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Data-driven campaigning and democratic disruption: Evidence from six advanced democracies

Glenn Kefford (ORCID)
School of Political Science and International Studies, University of Queensland, Brisbane, Australia

Katharine Dommett
Department of Politics, University of Sheffield, UK

Jessica Baldwin-Philippi
Department of Communication and Media Studie, Fordham University, Bronx, NY, USA

Sara Bannerman
Faculty of Social Sciences, McMaster University, Hamilton, ON, Canada

Tom Dobber
Amsterdam School of Communications Research, University of Amsterdam, Netherlands

Simon Kruschinski
Department of Communication, Johannes Gutenberg University Mainz, Germany

Sanne Kruikemeier
Amsterdam School of Communications Research, University of Amsterdam, Netherlands

Erica Rzepecki
Faculty of Social Sciences, McMaster University, Hamilton, ON, Canada

Abstract

Data-driven campaigning has become one of the key foci for academic and non-academic audiences interested in political communication. Widely seen to have transformed political practice, it is often argued that data-driven campaigning is a force of significant democratic disruption because it contributes to a fragmentation of political discourse, undermines prevailing systems of electoral accountability and subverts 'free' and 'fair' elections. In this article, we present one of the very first cross-national analyses of data-driven campaigning by political parties. Drawing on empirical research conducted by experts in six advanced democracies, we show that the data-driven campaign practices seen to threaten democracy are often not manifest in party campaigns. Instead, we see a set of practices that build on pre-existing techniques and which are far less sophisticated than is often assumed. Indeed, we present evidence that most political parties lack the capacity to execute the hyper-intensive practices often associated with data-driven campaigning. Hence, while there is reason to remain alert to the challenges data-driven campaigning produces for democratic norms, we argue that this practice is not inherently disruptive, but rather exemplifies the evolving nature of political campaigning in the 21st century.

Corresponding author:
Glenn Kefford, School of Political Science and International Studies, University of Queensland, Brisbane, QLD 4072, Australia.
Email: g.kefford@uq.edu.au

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Data-Driven Campaigning (DDC) has become a key concept for those seeking to understand elections and campaigns in the last two and a half decades. Whilst the practice of collecting and mobilising information about citizens within campaigns has long antecedents (Hersh, 2015), in recent years it has been argued that we have entered a new era of DDC facilitated by developments in digital technology, media and broader society (Roemmele and Gibson, 2020). Characterised by the collection, analysis and use of increasingly personalised information online and offline, data is widely seen to have transformed modern campaigning (Nickerson and Rogers, 2014). However, DDC has also been seen to be a force of democratic disruption, with the collection, analysis and use of data in election campaigns by political parties and other campaigners seen to be challenging democratic norms and practices (Gorton, 2016). Focussing on political parties as the key campaign actors in most advanced democracies, we argue it is important to know how political parties are using data in their campaigning practices so that we can determine the likely extent of disruption to these parties, as well as to our democracies. Hence, in this article, we answer the question: 'how, if at all, do political parties in advanced democracies undertake DDC?'. This question allows us to determine whether DDC is the existential threat to democratic norms it is often assumed to be, or whether DDC is a product of broader socio-political forces which encourage and incentivise campaign actors such as political parties to campaign in such a way.

Our approach departs from the prevailing tendency to detail the theoretical, normative and legal aspects of DDC (Dobber et al., 2019; Zuiderveen Borgesius et al., 2018). Instead we provide one of the very first cross-national empirical analyses of DDC practices, something severely lacking in the literature thus far. While increasingly there are case studies of DDC practices across the globe (Anstead, 2017; Kefford, 2021), scholarship lacks comparative analyses and is United States (US)-centric. This US focus is particularly problematic because prevailing accounts of DDC have become associated with highly resourced presidential campaigns that are an outliner compared to most election campaigns.

Offering an important corrective to these tendencies, we bring together and comparatively analyse empirical data on the DDC practices of political parties in six advanced democracies. Specifically, we reveal the variety of ways in which data is collected, used and curated by campaigns, showing that while there are a relatively uniform set of practices employed by parties across advanced democracies,

the take-up and implementation of these practices differ significantly across and within country contexts. Hence, while there is evidence of DDC having a disruptive impact on campaigning practices and parties, these effects are by no means uniform, inherently new or necessarily democratically problematic.

The remainder of our article is structured as follows: we begin by surveying the literature on DDC and outline the threat it is perceived to pose to democracy. We then move on to our findings, setting out developments in our six advanced democracies. We start with how data is collected, turn to how data is used and then move on to discuss data infrastructure. We conclude by reflecting on the limitations and logical extensions of our study and discuss the implications of our findings in light of DDC's alleged impact on democratic norms and practices.

The rise of data-driven campaigning

DDC has gained widespread interest amongst academic and non-academic audiences, coming to prominence as media, technological and social-political transformations have led to a fragmentation of media landscapes, ongoing datafication of society, increasing individualisation, and broader electoral volatility across the democratic world. Some scholars see DDC as a new 'science of campaigning' (Pons, 2016: 36), suggesting it has opened the possibility of 'direct approaches in which political actors target personalized messages to individual voters by applying predictive modelling techniques to massive troves of voter data' (Rubinstein, 2014: 882). For Baldwin-Philippi, DDC has two main features: 'targeting, or deciding which messages go to what potential voters at what time during the campaign, and testing, or empirically measuring how well messages perform against one another and using that information to drive content production and further targeting' (2017: 628).

Studies examining the effect of DDC on organisations such as parties have been sparse. Some scholars focus on data as a resource that has organisational consequences for campaigning (Munroe and Munroe, 2018: 8–9). Whilst by no means novel (Hersh, 2015; Kreiss and Howard, 2010), new forms of data are seen to allow parties to make cost efficient decisions, (Kreiss, 2016), to improve communication attempts and to support 'the organisation and evaluation of a campaign' (Dobber et al., 2017; Kruschinski and Haller, 2017). Frequently, DDC is depicted as the latest manifestation of longstanding trends of professionalisation and modernisation within political campaigning (Plasser and Plasser, 2002; Chester and Montgomery, 2017).

More prominent have been concerns about the democratic implications of DDC. Many scholars have made connections between DDC and voter surveillance or profiling, leading to coverage of electoral manipulation and subterfuge. Accounts highlight how '[b]y analysing specific datasets, political parties can achieve a highly detailed understanding of the behaviour, opinions and feelings of voters' (IDEA, 2018: 6). Or that 'it even is possible to predict a person's beliefs, even before they have formed them themselves. And, subsequently, it is possible to subtly steer those beliefs, while leaving the person thinking they made their decision all by themselves' (in 't Veld, 2017: 2–3). Such narratives suggest DDC has democratic implications for individuals (Zuiderveen Borgesius et al., 2018), raising questions about voters' privacy and capacity to freely exercise choice free from manipulation (Burkell and Regan, 2019). At a societal level, scholars have also spotlighted the negative democratic implications of DDC, arguing that it encourages campaigns to focus on individual interests rather than interest aggregation (Kusche, 2020), contributes to a fragmentation of political discourse (Pons, 2016; Harker, 2020), and undermines prevailing systems of electoral accountability (Jamieson, 2013; in 't Veld, 2017). DDC is therefore currently seen to threaten established democratic principles about individual and societal practices, trends that are seen likely to only intensify as campaigns gain access to ever more personalised data and technology adapts to enable more individual level targeting.

Whilst these democratic implications are widely discussed within scholarship and wider society, much existing work exhibits significant limitations. First, empirical observations are scarce since access to campaigns is difficult to obtain and there is little transparency around DDC practices. Second, extant studies have adopted a 'media-centric' theoretical approach, focussing on the growth of digital technology and the data insights these developments make available (Jungherr et al., 2020). Third, most of the studies focus on single country cases with a special focus on the US context (Baldwin-Philippi, 2017; Kreiss, 2016).

Data and methods

We expand knowledge of DDC by comparing practices in Australia, Canada, Germany, the Netherlands, the United Kingdom (UK) and the US. In selecting our cases, we chose countries with established history of DDC and utilised a Most Different Systems Design (MDSD) to compare key dimensions which theoretically should be significant in shaping campaign practice in advanced democracies. Hence, we included countries with different electoral, regulatory, and institutional structures, allowing us to observe differing financial regimes, party systems, unitary and federated structures, voluntary and compulsory voting, as well as different regulatory and legislative environments. In

doing so, our aim was not to produce a set of findings that are generalisable, or that explain the variation across advanced democracies, but rather to deepen understanding of the varied nature of DDC and its impact on democracy. We focus our attention particularly on political parties in recognition of the central role they play within election campaigns and their significance as essential components of the democratic framework.

Our approach, which is inductive and qualitative, has proven insightful for the study of new campaigning tools in our field (Kreiss, 2016; McKelvey and Piebiak, 2018), and builds on emerging work that has shown variation in the practices and organisational capacities of parties to undertake DDC (Dommett, 2019; Kefford, 2021; Kruschinski and Haller, 2017). Our analysis therefore allows us to reflect more concretely on the way that changes to media, technology and political participation are – or are not – shaping how political parties campaign in the 21st century.

To conduct our analysis, we brought together a group of scholars with detailed knowledge of DDC practices of political parties in the six democracies. Each featuring as authors of this piece, we set out to pool our empirical insights of single case studies to tackle the prevailing tendency for isolated, or empirically impoverished studies of data-driven campaigning. Whilst it may have been optimal to conduct new, entirely comparative work simultaneously in our six countries, this approach was not possible for a number of reasons. In addition to resource constraints, access was a pre-eminent concern. DDC is a highly sensitive topic and it is common to encounter non-disclosure agreements or extreme reticence about taking part in research. Securing access, or re-access, is therefore far from straightforward.

Our chosen approach, of course, raises a number of challenges. Most immediately, it means that our data is not directly comparable, either in terms of the type of empirical insight collected, the time period covered, or the number of parties (see Table A1 in the appendix). In the majority of our cases, researchers have conducted extensive interviews, scrutinised internal party documents, media coverage and other documents within the last 2–3 years. The relative propensity of each type of data reflects the dynamics of each case. In Australia, for example, interview data far exceeds any of our other cases, reflecting the limited insights which are publicly available about the practices of political parties in that country as a result of a regulatory regime that requires almost no disclosure and transparency around party expenditure. In contrast, in Canada or the Netherlands, for example, experts were able to rely on other sources to gain understanding, often drawing on party documents or content analysis. While acknowledging these limitations, we argue that the merits of providing the first detailed cross-national study of DDC outweigh these limitations as our data allow us to provide a necessary corrective to the often

simplistic and uniform coverage of DDC by political parties in scholarly and popular commentary.

In order to draw insights from this data, we asked all authors to provide responses to a set of standardised research questions inspired by Dommett's (2019) theoretical data-driven framework on data collection, data use, who is using data, data regulation and recent election campaign practice. Our analysis focusses on DDC practices in the run up to national election campaigns for the sake of increasing comparability.[1] However, given the organisational structure of many political parties, interviews (when utilised) were conducted not only with candidates, party officials and campaign consultants working in national campaign headquarters, but also with actors at sub-national and local levels. Due to inconsistencies in data collection, we were unable to offer comparative analysis on all topics, and hence refined our focus to concentrate on three aspects of DDC: Data collection, data use and data infrastructure. We discuss each theme in turn and spotlight variance between major and minor parties in each country. We also reveal areas in which our data is less comprehensive, showing where further empirical investigations can fruitfully build on our work.

Findings

Data collection

Central to many of the concerns that scholars, policymakers and commentators have about DDC is that it incentivises parties – or other campaigners – to surveil citizens (Zuboff, 2019) instead of engaging them through other democratic means. In accordance with many prevailing accounts, DDC prompts parties to collect tens of thousands of data points about voters' movements, engagement and behaviour in online and offline environments (Schechner et al., 2019). This data, and especially personalised forms of digital trace data, are seen to make it possible for parties to influence and even manipulate citizens to promote their electoral goals (Madsen, 2019). Data can therefore be used to demobilise certain groups of voters (Bodó et al., 2017) or to develop subversive forms of persuasive influence (Burkell and Regan, 2019), reshaping political practice and transforming the logic of the democratic process.

To better understand and contextualise data collection processes and the logic underpinning this activity, we, first, asked team members to describe in detail whether and how parties collected data. In particular, we wanted to reflect on how data was gathered, asking whether this was freely available, required party members and supporters to undertake canvassing work, was purchased from external brokers, or gathered through party polling (see Table A2). We found that data is widely used and is collected in relatively consistent ways across our cases, with limited

evidence that new media and social change has transformed established data collection practices. There are important differences in the practices evident in each country, and in the capacities of major and minor parties. Challenging the idea that *all* parties are able to collect 'extraordinarily detailed political dossiers' composed of 'hundreds of millions of individual records, each of which has hundreds to thousands of data points' (Rubinstein, 2014: 863–864), our analysis raises questions about the sophistication and novelty of contemporary data collection activity.

First, looking at variation *across* our countries, we found a longstanding tradition of data collection. Despite the institutional and regulatory differences, there is relatively little variation in the type of data collection methods utilised. A combination of state information, canvassing data, online tools (such as email sign up lists, cookies or social media 'matching' data)[2], polling, and the purchasing of data are commonly found, suggesting a high degree of commonality. However, we do find variation in the type of information parties are able to collect in each country. Take, for example, state provided information. In the UK, Australia, US and Canada, information is available year-round but comes in different forms. In the UK, parties can access the electoral roll and the marked register, offering them insight into who is registered, who cast their ballot at previous elections, who has a postal vote and who is a first-time voter. However, in Germany, whilst some data is available,[3] certain information can only be purchased 6 months before an election including names, addresses and educational qualifications if a party asks for data on a clearly defined population group of a certain age. Moreover, in the Netherlands, an electoral roll has not been provided since 1951, vastly affecting the information parties can access. These variations are not only evident when comparing different countries. In the US, there is little internal uniformity, with some states providing information freely and publicly, some providing it freely but requiring people to go through a request system or credentialing, and others requiring payment. There are even differences in the available data in different states, with some offering information on partisan registration or ethnicity, and others not. In part these variations reflect alternative regulatory frameworks, with data protection in European countries in particular curtailing what information can be shared and utilised, but the variations within single countries suggest that local rules and norms are also significant to understanding differences.

Similarly, we found that canvassing was a long-established practice in many countries, but once again there was variation as this has longer antecedents in Australia, Canada, the Netherlands, UK and US, where door-knocking or phone canvassing are common (Bale et al., 2019; Dobber et al., 2017; Kefford, 2021; Nielsen, 2012). In contrast, in Germany, until 2019 it was only the two major parties who canvassed strategically (Kruschinski and Haller, 2017).

Whilst parties within and between our countries gather different types of data when canvassing,[4] parties usually seek to gather data on vote intention and in many countries, issue positions. Parties in all our cases are also adopting digital canvassing tools in the form of mobile canvassing applications, and yet rather than transforming canvassing activity we found that this practice streamlined established canvassing activities by removing the need for time-consuming manual data input.

One area of particular interest is the collection of data online and its potential to transform campaigning activity. Often presented as offering a raft of new, more granular forms of information to political parties (Dobber et al., 2017: 12), we found that parties were indeed beginning to gather more data online, but these activities were not inherently disruptive. In large part online efforts reflect established offline methods focused on getting individuals to disclose their own information to campaigns, with parties using tools such as the UK Labour Party's 'NHS Baby Number' which invited people to input their personal information and email address in order to find out what number baby they were under the NHS system – a technique which reportedly harvested over a million email addresses that the party were able to use for targeted campaign messaging (Culzac, 2014).[5] In a different vein, parties also gathered information online without individuals' knowledge or express consent. In Germany, for example, parties reported themselves to be using the Facebook pixel function to trace the online activity of voters. Whilst these practices have the potential to raise privacy concerns, they mirror established offline activity whereby parties record insights about individuals that they have not disclosed themselves. Indeed, there is evidence in Canada and the UK of parties making inferences about ethnicity or gender from details of voters' names (McEvoy, 2019), leading them, for example, to send Eid cards to those believed to be Muslim voters. Whilst some of the data gathered online was different than previously available, this type of data collection did not represent a radical departure from previous data collection practices.

One possibility is that parties are using online data sources to build detailed profiles of voters within their own databases. To this point, we found that online data was often being used to facilitate specific forms of online communication but was not being integrated into unified party data sets. For example, parties in all our countries used the data access services provided by companies such as Facebook and Google to gather new insights, but these companies do not allow parties to buy the underlying data they possess, curtailing data collection possibilities. Whilst our cases showed instances in which some data collected online – such as emails – were paired with parties' existing voter information data, online sources often appeared to supplement rather than transform existing data-collection activity.

Noting these trends, it is important to highlight important differences in the data collection practices of major and minor parties. This is especially the case in relation to the collection of data via canvassing and parties' ability to purchase data. The reasons for these trends reflect existing financial disparities between parties. First, canvassing is labour and capital intensive and some minor parties in the Netherlands, Germany and Australia did not have either the labour or capital resources to undertake these activities. Second, smaller parties in the Netherlands, Germany, Canada, UK and Australia were less able to finance the purchase of data either from the state (for example in Germany), from external companies, or from polling organisations. Even in the US, campaigns must pay the party for use of their voter file during primary elections, suggesting that available finance can limit a smaller campaigns' access to data. Finally, we also found some examples of smaller parties in the Netherlands and Germany (but not in our other cases) who limited their data use and acquisition at an ideological level. An example of this comes from the Netherlands and the Democrats 66 (D66), whose use of data was shaped by their principled stance on issues such as data privacy. Whilst it is theoretically possible for major parties to adopt such principled positions, we found no evidence of this occurring within our cases.

Thinking through the consequences of these findings, the evidence suggests data collection is commonplace, but by no means uniform. We find little evidence that there has been a marked shift in data collection practices prompted by developments in digital technology, and rather, it appears parties have adapted well-established data collection processes to integrate new insights. This suggests that the democratic concerns raised about 'new' and revolutionary practices are overstated. Moreover, while there is reason to be concerned about parties collecting tracking and other data via pixels and the subsequent effects on citizen privacy – and parties in many of our cases were doing this – our evidence suggests this tracking data was less influential than is often assumed. In drawing these conclusions it appears that data acquisition mirrors a trend found elsewhere in campaigning and party organisation where rather than providing opportunities for new or emerging minor parties, we see data – as a significant resource that parties need to collect to campaign in the contemporary political and media environment – reinforcing existing hierarchies in party systems and favouring established major parties (Gibson, 2015; Gibson and McAllister, 2015).

Data use

One of the central claims associated with prevailing depictions of DDC is that campaigns use data to model voter

behaviour and can send targeted messages proven to be effective on specific audiences. Christopher Wylie, the Cambridge Analytica whistle-blower, famously told the Guardian (cited in Cadwalladr and Graham-Harrison, 2018), 'We exploited Facebook to harvest millions of people's profiles. And built models to exploit what we knew about them and target their inner demons'. Such capacities, if widely utilised and effective, would indeed represent a disruptive force in campaigning practice and democracy, and yet questions have been raised about how widespread and new these practices are (Baldwin-Philipi, 2017; 2020).

To provide some much-needed comparative evidence of how exactly data features in contemporary election campaigns, we asked team members to describe how data was used by political parties. In particular, we asked them to outline to what extent: parties identify groups of voters with certain demographic or attitudinal characteristics to target, whether parties create models that profile voters, and to what extent parties use data and analytics techniques to either create scores about how likely voters are to be supporters or to be persuadable (see Table A3).

First, across our six cases, in regards to the claim that parties are developing detailed profiles of citizens, we found it was common for parties in each country to create scores on a citizens' likelihood to be a supporter and/or their persuadability. The sophistication of the practices underpinning these scores and the granularity of the data was, however, exceedingly difficult to assess. This was partially a product of a lack of transparency and because parties often delegate these processes to companies who are unwilling to disclose their processes. This makes it challenging to understand precisely how models are constructed, but also to determine how frequently they are used to underpin campaign interventions. The exceptions to this are the US (Hersh, 2015; Nickerson and Rogers, 2014) and Australia (Kefford, 2021), where there have now been detailed discussions of the analytics process campaign operatives undertake.

There was, however, some evidence that the idea of modelling – broadly defined – has been widely embraced by the major parties in the six case studies. When it comes to identifying supporters, we found major and many minor parties attempting to identify the attributes of likely supporters to target voters. In the Netherlands, for example, Groen Links used profiling techniques to identify likely voters (e.g. showing highly educated women, living in a city to be more likely to be a GroenLinks voter). Similar approaches can be observed in the personas identified by campaigns as groups of target voters, with a search in the Australian Liberal Party for 'tradies' and similar techniques also used by the German Christian Democrats to identify groups of like-minded voters. These techniques are not, however, particularly new, as polling and focus groups have been used for decades to identify target audiences and this has also been a common approach used by data brokers and commercial marketing operations for decades (Kusche, 2020).

Our analysis also explored the extent to which parties were using data to identify fine-grained target audiences. We found that whilst occurring to some extent in our six cases, these practices were not uniform. In the UK, Germany and the Netherlands, for example, parties engaged in a form of 'narrowcasting' (Kefford, 2021), communicating specific policy pledges to particular groups such as students or pensioners. Many of these appeals did not involve sophisticated modelling or attempts to determine the most effective forms of messaging, but rather used simple geographic or demographic information to identify a target group. Such practices occurred both offline and online and were a longstanding feature of party communication (Fulgoni et al., 2016).

It is, however, important to note that across our cases, there was evidence of parties utilising the services of technology companies to aid targeting. In all our cases parties use Facebook tools such as 'core', 'lookalike' or 'custom' audiences to identify specific types of voters or those who had certain attributes in common, such as location, age, language or gender. Previous research within platform studies has highlighted how the affordances of digital technologies can affect how campaigns are organised (Nielsen and Ganter, 2018), and our findings mirror this. We did, however, find differing relationships between parties and such companies. Whilst in Germany we found evidence of the CDU working closely with Facebook to construct target audiences for specific topics and campaign times, reflecting practices previously found in the US (Kreiss and McGregor, 2018), this kind of practice was not found widely elsewhere. Indeed, even looking in more detail *within* the US, while the two major parties do this, and make it easy enough that even congressional campaigns can pull lists of targets to canvass and call, most House and even some Senate races – especially those that were not contested or which were poorly financed – do not engage in their own sophisticated modelling or have access to direct relationships with social media companies.

Beyond platform affordances, the precise form of targeting evident in our cases was often heavily informed by the institutional, behavioural and electoral dynamics of each case. In Australia, for example, where there is compulsory voting and where turnout is high, there was less incentive for parties to focus on identifying infrequent voters and deploying mobilising messages. In contrast, in the US, where voting is not compulsory, where turnout in some areas is historically low, and where specific districts are electorally important, such targeting efforts were central. The incentive to target different groups therefore varied dependent on the particular context, resulting in inconsistent practice across our cases.

Finally, we also explore the extent to which parties used data to test message effectiveness. Financial and time limitations have historically limited parties' ability to develop highly differentiated, or multiple iterations of, campaign messaging. Digital technology has, however, made it easier for parties to test alternative messages, and to deliver these easily at low cost.[6] In the Netherlands, for example, at the 2021 election, the Facebook advertising archive showed the CDA party to be running 40 different versions of one ad. Similar experimentation was also evident at recent elections in the UK and US. In other countries, such experimentation was less evident despite platforms' efforts to make it easier for campaigns to execute such a strategy. Evidence from Germany and the Netherlands suggests that parties often lack the capacity (discussed further below) to experiment and test campaign interventions within an election period, meaning that little testing occurs. Even in places where testing is common, our analysis suggested that parties' capacity to utilise these insights was limited, with evidence from Canada showing that parties frequently failed to review this data to monitor or evaluate campaign interventions (Munroe and Munroe, 2018). Whilst parties are therefore often interested in exploring the potential of testing the effectiveness of messages, to date these practices are not being as widely employed as is often assumed.

Our analysis therefore suggests data and analytics are an important aspect of campaigning, and that in many of our countries data is being used to develop models, to deliver targeted and tested interventions, and to evaluate campaign activity. However, the uptake and use of these tools is not universal or as sophisticated as many prevailing accounts imply. Whilst many parties are using the affordances provided by organisations such as Facebook to gain information about voters and to tailor messaging, political parties are largely using digital media to promote mundane and well-established campaign targeting strategies within a hybrid media system, and they are constrained in their ability to micro-target and message test.

Data infrastructure

One often implicit implication of prevailing depictions of DDC relates to the disruptive impact of data on campaign (and party) organisation and the subsequent effects this has on how these organisations engage with citizens. While the work of Kreiss (2016) shows that such organisational change has been a much longer term and uneven process, contemporary arguments that data 'drives' campaign interventions imply that modern campaigns invest resources in data personnel and infrastructure, and position data and analytics teams at the centre of campaign decision-making. To investigate this, we asked team members whether parties had paid staff to deal with data and analytics processes, whether they paid external companies to undertake data and

analytics work on their behalf, and whether they had bespoke or generic data management systems (see Table A4).[7]

We found investment in data and analytics staff within parties across national contexts, but there was a clear divide between major and minor parties and important variations over the electoral cycle. In each of the cases major parties were investing in paid staff to do data management work. Whilst it is not possible to get precise details on staffing from all parties due to a lack of transparency, US parties appear to contain the largest data teams, with dozens of staff devoted to this work within both the Democratic and Republican parties. In contrast, parties in other countries contain far smaller data teams, often composed of a handful of individuals. Election dynamics directly affect parties' ability to do this work, as it is common in Australia, Germany, the UK, Netherlands and US for major parties to expand the size of their data teams in the run up to an election, but outside the US this expanded capacity rarely took data teams above 5–10 team members, and in minor parties it was common to find only 1-2 devoted employees, if there were any. Staff understanding of data analytics within parties' wider campaign organisation is, however, often limited. In Germany, for example, individuals rarely have a background in data analysis, a point that became apparent when, during one interview, a local political campaign strategist asked what 'predictive modelling' was.

One possible alternative to developing in-house capacities is the potential for parties to use external companies to analyse data and to create models, and we found significant evidence of this. Developing the idea that parties are drawing on a broader ecosystem of service providers (Dommett et al., 2020), some major and minor parties paid external companies to undertake such work. Companies such as CrosbyTextor, Blue State Digital and Harris Media worked with parties in multiple countries (i.e. UK, Australia, Canada, Germany and the US), often (but not always) working with parties with common ideological agendas. There were also many specialist agencies who supported and contributed to parties' data activities. In the Netherlands, parties have collaborated with made2matter, SUE, and Roundabout. In the US, both parties have purchased data from vendors (e.g. i360 and Catalist). Looking across the parties within our cases, we found that by no means all parties used these services, with the financial implications of such relationships often acting as a key inhibitor on minor parties.

Whilst data collection and analysis has become an important aspect of party campaigning, within our cases we found campaign strategy was often not determined by data, with other factors such as party leader/s preference or local discretion instead determining how campaigning occurred. Within the UK, for example, following the 2017 General Election it was claimed that Theresa May elected not to implement the 'data-driven' strategy developed by the

consultancy firm CrosbyTextor and pursued her own messaging (Valent Projects, 2020: 3–4). Meanwhile in Canada, Bennett (2015) has highlighted divisions within parties between 'traditionalists – relying on face-to-face methods of canvassing – and the new breed of high-tech party workers', indicating that support for data-driven techniques is not uniform within parties. We also found evidence that party organisation and structure can affect the extent of data influence (Kefford, 2018). In-depth analysis of organisational structures in the German SPD party and organograms of the UK Labour Party, for example, have shown data and analytics teams to be cut off from other teams, limiting their influence on parties' decision-making. Elsewhere, we found evidence that decentralised parties did not always draw on data when making campaign interventions. In Germany, for example, the SPD lack a top-down organisational structure to allow them to implement and communicate a data-driven strategy in their different local chapters, resulting in local activists making autonomous decisions often uninformed by data.

In terms of investment in data infrastructure, we found many parties across the six advanced democracies were using a bespoke data management system. The evidence suggests there were a wide range of large and often sophisticated databases that allow parties to upload, store and analyse information. In Germany, Canada, the UK and the US, all the major parties were using bespoke systems,[8] while in the Netherlands and Australia this was only true of some of the major parties. We also found evidence that many parties adopted systems found in other countries, often purchasing and adapting systems from the US for their own needs. In the UK, for example, the Conservative Party has purchased 'Voter Vault' which was developed for the Republican Party, whilst in Canada the Liberal Party system 'Liberalist' is modelled on the VoteBuilder software utilised by the Obama campaigns (Bennett and Bayley, 2018: 14). In addition, we found evidence of parties using external companies to store and manage data. NationBuilder, for example, was used in Australia, Canada, Germany and the UK, with parties often running activist management operations and creating websites via this platform. Whilst these 'off-the-shelf' systems are widely used by major and minor parties in the Netherlands, Germany, Canada and the UK, these systems were routinely described as glitchy and difficult to use. Whilst many major parties had (often limited) funds to invest in the maintenance and improvement of these systems, or to supplement these services, many minor parties did not have the resources to do so.

Cumulatively, data from our six countries suggests parties almost universally recognise the importance of investing resources in data personnel and infrastructure, however, many lacked the financial resources to fund full-time staff or expert advice, and found it challenging to maintain often unwieldy databases. These challenges were made more substantive by the 'boom and bust' cycles of the electoral calendar – in major election years support comes but dries up between elections. As such, even within major parties, levels of investment were often low. Moreover, data teams often remain peripheral parts of campaign organisation and their influence is not guaranteed, suggesting that the disruptive impact of data may not be as extensive as often claimed.[9] These findings suggest that, as with data collection and data use, evidence of how parties are investing in data infrastructure, does not reflect the threat to democratic norms and principles outlined in much existing scholarship. Instead, we see evidence – especially outside the US – of organisations struggling to keep pace with broader changes in media, technology and political participation. DDC is expensive, and many political parties do not have the resources to invest in bespoke systems or large numbers of data and analytics personnel.

Conclusions

In setting out to study DDC across our six cases, we found sustained evidence of parties collecting data, identifying particular audiences for messaging, creating models and investing in infrastructure either within or beyond their organisation. However, in contrast to prevailing accounts that have offered a fairly uniform depiction of the role data plays in campaigns and the disruptive influence it is having on parties, our analysis demonstrates variations in how data is collected, used and resourced both between and within cases. Recognising this diversity, our conclusions have implications for current debates around the impact of DDC. It is often claimed that changes in the technological, media and social landscape have led parties to engage in hyper-intensive data practices including subversive and invasive forms of online data collection, sophisticated profiling, highly personalised targeting and real-time campaign evaluation. Whilst these practices can be found within the US, there is variation even within this case. Even more starkly, our evidence suggests these practices are not common in the other five advanced democracies examined. Indeed, we show that many aspects of parties' data collection and analysis are long-standing and largely mundane, whilst their data infrastructure is often curtailed and frequently does not 'drive' decision-making. There is therefore little evidence of parties conducing sophisticated data scraping operations, instead they tend to rely on basic, state provided information complemented with simple voter canvassing and information about voting behaviour and issue positions. Whilst there is evidence that parties are supplementing this information with new forms of data gathered online and are utilising the affordances provided by platforms to identify target audiences, much day-to-day data use builds on longstanding principles of audience identification and engagement, focussing on broad appeals

rather than targeting at the individual level. It may therefore be technically possible for parties to collect fine-grained data, and to personalise political messages, but in practice we find that many parties engage in what Kefford (2021) describes as narrowcasting. Our findings therefore suggest that developments in digital technology, media and broader society are not transforming data practices, but are prompting them to evolve.

Reaching these conclusions, our analysis suggests there is value in moving away from a 'media-centric' account of DDC that focuses on the transformational and disruptive impact of new media developments. Instead, it encourages a focus on campaign organisations, inviting us to explore how in different countries these organisations are adapting to the technological and societal developments they confront. In utilising a 'party-centric' approach, our analysis suggests that rather than data being a disruptive force that is transforming contemporary election campaigning, we see long-standing power differentials maintained, and in some cases reified because of the labour, capital, and skill needed to conduct campaigning. DDC, we argue, is therefore not inherently problematic or deterministic, but is a diverse set of practices that reflect a new era of democracy in which technology giants exercise significant power, the traditional media landscape is fragmenting and changing modes of citizen participation are creating new expectations about politics.

There is also little evidence to suggest that these practices are inherently a threat to democracy, while also recognising the dangers for individual privacy. While not the primary focus of our analysis, these findings are worth discussing in terms of how they affect the competition between parties in each of our countries. It is certainly true that DDC is labour and capital intensive, and this has the potential to contribute to the dominance of the major parties which are often highly resourced at the expense of new or emerging parties. However, we would suggest that while DDC is a feature of party campaigning in many advanced democracies, the efficacy of these campaigns remains a source of debate (Broockman and Kalla, 2020; Kalla and Broockman, 2018). Likewise, there is little to suggest that these practices are inherently strengthening the linkage role that parties are theoretically meant to play. While DDC may assist parties in mobilising members and supporters and often manifests in offline practices such as an increased emphasis on direct voter contact, there is insufficient evidence to conclude that this is assisting parties in placing themselves as the central node between citizens and the state or even that political parties wish for this to be the case. We therefore argue that it is not the case that DDC is disrupting democracy, but democratic developments – such as a fragmenting media landscape, changes in political participation and technological advances – are disrupting campaign practices.

This study certainly has limitations. We acknowledge the inconsistency of data, and particularly highlight the comparably limited data our experts were able to gather on the Canadian case. These variations mean that certain conclusions, particularly in relation to Canada, should be caveated (Table A4). Our data also focuses on six countries where DDC use is already established. These cases should therefore not be used to generalise to other countries whose adoption of these techniques may be less advanced. Despite these limitations, we contend that this article has made a significant contribution to our understanding of DDC, providing an important corrective to arguments DDC is disrupting democracy. Instead, we argue that democratic developments – such as a fragmenting media landscape, changes in political participation and technological advances – are disrupting campaign practices.

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ORCID iDs

Glenn Kefford https://orcid.org/0000-0002-6733-3323
Katharine Dommett https://orcid.org/0000-0003-0624-6610
Jessica Baldwin-Philippi https://orcid.org/0000-0002-8664-6827
Sara Bannerman https://orcid.org/0000-0002-2295-3254
Tom Dobber https://orcid.org/0000-0002-6657-4037
Simon Kruschinski https://orcid.org/0000-0002-3185-5656

Notes

1. Our focus on the run up to election campaigns should be noted as our data suggests that the use of DDC fluctuates throughout the electoral cycle. We found, for example, that increased levels of staffing and resource are devoted to DDC in the run up to elections, and that activity is often sparse after an election occurs. This suggests the importance of further analysis of the use of DDC in non-electoral periods, but such consideration is beyond the scope of this particular article.

2. For example, Facebook's 'lookalike' audience feature or NationBuilder's 'social media matching' feature.

3. Accumulated voter data from statistical offices of the state (residential districts, age, education, household size, proportion of foreigners, religious affiliation, unemployment rate) and accumulated voter data from the Federal Election Commissioner can be accessed for free throughout the year (past election results, voter turnout).

4. We found examples of variation in the scripts that were used by different parties that showed some parties, for example, to gather data on voters' interests, concerns or willingness to display a poster at election time.

5. This inspired similar data harvesting operations in their 'sister' party in Australia – the Australian Labor Party, and Australia's other major party, the Liberal Party, were also employing similar data harvesting techniques (Kefford, 2021: 77–79).

6. As an example, Facebook's Dynamic Creative tool, which automates design variations of adverts, allows campaigns with few resources to easily create and test a variety of adverts, allowing them to run significantly more message variations in that platform. This hints to the fact that – especially legally restricted European parties – can utilise companies such as Facebook to facilitate targeting.

7. By bespoke we mean that the data management system has been built specifically for that party rather than the party uses a system from an 'off-the-shelf' provider such as NationBuilder.

8. Interesting variations at the federal and provincial level in Canada have been revealed by McKelvey and Piebiak (2018).

9. Indeed, even in the US the centrality of data teams is debatable and Baldwin-Philippi (2019), has noted how digital and data teams often support all mobilisation and persuasion campaign efforts and 'often hold equal power in campaigns'.

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Appendix 1

Table A1 Comparing Data Across Our 6 Cases.

	Type of data collected	Number of interviews and type	Type of document analysed	Period of data collection	Number of parties
Australia	Interviews, documentary analysis, participant observation	167 including candidates, party officials and campaign consultants	Internal party documents Public party documents Party websites Media coverage	2015–2020	6 (2 major, 4 minor) Australian Labor Party Liberal Party of Australia Australian Greens The Nationals Pauline Hanson's One Nation The Nick Xenophon Team
Canada	Documentary analysis	0	Government documents (Elections Canada; Office of the Privacy Commissioner of Canada); political parties' privacy policies; secondary sources (academic and news sources)	2012–2020	5 (2 major, 3 minor) Liberal Party of Canada Conservative Party of Canada New Democratic Party Green Party Bloc Quebecois
Germany	Interviews, Documentary analysis and content analysis of Facebook, Google and Snapchat ad libraries	43 (with 53 interviewees) including candidates, party officials, campaign strategists; and consultants	Internal party documents (Political parties' privacy policies; ethical guidelines for DDC) Public party documents Party websites Media coverage Government documents (Office of the Privacy Commission) Memoires and first-hand accounts Parliamentary Reports Regulatory reports or investigations Non-profit institution reports	2014-2018 state elections 2017–2021 federal elections	7 (2 major, 5 minor) Social Democratic Party; Christian Democratic Union; Christian Social Union; The Greens; Free Democratic Party; The Left; Alternative for Germany
Netherlands	Interviews, documentary analysis and content analysis of Facebook, Google and Snapchat ad libraries	8	Public party documents, financial reports	2016–2021 (8 parties were interviewed in 2016 [Labour Party, D66, CDA, Green Left, Christian Union, Senior's Party, Reformed Political Party, Socialist Party]. Four parties that were interviewed in 2016, were also interviewed in 2021 [D66, GreenLeft, ChristianUnion, Labour Party]. Content analysis was conducted in 2019 and 2021. Analysis of documents occurred between 2016 and 2021)	16 (6 major, 10 minor) People's Party for Freedom and Democracy Democrats 66 Party for Freedom Christian Democratic Appeal Labour Party Green Left Socialist Party Christian Union Forum for Democracy Volt Netherlands Party for the Animals Right Answer 2021 Reformed Political Party Think Farmers Party Bij1 (2gether)
UK	Interviews, documentary analysis and content analysis of Facebook and Google advertising archive	57 Including with party staff, campaign consultants, and activists	Internal party documents Public party documents Party websites Media coverage Memoires and first-hand accounts Parliamentary Reports Regulatory reports or investigations Financial spending returns	2015–2018; 2021	6 (2 major, 4 minor) Labour Party Conservative Party Liberal Democrats Greens Scottish National Party United Kingdom Independence Party
US	Interviews and documentary analysis	13, including party staff, and campaign staff/consultants (some of whom have worked in both positions)	Public party documents Party websites Media coverage Financial spending returns	2018–2020	2 (2 major) Democratic Party Republican Party

Table A2 Data Collection in Six Advanced Democracies[a].

	None	Some minor	All minor	Some major	All major	Other
To what extent do parties in your country collect data through canvassing activity?						
Netherlands		X		X		
Germany		X			X	
Canada			X		X	
UK			X		X	
Australia		X			X	
US					X	
To what extent do parties in your country collect data through online activity?						
Netherlands						X
Germany			X		X	
Canada			X		X	
UK			X		X	
Australia			X		X	
US					X	
To what extent do parties in your country have access to data from the state?						
Netherlands	X					
Germany		X			X	
Canada			X		X	
UK			X		X	
Australia			X		X	
US					X	
To what extent do parties in your country purchase data from companies such as data brokers?						
Netherlands						X
Germany		X		X		
Canada		X			X	
UK		X			X	
Australia		X			X	
US					X	
To what extent do parties in your country conduct private polling to gather data?						
Nation					X	
Nation			X		X	
Nation		X			X	
Nation		X			X	
Nation		X			X	
Nation					X	

[a]* means response comes with caveats based on limited data available to the researcher

Table A3 Data Use in Six Advanced Democracies.

	None	Some minor	All minor	Some major	All major	Other
To what extent do parties identify groups of voters with certain characteristics to target campaign interventions at?						
Netherlands			X	X		
Germany			X		X	
Canada		X*		X*		
UK			X		X	
Australia		X			X	
US					X	
To what extent do parties create models that profile voters?						
Netherlands		X		X		
Germany		X		X		

Table A3 (continued)

	None	Some minor	All minor	Some major	All major	Other
To what extent do parties identify groups of voters with certain characteristics to target campaign interventions at?						
Canada				X*		
UK		X			X	
Australia		X			X	
US					X	
To what extent do parties use data and analytics techniques to create scores about how likely voters are to be supporters?						
Netherlands		X		X		
Germany		X			X	
Canada			X		X	
UK		X*			X*	
Australia		X			X	
US					X	
To what extent do parties use data and analytics techniques to create scores about how persuadable voters are likely to be?						
Netherlands		X		X		
Germany	X					
Canada						X*
UK		X*			X*	
Australia		X			X	
US					X	

Table A4 Data Use in Six Advanced Democracies.

	None	Some minor	All minor	Some major	All major	Other
To what extent do parties have paid staff devoted to work on data management and analysis?						
Netherlands		X*			X*	
Germany		X			X	
Canada				X*		
UK		X*			X	
Australia		X			X	
US					X	
To what extent do parties pay external companies to analyse data and create?						
Netherlands		X		X		
Germany		X		X		
Canada		X		X		
UK		X*			X	
Australia				X		
US				X		
To what extent do parties have a data management system that is bespoke to the party, meaning it was either designed or adapted for a specific parties' purpose and is not a generic system used by many others, for example, Voter vault, Excaliber?						
Netherlands		X*		X*		
Germany		X*			X	
Canada		X			X	
UK		X			X	
Australia				X		
US					X	

Table A4 (continued)

	None	Some minor	All minor	Some major	All major	Other
To what extent do parties have paid staff devoted to work on data management and analysis?						
To what extent do parties use a data management system that is not bespoke but is rather used in a number of different countries or parties, for example, NationBuilder or ecanvasser?						
Netherlands						X
Germany						X
Canada		X		X		
UK			X		X	
Australia			X	X		
US					X*	

Author Biographies

Glenn Kefford is a Senior Lecturer in Political Science in the School of Political Science and International Studies at the University of Queensland and the author of Political Parties and Campaigning in Australia: Data, Digital and Field.

Katharine Dommett is a Senior Lecturer in the Public Understanding of Politics in the Department of Politics and International Relations at the University of Sheffield and the author of The Reimagined Party: Democracy, Change and the Public.

Jessica Baldwin-Philippi is an Associate Professor at Fordham University and the author of Using technology, building democracy: Digital campaigning and the construction of citizenship.

Sara Bannerman is the Canada Research Chair in Communication Policy and Governance at McMaster University and the author of International Copyright and Access to Knowledge.

Tom Dobber is an assistant professor in the department of Political Communication & Journalism of the University of Amsterdam.

Simon Kruschinski is a Research Higher Degree student in the Department of Communication, Johannes Gutenberg University Mainz, Germany.

Sanne Kruikemeier is an Associate Professor in Political Communication and Journalism in the Communication Science department of the University of Amsterdam.

Erica Rzepecki is a Research Higher Degree student at McMaster University.