08, .04)$, $p = .33$, the AMCE of shared religion is $-.04 (-.11, .02)$, $p = .08$, and the AMCE of shared occupation is $-.06 (-.14, .01)$, $p = .10$. In other words, while the effect of shared social characteristics on candidate choice diminishes or vanishes in the *both* treatment, the difference between the *group* and *both* treatments is not statistically significant. We cannot rule out that the reduction in AMCE between treatments occurred by chance only.

These results with respect to our hypothesis that descriptive representation may facilitate substantive representation for citizens come as a surprise, given that citizens differentiate candidates by the candidates' social characteristics and prefer those who share their political preferences. Why are citizens not using the information embedded in social characteristics in a way observable to us even when no other information is available? Is it that they cannot perceive a correlation between candidates' social characteristics and political preferences?

Experiment 2 tests whether respondents believe that candidates' preferences on policy issues are associated with the candidates' social backgrounds. If respondents form such beliefs, we would take this as evidence that instrumental motivations are enabled by descriptive representation. In this case, citizens could use the information provided by descriptive representation to select candidates that reflect their policy preferences, even if they do not know candidates' exact policy positions. Experiment 2 shows that respondents' beliefs about candidates' political preferences vary significantly with changes in candidates' ages, genders, educational levels, and religions (Fig. 6). Citizens infer candidates' issue positions based on only knowing candidates' social characteristics. Substantial variation exists in which preference citizens attribute to a candidate given the candidate's social

characteristics. Specifically, except for region of residence, all candidates' social characteristics are thought to have a significant effect on candidates' policy positions.

Moreover, respondents' beliefs about variation in policy preferences based on differences in candidates' social characteristics often align with the ways respondents' observed attitudes vary with their social backgrounds. We find congruent patterns of change with variations in social characteristics in the predicted probability that a respondent believes that the hypothetical candidate agrees with an issue statement and the observed proportions of respondents agreeing with that statement. Respondents believe that a female candidate is more likely to agree with the statements on income inequality and refugees rights but to disagree with the statement on emissions; see Fig. 6. Correspondingly, as shown in Fig. 1, female respondents are more likely than male respondents to agree that the state should reduce income inequality and that refugees should have the same social rights as Norwegian residents and are less likely to agree that most of the carbon emissions reductions should be achieved abroad. Variation in educational level triggers similar changes in predicted and observed agreement with the statements on two of the three policy issues. We see rather different patterns of change with variations in age, religion, and region of residence.

One should be wary of making overly strong inferences, however, when comparing predicted and observed attitudes because the underlying probabilities of the experimental data and the observational data are different.

6. Discussion

6.1. Interpretation of treatment effects

The results from experiment 1 establish that citizens make decisions based on political candidates' issue positions across different decision situations, both when they learn candidates' policy preferences only and when they are shown candidates' social characteristics. Citizens base their choice on candidates' social characteristics if they do not know the candidates' policy preferences. They prefer in-group candidates only on some social attribute dimensions, but we find a strong preference for candidates who share the same positions on important issues. Throughout, we interpret these results as evidence for a substitution effect: Citizens base candidate evaluations mostly on issue positions and only to a lesser extent on social characteristics.

While we treat candidates' issue positions and social characteristics as being considered separately once respondents are presented with both pieces of information about the candidate, some of the literature argues that the relationship between these two sets of candidate attributes may be interactive. By conceptualizing social characteristics as a valence factor, one could reach a different interpretation than ours. Mondak and Huckfeldt (2006) show that valence factors matter less when candidates are centrist, i.e., have unclear political positions, than

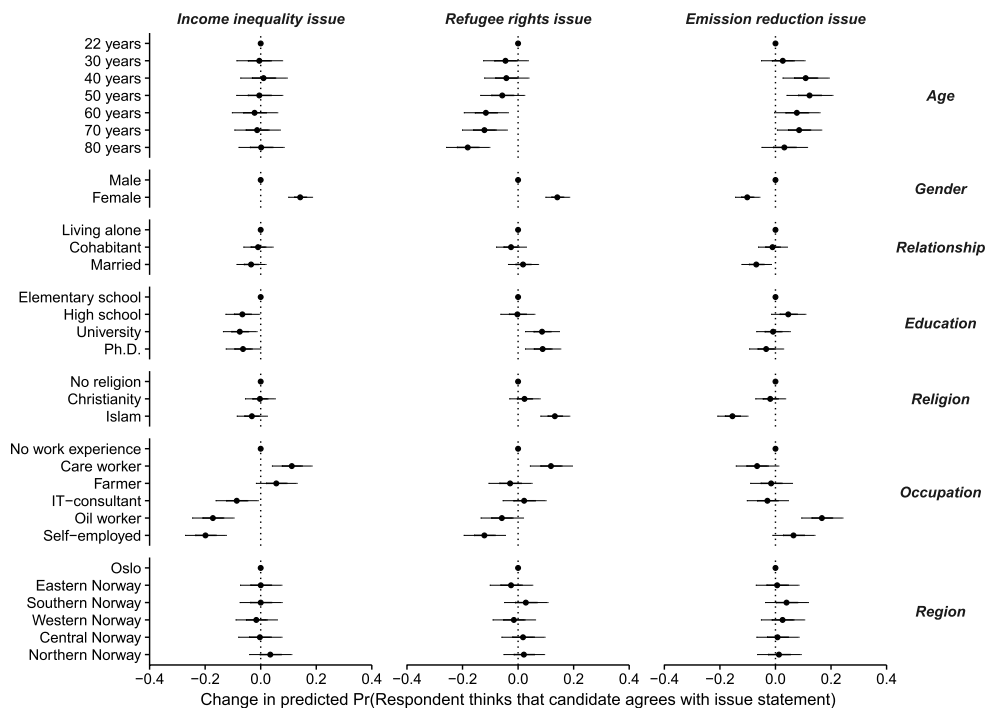


Fig. 6. Change in predicted probability that respondents believe a hypothetical candidate agrees with the issue statement; proportions shown by candidates' social characteristics.

when they have extreme, i.e., have clear political positions. Franchino and Zucchini (2015) even argue, building on evidence from a conjoint experiment, that valence factors and policy positions are not separable at all, while we find differences in candidate choice depending on whether candidates' social characteristics, issue positions, or both are shown, hinting at a separation. In any case, our findings may not contradict this literature because respondents in our sample simply may not see the social characteristics we assign to candidates as valence factors or proxies for valence factors. Generally, the interactive relationship between policy preferences, social characteristics that serve as valence factors, and candidate choice is empirically debated in other works. While Green and Hobolt (2008); Buttice and Stone (2012) find that valence matters more for candidates of similar ideology, Pardos-Prado (2012); Clark and Leiter (2014) show the opposite.

When social markers are merely a proxy for other candidate characteristics, such as competence, we also face an identification problem. Carnes and Sadin (2014) find in a survey experiment that upper-class candidates are seen as more competent than their working-class alternatives, and Smith et al. (2007) show that citizens attribute higher political skills to men than to women. While we do not attribute class to candidates directly, we assign them an occupation and gender. The above findings, then, imply for our study that citizens may infer competence or skills from occupation and gender but not as much from, say, knowing a candidate's level of education or region of residence. In other words, we may not be easily able to compare the relative importance of those two sets of characteristics on candidate choice estimated in our experiment because their effect on electoral decisions could follow different mechanisms. One such mechanism that links social characteristics such as gender and the attribution of competence are gender stereotypes. Citizens could regard women as better at addressing some political issues than men or vice versa (Holman et al., 2016; McDermott, 1998; Huddy and Terkildsen, 1993), so political preferences on certain issues matter less for voters' choices not because of candidates' positions but because of candidates' credibility to implement meaningful policy on that issue.

6.2. Robustness of treatment effects

Our experimental design addresses the problems that candidates' social characteristics and policy positions are correlated and that social characteristics themselves may proxy for one another (e.g., occupation and educational level). We argued that these grounds that an experimental design is clearly preferable to an observational study to robustly identify the independent and interactive effects of those candidate attributes on candidate choice. An experiment allows us to present respondents with every potential counterfactual, every possible combination of candidates' social characteristics and political preferences, breaking correlations between candidate attributes that may hinder identification. This is also important because who runs for office and who is elected is certainly a function of candidates' social markers and issue positions. Women, for example, are less likely to select into political competition and less likely to believe that they qualify for public office (Kanthak and Woon, 2015; Fox and Lawless, 2010, 2011). To elicit demand effects (citizens' direct preferences for candidates) separately from supply effects (who runs for office) we must use randomized assignment of attributes to hypothetical candidate profiles.

Obviously, the decision situation faced by the respondents in our experiment is a hypothetical choice between two candidate profiles. Issues with identification, internal validity, and external validity immediately arise. A first concern is an experiment effect whereby respondents are forced to choose, to trade off different attributes that they otherwise would not have. Second, hypothetical choices sometimes imply a larger degree of intrinsic motivation than real-world choices. Third, pre-treatment effects – such as accounting for local political contexts, the timing of elections, or particular prominent politicians – may prevent us from obtaining an unbiased estimate of the AMCE. We acknowledge these concerns but argue that the treatment effects we identify among subjects from the comparison of the *group*, *issue*, and *both* treatment conditions are not affected provided that subjects are balanced across treatment conditions.¹⁷

¹⁷ We find no significant difference between treatment groups at $\alpha = .05$ in

Generally, we need to restrict the generalizability of our claims in several ways: First, we note that the current electoral system in Norway is not yet personalized to the extent that voters are allowed to directly choose between candidates; it remains a party-list system. The external validity of the claims we make can only be judged if and when the electoral system actually changes. Until then, the behavior we predict remains a hypothetical, albeit, as we argue, an interesting hypothetical. Hainmueller, Hangartner and Yamamoto (2015) also show that conjoint experiments, even if abstract in nature, produce externally valid estimates when their results are compared to real-world outcomes. We further employ a nationally representative sample of the Norwegian electorate.

Second, we may speak to questions about representation as they relate to particular social cleavages; for our study this is gender and educationally driven divides. One result is important in this respect: The respondents in our study show a general appreciation for female candidates in the *group* treatment (when no information on candidates' policy positions is available). This finding is in line with meta-evidence on voters' preferences for female candidates in conjoint experiments (Schwarz et al., 2018). We add to this literature that such a preference may not be robust to the decision situation voters face. In our *both* treatment (when respondents also see information on candidates' policy positions) the favorable attitude toward female candidates disappears. We also do not find that women appreciate descriptive representation; on this topic, previous experimental studies have found conflicting evidence (Carnes and Lupu, 2016; Aguilar et al., 2015). We discuss social divides related to education and what we may learn from our results for representation based on education in the conclusion.

Finally, when respondents are shown information on candidates' social characteristics or policy positions, they may simply infer partisanship and choose based on that marker. Indeed, (Kirkland and Coppock, 2017) show an interaction between whether partisanship is known to voters and the effect of other candidate characteristics, i.e., competence, on candidate choice. In general, many studies argue that social characteristics do not independently affect candidate choice but are always moderated by partisanship (Hayes, 2011; Huddy and Capelos, 2002). We argued earlier that there is value in not considering the party affiliation of the candidates in our experiment because partisanship leads respondents to make inferences about other omitted candidate characteristics. In other words, we sought to achieve control over what respondents may infer from partisanship in their decision-making between candidates by omitting party labels at the cost of allowing respondents to infer partisan labels from the candidate characteristics that we provide. The former would mean that we could not learn about the independent effect of some of our attributes of interest because party labels may be a very dominant determinant in voters' decision-making, whether directly or as proxy for other omitted candidate attributes. The latter would mean that we induce a latent variable, party label, that voters infer from the candidate characteristics shown.

Suppose that respondents infer a candidate's party from the candidate characteristics they know; then, we would face yet another issue regarding a lack of internal validity in our experimental design: When we consider a candidate choice to be driven by (shared) social characteristics and/or issue positions, we may be mistaken, and candidate choice may instead be driven by inferred party labels. We may also err when we contend that the smaller effect of social characteristics on

candidate choice when respondents also learn about candidates' issue positions is evidence for the existence of a mechanism whereby citizens make inference from the social characteristics provided through descriptive representation to select a candidate who shares their substantive interest. One alternative interpretation is that once candidates' issue positions are known, citizens are much better able to infer the candidates' partisanship and decide based on that information than when they know only candidates' social characteristics.

For this study, however, we decided to omit partisan labels, as similar studies have done in the past (Hainmueller et al., 2014; Franchino and Zucchini, 2015). Our target of inference is learning about the relationship between social characteristics and issue positions in its effect on citizens' preferences over representatives independent of the influence of party platforms or partisanship. Furthermore including partisanship entails a significant challenge for experimental design: A full randomization over social characteristics and policy positions when the profile shown to respondents also includes candidates' party labels is problematic. In some cases, the shown issue positions in combination with a particular party membership, for example a candidate from a conservative party who strongly disagrees with reducing immigration, will seem unreasonable to the respondent. In this way, the respondents preference over candidates we elicit will be a biased measure of their true preference given the confusion that such an unreasonable candidate profile provides. Future research, bearing in mind the challenges for experimental design we just presented, should certainly investigate the robustness of the mechanism we present to including partisan labels in the hypothetical candidate profiles.

7. Conclusion

We designed two conjoint experiments embedded within the Norwegian Citizen Panel to investigate the use of descriptive information (social characteristics) and substantive information (issue positions) when choosing between candidates. We find that citizens pay attention to social characteristics when they choose candidates and prefer to be represented by an in-group candidate on selected attribute dimensions (educational level, religion, and occupation). Both findings disappear when respondents also know candidates' issue positions. We argued that these results imply that citizens have instrumental incentives for choosing candidates who share their social characteristics and that is why respondents prefer their in-group candidates.

We then proceeded to test directly whether descriptive representation is valuable to citizens because of the instrumental benefits it carries, whether voters are able to infer and actually do infer candidates' issue positions from their social markers. We find that citizens, indeed, hold commonly accepted beliefs about which social characteristics align with particular political preferences of a candidate and, importantly, clearly desire representatives who share their political preferences. We could not robustly establish, however, whether citizens connect that knowledge obtained from knowing candidates' social markers and their desire to be substantively represented. The direct experimental test of whether descriptive representation facilitates substantive representation pointed in the expected direction but did not produce a statistically significant treatment effect. Nevertheless, citizens infer potential representatives' issue positions from the latter's descriptive characteristics; therefore, they are able to achieve the better substantive representation they clearly desire.

We also provide insights into the discussion about the benefits of personalizing electoral systems, which is happening across democracies. In a more personalized, direct candidate choice system, voters are better able to choose a representative that descriptively and substantively represents them well. This phenomenon occurs because voters have the opportunity to directly choose a candidate with desired characteristics and policies and not through a party list. In some instances, however, the advantages of being descriptively represented and those of being substantively represented are at odds – which may

(footnote continued)

any of respondents' social characteristics (age, gender, relationship status, educational level, religion, occupation, and region of residence) or in respondents' attitudes on the three policy issues (income inequality, refugee rights, and emissions reductions). Results are based on Fisher's exact test for the categorical variables and a Welch two-sample *t*-test as well as Wilcoxon's rank-sum test for the variable age.sss.

explain our finding of a greater emphasis on the latter than on the former.

From our result that more highly educated representatives are generally preferred, we argue that a lack of descriptive representation for less-educated citizens may arise and lead to detrimental substantive representation for that already disadvantaged group. Political decision-makers tend to be more responsive to the policy preferences of highly educated, politically active and affluent citizens (Bartels, 2016; Adams and Ezrow, 2009). These highly skilled, strongly motivated, and well-connected citizens tend to participate in society to a disproportionate degree, and the education level of citizens is the social characteristic most closely associated with political participation (Wolfinger and Rosenstone, 1980). Unequal participation in civil society and politics spills over into unequal political representation because those who fail to exert influence in decision-making bodies are likely to have different political needs, interests, and preferences from groups that are actively engaged in society and politics (Gallego, 2014). In other words, less-educated citizens are not represented by someone who shares their educational level, but better educated citizens are.

To the extent that one objective of the electoral system is to ensure better representation of all strata of society, including less-educated citizens, a reform that introduces more personalized candidate choice is unlikely to meet this objective. While less-educated citizens should desire that education-based descriptive representation be used to also achieve substantive representation, we find exactly the opposite: less-educated citizens fail to recognize the value of educational descriptive representation. Therein lies the irony. For most of the 20th century, many countries had large social-democratic, socialist, communist, and agrarian political parties that explicitly focused on representing the interests of lower-class citizens (Lipset and Rokkan, 1967), helping to overcome biases in participation. In an electoral system that allows more personalized representation, when we reduce the influence of parties said to be too distant from many groups in society, the interests of less-educated citizens may be even less well represented than under the status quo.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.electstud.2018.10.005>.

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