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Are Certain Types of Microtargeting More Acceptable? Comparing US, German, and Dutch Citizens' Attitudes

Esmeralda Bon [1], Katharine Dommett [2], Rachel Gibson [1], Sanne Kruikemeier [3], and Sophie Lecheler [4]

[1] Department of Politics, University of Manchester, UK
[2] Department of Politics and International Relations, University of Sheffield, UK
[3] Department of Strategic Communication, Wageningen University of Research, The Netherlands
[4] Department of Communication, University of Vienna, Austria

Correspondence: Esmeralda Bon (esmeralda.bon@manchester.ac.uk)

Abstract

Much of the research on political microtargeting has focused on growing public concerns about its use in elections, fuelling calls for greater regulation or even a ban on the practice. We contend that a more nuanced understanding of public attitudes toward microtargeting is required before further regulation is considered. Drawing on advertising psychology research and the results of academic analyses into microtargeting, we argue that individual concern, and by corollary, acceptance of microtargeting will vary based on socio-demographic characteristics and political orientations, and the type of personal data used. We hypothesise that microtargeting that relies on observable or publicly accessible personal information will be more accepted by voters than that which uses unobserved and inferred traits. We test these expectations and the expected variance of public acceptance by individual characteristics using comparative survey data from the US, Germany, and the Netherlands. We find that across countries and socio-demographic groups, not all microtargeting is considered equally problematic. For example, whereas the use of age and gender is generally deemed acceptable, the use of sexual orientation is not, and right-leaning individuals are more accepting than those who lean left. Additionally, overall, the US is more accepting of microtargeting than Germany or the Netherlands. Thus, we find that not all microtargeting is considered equally problematic across countries and socio-demographic groups. We conclude by calling for a more contextualised debate about the benefits and costs of political microtargeting and its use of "sensitive" data before the expansion of current regulation.

1. Introduction

Political microtargeting is not a new phenomenon (Bodó et al., 2017, p. 3). Within politics, the idea of targeting specific messages to groups of voters to prompt mobilisation or facilitate persuasion has been advanced for decades. However, recently, digital technologies—and specifically online advertising infrastructure—have made it easier to target specific segments of a population with tailored content (Jamieson, 2013). Consequently, online political microtargeting has been seen to threaten contemporary democracy (Jamieson, 2013), leading to calls to curtail or ban it. Indeed, the EU's independent data protection authority recently asserted a need to ban microtargeting for political purposes (European Data Protection Supervisor, 2022, p. 2). For purposes of definitional clarity, we note at the outset that we use the terms "microtargeting" and "targeting" interchangeably in this article.

Recent studies have confirmed that the publics share these concerns about the use of their personal data to target political messages during elections (Gibson et al., 2024; Kozyreva et al., 2021). However, how this concern may vary has not been extensively theorized nor examined in a comparative perspective. In this article, we make a first step toward filling this gap by drawing insights from the advertising psychology literature to derive expectations about how acceptable the use of different types of personal data is for microtargeting. Specifically, we argue that certain forms of socio-demographic and opinion data will be regarded as more acceptable for such purposes compared to personal data based on unobserved and inferred characteristics. We test these expectations in a comparative context, examining the cases of the US, Germany, and the Netherlands. Our conclusions support the contention that not all forms of data are created equal, showing that, consistently across countries, certain forms of data are seen as more legitimate for parties to use in targeting their messages. Our findings indicate calls for blanket bans on microtargeting (Banning Microtargeted Political Ads Act, 2020; European Data Protection Supervisor, 2022) may be misplaced and policymakers should be encouraged to take a more flexible and moderated approach to intervention.

In this article, we first introduce the idea of microtargeting, outlining what it entails, and why political microtargeting, particularly in digital form, is seen as problematic for democracy. Second, we present existing insights into public attitudes towards microtargeting and data use, showing a propensity to focus on public concerns and limited analysis of variation within public attitudes of different data types. Third, we present new data showing important nuances in the acceptability of different data. Looking at cross-country variations, and the influence of demographic and attitudinal attributes, we consider to what extent these attitudes are uniform. Finally, we reflect on the significance of our findings for debates about political microtargeting, and call for new research and regulatory responses examining the conditions under which positive usage can be maximised. Improved knowledge of the factors linked to accepting political microtargeting helps understand what drives dominant negative perceptions of microtargeting. Do people object on principle, or do certain groups have a particular disposition toward political targeting, either because they have felt or feel discriminated against based on their identity, or because they would like to receive more identity-relevant information? While opposition to the former type may recommend a blanket ban, the latter more nuanced picture suggests that a more flexible approach is required.

2. What Is Online Political Microtargeting and Why Is It a Threat?

The practice of microtargeting has featured prominently in discussions about campaign innovation and the adoption of new digital technologies. Microtargeting is distinguished by its use of highly personalised online and offline data to tailor messages focusing on very narrowly segmented groups or individuals (Gorton, 2016, p. 68; Kruikemeier et al., 2016; Zuiderveen Borgesius et al., 2018, p. 83).

Although questions have been raised about the effectiveness and efficiency of contemporary efforts at political microtargeting (Baldwin-Philippi, 2017; Hildebrandt, 2019), and some have questioned the degree to which it is practised (Votta et al., 2024), it has nevertheless been claimed that microtargeting seriously threatens democracy, and particularly the integrity of the electoral process (Barrett et al., 2021; Zuiderveen Borgesius et al., 2018). This has prompted attempts to impose stronger regulations that would curtail microtargeting activity (Dobber et al., 2019). Catalogued comprehensively by Zuiderveen Borgesius et al. (2018), different democratic threats have been identified for citizens, parties, and public opinion. For citizens, privacy concerns are paramount, along with fears that these practices may have a chilling effect on behaviour and foster greater distrust in politicians. Gorton (2016) and others have also argued microtargeting can be used to influence voter choices, and even whether they turn out at all (Bodó et al., 2017, p. 3; Harker, 2020, pp. 155–156; Kim et al., 2018; Lavigne, 2020). Even if no explicit attempt at voter suppression is made, there remains potential for microtargeting to exclude the voices of already marginalized sectors of the electorate as mobilization efforts become more accurate in bypassing hard-to-reach voters in favour of the already engaged (Cotter et al., 2021, p. 3).

At the party level, microtargeting is seen to create problems around transparency, as it allows politicians and candidates to obscure how, and to whom their messages are targeted (Jamieson, 2013). These practices also make parties potentially more reliant on intermediaries who provide access to data on commercial terms "to the highest bidder, without any regard to wider, societal concerns" (Bodó et al., 2017, p. 5; Harker, 2020, pp. 155–156). Finally, at the level of public opinion, scholars have raised concerns about the impact of microtargeting in terms of narrowing debate around particular issues and fragmenting the public sphere (Boehme-Neßler, 2016).

These academic concerns have been echoed in the policy environment with calls from prominent regulatory bodies in the EU and US politicians for severe restrictions and even a ban on political microtargeting (Banning Microtargeted Political Ads Act, 2020; European Data Protection Supervisor, 2022). In practice, recent legislation in the form of the EU Digital Services Act, while not prohibiting microtargeting has strengthened restrictions on its use to target vulnerable groups like minors, imposed greater protections on the use of data designated as sensitive, and required more transparency in campaigns' use of algorithms and profiling (European Parliament, 2024). These steps indicate that governing elites are making a distinction regarding the acceptability of different types of personal data used in political microtargeting. It is not clear, however, whether the public share these patterns of concern, or whether this varies cross-nationally, making context-specific national-level regulation more appropriate.

In this article, we interrogate the prevailing negative focus on the use of data in politics. In contrast to many accounts, we note longstanding precedents surrounding the use of data and microtargeting within politics (Kusche, 2020, p. 4). As outlined in detail by Hersh (2015) in the US, the use of data for political purposes

and the segmentation and targeting of the electorate is a key element of election campaigns. Indeed, in many countries, the state makes data about citizens freely available to political parties to facilitate targeted communications (Dommett et al., 2023; Kefford et al., 2022). Such examples suggest that the use of data is not unprecedented and indeed has often been seen as compatible with democracy. Noting this, we contend that microtargeting could have positive democratic effects. Indeed, the Victorian Parliament in Australia highlighted the potential for microtargeting to deliver more relevant political advertising to voters, and reach social groups that are usually difficult to contact. It also cited the cost, efficiency, and effectiveness of this technique as potential positives, and noted its potential for allowing campaign diversification and boosting knowledge among voters about individually relevant issues (Parliament of Victoria, 2021, p. 169; see also Zuiderveen Borgesius et al., 2018). Existing empirical work has found some evidence for these positive impacts. Dobber et al. (2023), for example, found that targeted advertising positively affects participants' likelihood to vote for a party placing targeted messages. Additionally, Matthes et al. (2022) found that political microtargeting increased political interest (dependent on age), although they also showed that perceived microtargeting decreased trust in democracy, revealing important nuances in effects. What is currently less clear is how citizens view the use of data within politics and how nuanced their views are about the use of different types of data.

In this article, we address this gap by posing the following interrelated research questions: Do citizens in different countries view the use of different kinds of data to be equally (un)acceptable for political microtargeting? If not, how and why might that differ? We then reflect on the implications of our findings for regulators.

3. Public Attitudes Towards Microtargeting

Empirical evidence on attitudes to political microtargeting is limited, with most studies focused on measuring how concerned people are in general about the practice. One of the earliest studies by Turow et al. (2012), reported that most of the American public (86%) did not want political campaigns to tailor advertisements to their interests and were much more critical of its use in elections than in commerce. More recently, the Pew Research Center (Auxier, 2020) found a similarly large majority (77%) of Americans considered it "not very" or "not at all" acceptable for social media companies to use their online activity to show them adverts for political campaigns. Measurement and analysis of perceptions about microtargeting is even more limited beyond the US. Work by Dobber et al. (2019) in the Netherlands using a 0–7 scale of acceptance of political behavioural targeting concluded that the Dutch public was also highly critical of its use by campaigns, with no item measuring favourability toward the practice recording a mean value above a score of three. A rare comparative three-nation study by Kozyreva et al. (2021) examining attitudes toward algorithmic personalization and the use of personal data online in Germany, the UK, and the US concluded that majorities in all countries found the use of these practices unacceptable by political organizations. However, the proportions in both European countries were noticeably higher—close to two-thirds or 61% found such personalisation unacceptable—than among US respondents, where just over half or 51% felt the same. The results also reinforced the finding that people are more negatively disposed toward personalised political advertising compared with tailored messages from commercial vendors. In addition, Vliegenthart et al. (2024, p. 1) tested the perceived acceptability of targeting based on general or individual characteristics in 25 countries, finding that "targeting based on general characteristics instead of individual ones is considered more acceptable." Gibson et al. (2024), in turn, examine how in the US, concern about

microtargeting practices remains considerable, although it varies between demographic groups and based on the type of personal data used.

These studies support the recent move to curtail or ban microtargeting. However, if we delve below the top-line results, a more nuanced picture emerges. First, the studies show variation in attitudes towards privacy according to demographic factors, and that not all groups of voters are equally negatively disposed toward its use. Notably, both the academic analyses and the Pew Research Center reports concluded that age and gender shape voters' perceptions of tailored campaigning, with younger people tending to find these practices less problematic than their older counterparts, and men more so than women. Education and ethnicity also appear to be relevant. For the former, a bimodal relationship emerges with the highest and least educated found to be more accepting. Ethnic minority voters, at least in the US, are less likely to see the practice as problematic. While these analyses do not probe the reason for these differences, much microtargeting literature has identified privacy concerns as key factors driving the dislike of behavioural targeting (Dobber et al., 2019; Schäwel et al., 2021; Zuiderveen Borgesius et al., 2018). Given that privacy fears and protective behaviours appear to follow a similar demographic distribution (Dobber et al., 2019; Kozyreva et al., 2021), it is plausible that they motivate a dislike of microtargeting.

A second source of nuance revealed in these studies is cross-country differences in tolerance toward microtargeting. European publics are more likely to be critical of these practices than the US. Again, although there has been no systematic analysis of those differences, comparative research on data privacy suggests that historical context and the experience of authoritarian rule within European nations have generated stronger cultural and legal resistance toward political microtargeting. Certainly, EU countries have taken greater steps to codify their citizens' right to privacy in law through initiatives like the General Data Protection Regulation than is the case in North America (Bennett, 1992).

Finally, besides the individual-, or micro-, and macro-level characteristics that appear to moderate citizens' views on political microtargeting, the work of Kozyreva et al. (2021) has suggested that supply-side factors and particularly the types of data used in personalised advertising may affect perceptions of its legitimacy. In their study of the US, German, and UK publics the authors compared attitudes toward personalised advertising that was based on a range of different types of data. Specifically, they examined levels of concern toward the use of more observable traits that are typically recorded for official purposes (gender, age, and marital status), as compared to more private and unobserved characteristics (religion and sexual orientation), and online behavioural data (social media posts, online purchases, and browsing habits). The conclusion was that the publics were more restrictive in their attitudes toward the latter types of unobserved and tracking data, but that majorities did accept the use of the more publicly available forms. Work by Zarouali et al. (2022) on responses to data-driven government health initiatives in the Netherlands concluded similarly that compliance was significantly lower when individuals were asked to divulge their movements for purposes of contact tracing and quarantine, compared to others that were more informative, like using digital communication channels to convey updates to citizens. Vliegenthart et al. (2024) also found that targeting based on general characteristics (like age or gender) is more acceptable than targeting based on individual-level characteristics like social media usage or pet ownership. The idea that more intimate or personalised data is viewed to be more sensitive is also found in other studies, which have found negative emotional reactions to be associated with the use of tracking tools to obtain unobservable data (Ruckenstein & Granroth, 2020).

Building on these findings, and linking this back to the privacy fears identified earlier, it appears that not all forms of personal data sharing trigger the same level of anxiety within individuals. Specifically, "sensitive" data that requires self-disclosure like relationship status, sexual orientation, and political beliefs (Miguel, 2018) is likely to encounter greater resistance (Gómez Ortega et al., 2023). There are many possible explanations for these different views. Watson and Lupton (2020, p. 152) propose that perceptions of inappropriate data use depend on how its use makes people feel about their privacy and whether it evokes anxiety, discomfort, and the fear of being "compromised, in danger or embarrassed." Elsewhere Vliegenthart et al. (2024) point to information boundary theory (Boerman et al., 2017), to contend that data seen to be discomforting is perceived as a risk that does not outweigh the benefits of data collection. Within this article, we are interested in further interrogating views of different data.

4. Hypotheses

Our analysis builds on earlier work that has differentiated between attitudes to different data. Unlike previous work that has differentiated in broad terms between general- or individual-level data (Vliegenthart et al., 2024), we differentiate two types of data referred to within existing literature (Table 1).

Type 1 includes data that is publicly available or visibly observable. This data type has routinely been identified as a key source of campaign insight (Hersh, 2015), and is often gathered by campaigners via official records, like census data or the electoral roll (publicly available) or through canvassing (visibly observable). Type 1 data is readily available within the public realm, and includes information about, for example, age, gender, ethnicity/race, education, geographic location, and socioeconomic status. Given insights from information boundary theory, we suggest that this form of data is likely to be more acceptable to citizens as it does not relate to private characteristics or traits. Type 2 includes traits which are not freely and publicly available to campaigns and not directly observable. This individual data is "inferred" or "modelled" (Dommett et al., 2023), and can be purchased by campaigns without a voter's knowledge or consent. Examples of Type 2 data include religious views, personality profiles, sexual orientation, major life events, relationship status, and political views. Within this list, arguably the classification of the last two requires some further justification. Regarding relationship status, we accept that this could also be understood as Type 1 data if interpreted as an individual's formal relationship status, i.e., being married or in a civil partnership. Given the range of situations that this could be assumed to cover, however, many of which are not officially recorded, we classify it as Type 2 data. Similarly, we acknowledge that political views could be considered as Type 1 data in the US where voter registration data is publicly accessible. However, the US is the exception in this respect. Also, even in the US political views are potentially likely to be interpreted as more than simply party choice but to extend

Table 1. Two types of personal data used for microtargeting.

Type		Source	Example data forms
1	Publicly available or observable personal identity traits	Collected by public authorities in the form of a census and are seen as relevant for the distribution of public funding and policy	Socio-demographics, age, gender, ethnicity/race, education, geographic location, class, or income
2	Unobservable personal identity traits	Collection requires self-disclosure of specific information or intimate surveillance via tracking	Religion, personality profiles, sexual orientation, major life events, relationship status, and political views

to non-publicly recorded attitudes toward key issues, groups, and governing bodies. Following Vliegenthart et al. (2024), we suggest that this more intimate or private data is likely to be deemed more risky and to provoke privacy concerns and trigger anxiety, discomfort, and embarrassment, leading it to be viewed in more negative terms than Type 1 data. In both cases, however, we present exceptions to these expectations that are particular to the context of political microtargeting. First, for Type 1, given previous highly controversial instances in which race has been used negatively to mobilize voters (one of the most notable being the Willie Horton ad shown by the Bush campaign in the 1988 US Presidential election) we argue that sensitivity to its use in political microtargeting will be higher and its acceptance will typically be lower than for other Type 1 data. Conversely, among the unobservable traits (Type 2), the use of political views is likely regarded as much more acceptable given its purpose to mobilize voters. Based on this reasoning, we develop two interrelated hypotheses about the relationship between the intimacy of data (collection) and the perceived acceptability of these data for political microtargeting:

> H1: Targeting based on Type 1 data, except for race and ethnicity, will be viewed as more acceptable for political targeting purposes compared to Type 2.

> H2: Targeting based on Type 2 data will be viewed as less acceptable than Type 1, except for political views.

In a second step, we extend the analysis to examine the impact of individual characteristics and national context on concerns about microtargeting. Specifically, we regress concern toward the two types of microtargeting on a range of socio-demographic variables that have been linked in prior analyses with different levels of concern. We then compare whether those relationships hold across our three countries. Given the inductive and largely atheoretical approach of this work to date, we adopt an exploratory rather hypothesis-driven approach for this stage of the analysis. We return to reflect on the country and individual-level relationships observed in our conclusions and the implications for future theory building.

5. Methods

5.1. Data and Case Selection

We use three surveys covering three elections: the US presidential election (2020), and the Dutch and German general elections (2021). All data collections were part of two larger research projects, DiCED and DATADRIVEN (see Acknowledgments). Our case selection allows for a comparison of the US, which has dominated scholarly analysis to date, with two European, EU countries that are subject to more stringent data protection rules. We know from Kozyreva et al.'s (2021) study that the German public has greater reservations about microtargeting than the US. The Netherlands adds a new context and further potential variance. A recent comparison of the structure and perceptions of data protection regimes within Europe concluded public debate and awareness of issues relating to data privacy was particularly intense in the Netherlands (Custers et al., 2018). Findings from a Eurobarometer (2021) survey about citizens' understanding of the General Data Protection Regulation supported this finding, with a large majority of Dutch respondents (60%) confirming they had heard of the legislation and knew what it was about, as compared to a smaller minority (42%) of Germans.

Given these documented differences, we anticipate the Netherlands to equal if not exceed Germany in the extent to which it rejects microtargeting and that both nations will display stronger concern than the US. To test our expectations about the between-country and data type-based variance of these perceptions, we compare findings from surveys that asked comparable questions in each country.

The US data was collected between September 16 and October 20, 2020, by YouGov. An overall sample of 5,376 respondents was generated from their main panel to be representative of the target population, i.e., all US adults aged 18 and above, based on education-level, age, gender, ethnicity, region, and the 2016 past vote. A subset of 3,956 respondents from the total sample answered questions about the acceptability of political microtargeting. Of these 3,956 respondents, 51.5% were female, the mean age was 47 ($SD = 17.8$), 6.3% did not finish high school, and 93.7% did. The German data was collected between August 18 and September 10, 2021, by YouGov. Their main panel was used to generate 5,432 respondents to be representative of the target population, i.e., all German adults aged 18 and older, based on education-level, age, gender, migration background, region, and the vote in the 2017 Federal Election. A subset of 4,920 respondents from the total sample answered questions about the acceptability of political microtargeting. Of these 4,920 respondents, 50.9% were female, the mean age was 50.2 ($SD = 17.3$), 30.7% did not finish secondary school or high school, 35.5% finished lower secondary school, and 33.2% finished upper secondary school. Finally, data for the Netherlands was collected between February 23 and March 8, 2021, by I&O. Of the 1,264 respondents who participated in the study, 47.9% were female, the mean age was 52 ($SD = 17.1$), 22.2% had a low-level of education, 39.2% a medium-level, and 38.5% a high-level.

5.2. Measures and Analyses

To investigate perceptions about data-driven targeting, we developed measures that tapped into voters' acceptance of different types of personal data used in campaigns. We focus on "voter data" as opposed to "campaign data" (Dommett et al., 2024), and specifically consider data that can be disclosed, inferred, or behavioural (Dommett, 2019). We, therefore, explore public attitudes towards the use of nine types of personal characteristics in campaigns for political microtargeting: age, gender, and ethnicity (Type 1); relationship status, sexual orientation, religious views, political views, personality profiles, and major life events (Type 2). Whilst we could have analysed responses to particular combinations of these data points (recognising the potential for campaigners to combine individual attributes into voter profiles; Dommett et al., 2023), accepting Votta et al.'s (2024) finding that most political ads on Facebook use just one targeting criterion, we examine perceptions of different types of personal data discretely. The wording of the core survey item used to measure acceptance was: "Political campaigners sometimes try to target their adverts and messages to different groups of voters during an election" and "how acceptable do you think it is for political campaigners to use these different types of personal information to target their ads and messages at voters?" Respondents were given the list of data and asked to rate them on a four-point "acceptability" scale from 1 (*not at all*), 2 (*not very*), 3 (*fairly*), and 4 (*very*). A "don't know" option was offered. The question was fielded in identical form (subject to translation) in all three cases (see Supplementary File, Appendix 1, for the full question wording, for each country). While the question was fielded to the full sample in the case of Germany and the US, it was preceded by a filter in the Netherlands that first asked the respondent which of the nine types of personal data were used to target voters during election periods. They were then asked about the acceptability of the types of data they had identified as being used. The main result of the filter was to reduce the Dutch sample size and the proportion of don't know responses. Supplementary File,

Appendix 2, shows the final *N* and frequency distributions for each country. These adjustments are not expected to impact our findings to any great extent since our analysis is focused on comparing the relative levels of acceptance across the different types of data within each country rather than absolute levels across countries and the strength of the relationships between individual-level characteristics and acceptance levels. Finally, to help control for any bias introduced by the filter we correct for the over-reporting of the "don't know" responses, by removing them in all three datasets before reporting our results. To test our hypotheses, we present descriptive findings about the acceptability of microtargeting by country and data type. Thereafter, we run ordinal regressions to examine how acceptance of microtargeting varies between socio-demographic groups.

6. Results

Figure 1 presents the acceptance rates across countries for observed or Type 1 data and unobserved or Type 2 data in political microtargeting. Adopting the rubric of majority versus minority acceptance for the different types of data, H1 is broadly supported in that a majority of the respondents in all countries considered age fairly or very acceptable for targeting. Over half of the US respondents also felt that gender was acceptable, and just under half viewed ethnicity as within scope. Dutch and German respondents were somewhat less favourable toward the use of gender compared to Americans, and considerably lower in acceptance of ethnicity. Turning to H2, again we find broad support in that most of the Type 2 data are seen as less acceptable than Type 1, across countries, an exception being relationship status, which hovers around the same level as gender, particularly in Germany and the Netherlands. This might be explained by the fact that respondents interpret this to be marital status, i.e., an officially recorded if not observable statistic, rather than their informal situation. Alternatively, this can be because relationship status is, compared to sexual orientation or ethnicity, less of an identity-defining, discriminating feature. Notably, sexual orientation is regarded as the least acceptable basis for political microtargeting in all countries, while other inferred or unobservable traits vary cross-nationally. In the Netherlands, personality traits are viewed most negatively for targeting purposes, while Germans are particularly opposed to the use of religious views. The latter opposition may be linked to historical and current tensions between different religious and ideological groups in Germany. In line with H2, data on political views are deemed the most acceptable of all types, with clear majorities in all countries regarding them essentially as "fair game" for parties to use in targeting their messages.

Overall, therefore, the descriptive findings largely support our expectations. They confirm that not all forms of data are viewed as equally problematic for political microtargeting, and show differences across countries. To probe these findings further, we explore differences in acceptance at the individual-level and compare these patterns across countries. We do so by conducting nine separate ordinal regression analyses in each country. The models regress the acceptability scores for each of the nine types of data separately on measures of age, gender, education and political leaning, political interest, and ethnic/migration background on perceptions. Reflecting the particularities of each case study, our operationalisation of the independent variables varies slightly across the three cases. The variable descriptions for each country are provided in Supplementary File, Appendix 3. The results for each regression analysis are presented row-wise by country in Tables 2, 3, and 4. The unstandardized coefficients and their significance levels are reported to allow for comparisons of whether the acceptance of political microtargeting is more likely to occur based on the socio-demographic characteristic as a variable. The odds ratios and standard errors are reported in full in the Supplementary File, Appendix 4.
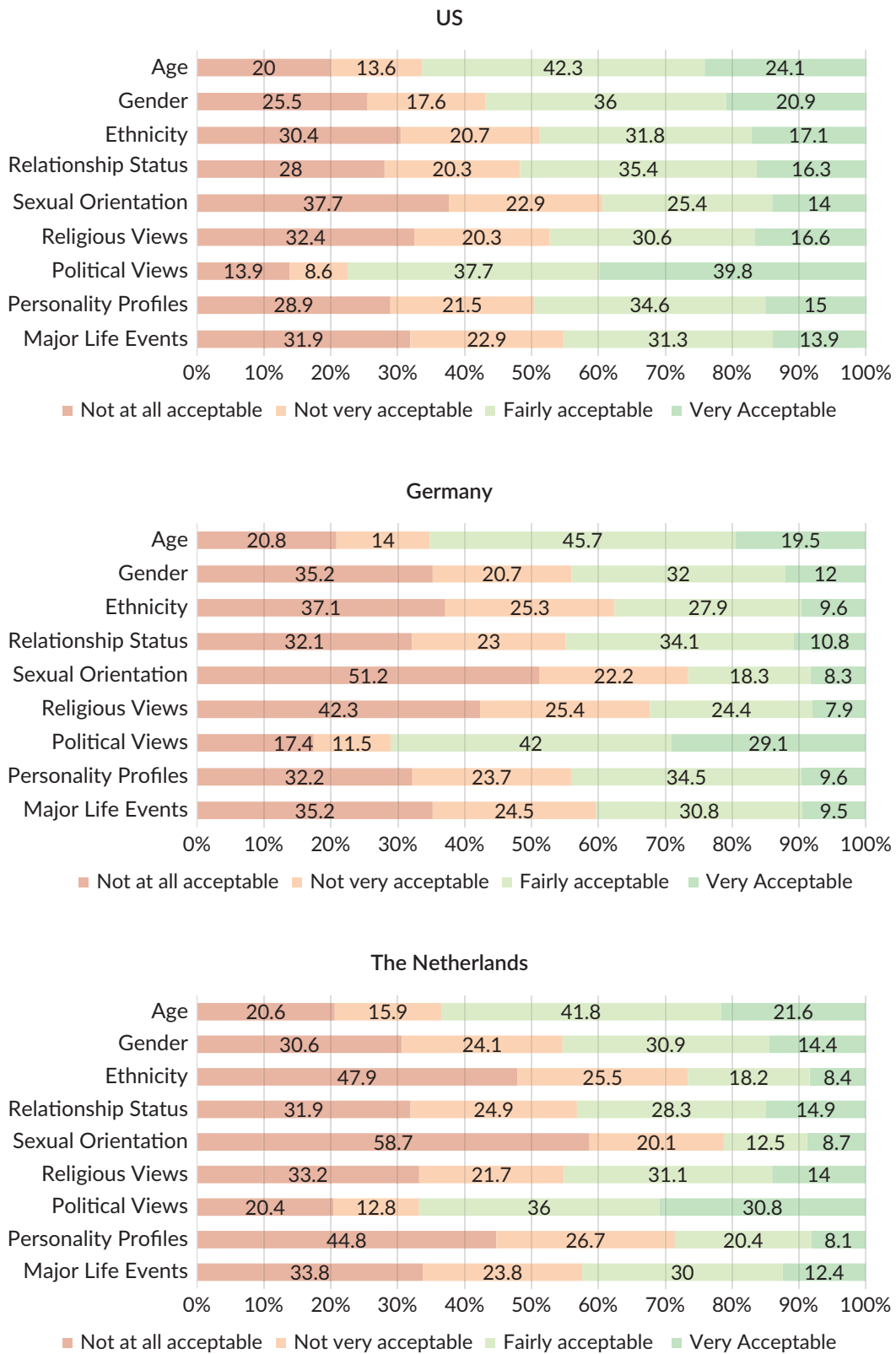
Figure 1. Comparing data acceptability in the US, Germany, and the Netherlands.

Table 2. Ordinal regression results for the US sample predicting the acceptability of targeting based on different data points.

Predictor	Observable traits (Type 1)			Unobservable traits (Type 2)					
	Age	Gender	Ethnicity	Relationship status	Sexual orientation	Religious views	Political views	Personality profiles	Major life events
Age	−0.01***	−0.01*	−0.01***	−0.01***	−0.02***	−0.01***	−0.01***	−0.01***	−0.01***
Male	0.23**	0.24***	0.30***	0.30***	0.36***	0.32***	0.13	0.32***	0.021**
Education									
Up to HS/some college	−0.11	−0.09	−0.18	−0.20	−0.14	−0.24	0.19	−0.12	−0.05
College qualification	−0.02	0.11	0.05	−0.03	0.08	0.00	0.38*	−0.06	0.02
Ideology (liberal−conservative)	−0.01	0.01	0.01	0.05***	0.01	0.07***	−0.16	0.03**	0.05***
Political interest (low−high)	0.08***	0.07***	0.05**	0.04**	0.05***	0.053**	0.10***	0.03*	0.04*
Race/ethnic background									
Black	0.51***	0.79***	0.70***	0.44***	0.56***	0.47***	0	0.59***	0.39***
Hispanic	0.08	0.35***	0.44***	0.27**	0.21*	0.15	−0.24*	0.22*	0.20*
Other	−0.06	0.01	0.02	−0.05	−0.01	−0.10	−0.40**	0.05	−0.03
Pseudo R^2	0.01	0.01	0.02	0.01	0.02	0.02	0.01	0.01	0.01
N of observations	3,110	3,113	3,100	3,033	3,044	3,095	3,147	2,932	3,014

Notes: * = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$.

Table 3. Ordinal regression results for the German sample predicting acceptability of targeting based on different data points.

Predictor	Observable traits (Type 1)			Unobservable traits (Type 2)					
	Age	Gender	Ethnicity	Relationship status	Sexual orientation	Religious views	Political views	Personality profiles	Major life events
Age	−0.02***	−0.02***	−0.02***	−0.02***	−0.03***	−0.02***	−0.02***	−0.02***	−0.02***
Male	0.20**	0.07	0.14*	0.22***	0.26***	0.18**	0.11	0.18**	0.10
Education									
Finished lower secondary school	−0.23**	−0.21*	−0.28**	−0.36***	−0.38***	−0.26**	−0.08	−0.25**	−0.25**
Finished upper secondary school	−0.18*	−0.26**	−0.49***	−0.46***	−0.48***	−0.36***	−0.01	−0.42***	−0.39***
Ideology (left–right)	0.01	−0.01	0.06***	0.03*	0.03*	0.09***	−0.02	0.01	0.04*
Political interest (low–high)	0.10**	0.02	0.03	0.04	−0.03	0.03	0.19***	0.03	0.01
Migration background	0.29**	0.31**	0.40***	0.31**	0.38***	0.37***	0.16	0.34***	0.34***
Pseudo R^2	0.02	0.02	0.02	0.02	0.03	0.02	0.01	0.02	0.02
N of observations	4,003	3,935	3,915	3,950	3,953	3,952	3,984	3,849	3,894

Notes: * = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$.

Table 4. Ordinal regression results for the Dutch sample predicting acceptability of targeting based on different data points

Predictor	Observable traits (Type 1)			Unobservable traits (Type 2)					
	Age	Gender	Ethnicity	Relationship status	Sexual orientation	Religious views	Political views	Personality profiles	Major life events
Age	−0.03***	−0.02***	−0.01*	−0.02**	−0.01	−0.01*	−0.02***	−0.01	0.00
Male	0.23	0.40*	0.49**	0.58**	0.42	0.21	0.20	0.53	−0.06
Education-level									
Middle	−0.51*	−0.14	0.06	−0.92**	−0.03	−0.02	−0.23	0.08	−0.28
High	−0.07	0.02	−0.01	−0.62*	0.01	−0.19	0.14	−0.54	−0.37
Ideology (left–right)	0.01	0.06	0.16***	0.07	0.10	0.08**	0.07*	−0.02	0.03
Political interest (low–high)	0.12	0.10	−0.04	0.02	0.00	0.05	0.10	0.04	−0.08
Migration background	−0.13	−0.25	0.06	−0.14	0.28	−0.40	−0.17	−0.21	−0.42
Pseudo R^2	0.03	0.02	0.03	0.03	0.02	0.01	0.04	0.02	0.01
N of observations	764	508	545	374	255	584	683	212	279

Notes: * = $p < 0.05$, ** = $p < 0.01$, *** = $p < 0.001$.

Across these tables, we see relatively consistent effects for age, gender, and to a lesser degree ethnicity or migrant background on acceptance of different data. Typically, younger people, men, and those with an ethnic/migrant background are more likely to accept the use of a wider range of data than older generations and women. For age, we see a significant and repeated negative relationship across all forms of data, particularly in the US and Germany. The age predictor is less pronounced in the Netherlands, emerging primarily for targeting based on age, gender, ethnicity, relationship status, and religious and political views. Regarding gender as a predictor of attitudes, again the divide is stronger and more consistent within the US and Germany, with targeting based on age, ethnicity, relationship status, sexual orientation, religious views, and personality profiles dividing men and women. Perhaps most interesting is the more positive views among ethnic minorities toward targeting. In the US, Black and Hispanic respondents are typically more open to microtargeting using all data forms although notably there appears to be a split here on the use of political views, with the former remaining more in favour than White voters while the latter are more likely to reject their use. In Germany, those with a migrant background were also more likely to accept the use of all data for microtargeting, again except for political views—mirroring the US. The Netherlands appears again to be less clearly divided, with no significant difference in attitudes between those with and without a migration background.

More cross-country variance is observed in the relationships between certain acquired traits and the acceptance of different types of personal data for microtargeting. Education emerges as often significant in Germany, with those who completed secondary school education being less inclined to accept the use of a range of personal data for targeting than those lacking a high school diploma. Interest in politics also matters, but mainly in the US. Finally, ideology does appear to influence acceptance levels across all countries, but mostly for Type 2 unobserved characteristics. In the US and Germany, right-leaning respondents tend to be more accepting of microtargeting based on a wide range of characteristics, including relationship status, religious views, and major life events.

The results from Tables 2, 3, and 4 confirm that individual characteristics significantly influence the extent to which people consider the use of certain types of data to be acceptable. They also suggest that the impact of these traits is quite consistent cross-nationally particularly regarding the use of Type 1 data, with age and gender following a similar pattern of influence on acceptance in each country. More differences emerge with Type 2, suggesting that cultural norms and national context play a stronger role in shaping what citizens consider to be "in" or "out of scope" when it comes to more private, undisclosed types of data.

7. Discussion and Conclusion

This article has considered whether citizens are negatively disposed toward microtargeting. We have argued that acceptance of microtargeting varies based on the type of data used and tested these expectations with comparable opinion data from the US, Germany, and the Netherlands. Our results confirm that the public does not view all forms of political microtargeting as equally problematic. In line with our expectations, the use of more publicly accessible forms of data (Type 1) is generally regarded as more acceptable than the use of non-observable inferred traits (Type 2), although there are notable exceptions concerning ethnicity and political opinions respectively. Microtargeting based on age and political views is accepted by most of the population in all three cases, with gender and relationship status also considered within scope by a majority of the US population and a smaller but significant minority of the Dutch and German public. In line with our expectations, generally, more private and non-observable forms of data are seen as off-limits for political

targeting. However, whereas the use of sexual orientation is similarly unacceptable across the cases, the use of religion is particularly frowned upon in Germany, and personality profiles are less accepted in the Netherlands. When we examine the individual correlates of these views, further similarities emerge among countries in terms of the significant role of demographic traits, with younger voters and men typically more accepting of parties' use of personal data to target their messages in all three cases. Ideological outlook also matters, with the US, Dutch, and German voters who lean right proving overall more accepting of microtargeting based on personal data. Perhaps most interestingly, we find that voters with an ethnic/migrant background in the US and Germany are generally more comfortable with the use of personalised data for targeting including ethnicity, compared to their non-ethnic counterparts.

These findings are important for our understanding of microtargeting, and efforts to regulate it. While the results do not suggest strong public support for personalisation in political advertising, they indicate that a "one size fits all" approach to the regulation of microtargeting is not the most appropriate policy response. While certain forms of undisclosed (Type 2) personal data like sexual orientation are viewed as inappropriate for political targeting by a large majority of the population cross-nationally, others like religious views and major life events appear to be more context-specific in terms of how concerned voters are. Our finding that those with an ethnic/migrant background are in many cases more positively disposed toward targeting that is based on observable characteristics, including ethnicity, raises important questions about the current restrictions imposed on its use in campaigns. It suggests they may have had a more positive experience of such contact, and perceived it as helpful to rally their vote. Banning political targeting, particularly in countries with smaller groups of ethnic populations that are harder to reach through broadcasting, could have the adverse effect of reducing the mobilization of minoritized voters. Similarly, political views, although categorised by the EU General Data Protection Regulation as "sensitive" and therefore restricted or prohibited in voter targeting, are widely seen as legitimate and perhaps even necessary for parties to rely on when targeting messages to voters.

Overall, our study suggests more nuanced work is needed to understand voters' orientation to microtargeting and particularly whether the use of different personal data affects its perceived unacceptability. Essentially, banning all forms of political microtargeting on grounds of public concern and minimizing harm to voters may be taking the proverbial sledgehammer to crack the nut, and runs the risk of both exaggerating their concerns, in that all data are not considered equally problematic, and perhaps more importantly, overlooking its potentially positive outcomes.

Drawing these conclusions, we recognise that many questions remain. Our study examined attitudes to individual data points in isolation and hence does not examine how people view data when combined to build voter profiles. We also used data gathered from two different projects, limiting the comparability of our findings. Future research should seek to conduct more directly comparable analysis to aid our understanding.

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Supplementary Material

Supplementary material for this article is available online in the format provided by the author (unedited).

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About the Authors

Esmeralda Bon is the lead research associate for the ERC advanced investigator grant project Digital Campaigning and Electoral Democracy (DiCED) at the University of Manchester. Her thesis and published work have focused on the drivers and impact of online political communication of established and new political elites. Her current research interests centre on the use of personal data and political influencers in elections and developing methodologies to study this.

Katharine Dommett is a professor of digital politics at the University of Sheffield. Her research explores the role of digital technology and data in elections. Her recent book, *Data-Driven Campaigning in Political Parties: Five Advanced Democracies Compared* was published in 2024 by the Oxford University Press.

Rachel Gibson is a professor of politics at the University of Manchester. She currently leads an ERC advanced investigator project Digital Campaigning and Electoral Democracy (DiCED). Her research focuses on tracing and analysing the relationships between digital technology, parties, and voters.

Sanne Kruikemeier is a professor in digital media and society at the Strategic Communication Group at Wageningen University and Research. Her research focuses on the consequences and implications of online communication for individuals and society. She recently published work on data-driven political targeting, privacy behaviour, online political communication, news consumption, and digital journalism.

Sophie Lecheler is a professor of political communication at the Department of Communication at the University of Vienna. Her research focuses on the impact of digital technology on political communication and political journalism. Her work has been published in a wide range of international journals, such as *Political Communication*, *Communication Research*, *Journal of Communication*, *New Media & Society*, and *the International Journal of Press/Politics*.