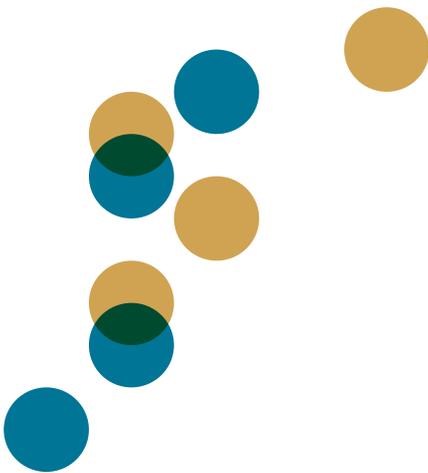


Working Paper

Studying the ‘Conversations of Democracy’

Research Design and Data Collection

Christiane Grill, Rüdiger Schmitt-Beck,
Manon Metz



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Abstract

The MZES project 'Conversations of Democracy' (CoDem) addresses a major gap in the empirical study of deliberative politics. Although democratic theory's deliberative turn stimulated increasing interest in the role of talk for the quality of democratic politics, research has paid hardly any attention to ordinary citizens' informal conversations about politics so far. No assured knowledge exists about how this form of political communication stands up to the high normative standards of deliberation. Likewise, there is no robust evidence on the factors that lead to a higher deliberative quality of everyday political talk, nor on whether everyday political talk actually entails the beneficial influences on the democratic process expected by deliberative theory. By investigating the deliberativeness as well as the conditions and consequences of everyday political talk, the project seeks to contribute to a deeper understanding of people's conversations about public affairs as the most basic form of political communication and foundation of democracy's deliberative system. The paper offers an overview of the background, aims and rationale of the project. It discusses the research design and documents its implementation in detail. The methodological core of the project is a face-to-face survey of voters that was conducted during the run-up to the 2017 German federal election in the city of Mannheim. Two further design components are derivatives from this baseline survey: re-interviews of the same respondents in a second panel wave conducted via telephone several months after the election, and follow-up telephone or Web interviews with individuals whom the respondents named as their most important political discussion partners during the main interviews.

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1. Introduction

Political science has been rather slow in developing a genuine interest in phenomena of political communication (Kaase 1986). Above all, this concerns the most basic form of communicating about politics: citizens' political talk with one another. Activities such as sharing information on current events and public affairs with fellow citizens, discussing opinions on political matters with friends, voicing concern or praising the performance of government while watching the news with the family, or attempting to persuade a neighbour or co-worker of a particular viewpoint are common occurrences in the day-to-day life of many citizens. Nevertheless, scholarly interest in such phenomena has developed only recently (for reviews see Huckfeldt 2009, 2017; Schmitt-Beck and Lup 2013; Cho 2015; Gilkerson and Southwell 2016; McClurg et al. 2017; Schmitt-Beck and Schäfer 2018).

More formally, we may define this object of study as interpersonal communication about political topics that takes place on a voluntary basis between the individual members of a political system. It is the most basic form of communication about public affairs and an integral part of many citizens' everyday life. Nonetheless, political science has only recently begun to recognize it as a social fact of potential relevance for the functioning of democracy. Trends of normative democratic theory have triggered a growing awareness that citizens' everyday exchanges about public affairs may make a difference to the democratic quality of politics. Indeed, political talk now seems 'central to most current conceptions of how democracy functions' (Mutz 2006: 7). In particular democratic theory's 'deliberative turn' (Dryzek 2000; Landwehr 2012; Florida 2017) stimulated scholarly interest in the functioning of 'talk-centric democracy' (Chambers 2003).

The notion of deliberation indicates a specific type of political talk. When deliberating, communicators 'carefully examine a problem, and arrive at a well-reasoned solution, after a period of inclusive, respectful consideration of diverse points of view' (Gastil 2008: 8). Deliberative communication is believed to enhance the quality of democracy in several, interrelated ways: by increasing the legitimacy of political decisions and the democratic system overall (Cohen 1989), by improving its policies, and by producing 'better' citizens (Steiner 2012: 219-46).

From the perspective of deliberative theory, democratic polities can be conceived as deliberative systems encompassing a wide variety of interdependent arenas of political exchange (Parkinson and Mansbridge 2012; Neblo 2015). They range from political parties, interest groups, social movements and other collective actors of civil society over the mass media to governmental bodies such as parliaments, cabinets and courts. Within and between these 'discursive spheres' (Hendriks 2006) myriad processes of communication constantly take place. Ordinary citizens' everyday communication about political matters is regarded as an essential building block and indeed the foundation of this complex overall structure. It is considered a 'crucial part of the full deliberative system that democracies need if citizens are, in any sense, to rule themselves' (Mansbridge 1999: 211; Hendriks 2006; Neblo 2015). It may provide an interface between the private realm of citizens' everyday lives and the public sphere, connecting the micro-level of individual citizens to the macro-level of the organizations and institutions of governance and, thereby establishing a link of crucial importance to the functioning of democracy (Gamson 1992; Chambers 2012).

Deliberation is a very demanding style of communication – a 'regulative ideal' (Steiner 2012: 3) and normative 'benchmark' (Steiner et al. 2004: 18) – that is hard, perhaps even impossible to reach in real life (Steiner et al. 2004: 17-9). Impressionistic evidence suggests that citizens' actual communicative practices fall short of this standard (Boeser and Schnebel 2013). Concern is increasingly voiced that political talk in Germany has lately even moved away rather than towards this vision of ideal democratic communication. Witnessing citizens' communications via social media and other Web tools in the wake of the refugee crisis of 2015,

observers have been reminded of a 'virtual civil war' (Amrhein 2016), in which 'opinions are fired like ammunition' (Deiningner et al. 2015), free opinion expression is impeded, and it apparently is no longer possible to 'discuss politics normally' (Klute 2016). However, all this is conjectural. No assured knowledge exists about how citizens' political talk actually stands up to the high normative standards of deliberation. Likewise, there is no robust evidence on how the deliberativeness of everyday political talk influences the democratic quality of politics or on the factors that foster or impede it. By analysing the deliberativeness of ordinary people's communication about politics as well as its consequences and conditions the MZES project 'The Conversations of Democracy' (CoDem) seeks to contribute to a better understanding of citizens' political talk as a core component of modern democracy's deliberative system.

After an introduction to the background, aims, rationale and research design of this project, the present paper offers a detailed documentation of its data collection. The design of the project is quite complex and methodologically challenging. At its heart is a face-to-face survey of voters, which was conducted during the run-up to the 2017 German federal election in the city of Mannheim (Component 1 of the design, later on acronymed *MR1*, for 'Main Respondents 1st wave'). Two further components of the design are derivatives of this baseline survey: re-interviews of the same respondents in a second panel wave that were conducted by telephone several months after the election (Component 3: *MR2*), and follow-up interviews with individuals whom the main respondents named as most important political discussion partners during the *MR1* interviews. These interviews were conducted by telephone or via the Web (Component 2: *PDP*).

2. Research on Deliberation in Citizens' Everyday Political Life: State of the Art

The notion of deliberative politics emerged as a domain of political philosophers, but since about a decade it has also stimulated considerable interest among empirical researchers. Three closely interrelated questions define the agenda of this field of study (Steiner 2012; Bächtiger and Wyss 2013; Fuchs 2014). At its heart is the question whether deliberative communication actually has the beneficial consequences expected by its proponents (Mutz 2008: 524). Answering this question presupposes determining to what extent the political communication taking place in the various arenas of democratic politics actually comes close to the deliberative ideal and which conditions are favourable or detrimental to its deliberativeness. During the past decade, numerous studies have explored these questions in the context of institutional arenas of democratic politics such as parliamentary, judicial, governmental and even supra-national decision-making bodies as well as for the mass media (e.g., Steiner et al. 2004; Ulbert and Risse 2005; Landwehr 2009; Wessler and Rinke 2014).

But what about ordinary citizens – 'can the demos deliberate?' (Chambers 2012: 68) If so, is it of consequence? Moreover, under which conditions does this capacity grow or shrink? These questions have been primarily addressed by studies on mini-publics – formalized deliberative events, such as planning cells, citizen juries, consensus conferences, or deliberative polls, which are organized in increasing numbers to involve citizens in decision-making processes on certain issues (cf., e.g., Geißel and Newton 2012; Grönlund et al. 2014; Gerber et al. 2018). As attempts to turn deliberative theory practical, purposively aimed at engaging samples of ordinary citizens in public deliberations, such initiatives for democratic innovation quite naturally attract considerable scholarly interest (for reviews see Bächtiger 2016; Bächtiger and Pedrini 2010; Bächtiger and Wyss 2013).

In stark contrast to that, although conceived as a 'fundamental underpinning of deliberative democracy' (Kim and Kim 2008: 51) by normative theorists, the deliberativeness of ordinary people's everyday communication about politics has received scarcely any attention in empirical research (Hendriks 2006; Chambers 2009).

To be sure, during the past decade a sizable number of inquiries into the political talk taking place in citizens' lifeworld has demonstrated that it is not just some inconsequential 'background buzz' of democracy but that such talk counts for its political process (Schmitt-Beck and Lup 2013). However, very few studies have specifically addressed the deliberativeness of everyday talk, its consequences or its conditions.

This is not to say that previous research has ignored deliberative democratic theory. However, the term deliberation is often used rather carelessly to denote any kind of political talk (Bächtiger et al. 2010: 33). Even the studies that paid more than mere lip service to deliberative theory sometimes failed to translate this concept into adequate measurement strategies (Fuchs 2014: 181; e.g., Jacobs et al. 2009). Most of the inquiries that seriously attempted to address deliberative theory focused on just one dimension of deliberative politics: citizens' experiences with political disagreement (Huckfeldt et al. 2004; Mutz 2006; Nir 2017). Moreover, they did so only in the rather restrictive sense of oppositional partisanship (Klofstad et al. 2013; Schmitt-Beck and Partheymüller 2014). One conceptually somewhat more complex study additionally focused on the perceived openness of communication (Zhang and Chang 2014). The hitherto most ambitious attempt to map the deliberativeness of everyday talk is an article that conceptualized deliberation as a three-dimensional standard of interpersonal communication, requiring conversations to address matters of public concern, to be open for diverse views of politics, and to allow for equal access (Conover et al. 2002). All in all, the observation of Jacobs et al. (2009: 21) that '[r]esearch on citizen deliberation has been largely limited to a series of isolated studies', which produced not more than a few 'islands of analysis', is therefore still a valid description of the state of research.

2.1. Conceptual and Methodological Deficiencies

Existing research is not only deficient with regard to the number and scope of studies. It also mirrors the conceptual ambiguity for which the debate on deliberative democracy has long been notorious (Neblo 2007). No study has thus far responded to the conceptual clarification achieved in recent years with regard to the measurement of the deliberativeness of political communication in the real world. In particular the development of the Discourse Quality Index by Steiner et al. (2004; see also Steiner 2012) and its continuous refinement in the course of applications to various arenas of the deliberative system has contributed to a conceptual convergence of existing research (Fuchs 2014). Significant contributions to the expanding body of cumulative knowledge can therefore be expected primarily from studies that take into account the multi-dimensional conceptualization of deliberation developed within this line of study: (a) Communication includes diverse perspectives; disagreement is expressed in an unconstrained way. (b) Participation is open to everyone in the sense of opportunities for equal access. (c) Exchange is interactive and dialogical; participants can speak and are listened to. (d) Arguments are justified by reasons validated through reference to logical and/or substantive evidence; participants yield to the power of the better argument, but not to one another. (e) Arguments are justified in terms of the common good instead of particularistic interests. (f) Arguments are presented truthfully; participants are sincere about their interests. (g) Participants assume a constructive posture; they communicate in a positive tone, oriented towards mutual understanding. (i) Participants are willing to change, and they do change their positions if persuaded by better arguments. (k) Respect is granted to other participants and their arguments. These facets of deliberation are not equally relevant to each arena of the deliberative system, and they cannot be measured equally well. However, they define a framework of analysis, which studies of the deliberativeness of political communication in citizens' everyday talk about politics should build upon.

Prior research has also ignored that political talk among citizens is a relational phenomenon that is tied to time and space. It takes at least two to talk – interpersonal communication as such, but also its quality presupposes the availability of suitable discussants. Its deliberativeness depends not on one communicator alone, but on all participants jointly. Hence, individualistic approaches, by definition, cannot provide a full

understanding of this phenomenon. With whom and how citizens discuss politics is contingent on the environmental supply of discussants, which in turn is conditioned by opportunities and constraints inherent to situational and socio-spatial contexts. No study has ever varied situational circumstances to investigate their implications for the deliberativeness of citizens' communication. Moreover, with the single exception of Huckfeldt et al.'s (2004) work on partisan disagreement, no study has ever displayed any sensitivity to the social ecology of the deliberativeness of political talk. Its exploration requires sophisticated multi-level approaches that reveal how interdependent citizens are embedded in concentric layers of contexts, ranging from dyads as the most basic (potentially) deliberative units (Gastil 2008: 11) over more extended social networks to neighbourhoods and functional settings such as workplaces (cf. Huckfeldt and Sprague 1995).

2.2. What Has Been Learned

Whereas little attention has been paid to its deliberativeness, more broad scholarly knowledge about citizens' everyday political talk has expanded considerably during the past one or two decades. It is characterized by a strong geographical bias, however (Schmitt-Beck and Lup 2013: 530). Many more studies have been conducted in the United States than in all other democracies of the world together. In Germany, political talk has never been explored in any depth. Most empirical studies of citizens' political communication in this country focused on its role in elections, most notably its influence on party choice and turnout (e.g., Pappi 1977, 1996; Zuckerman et al. 2007; Schmitt-Beck 2000, 2003, 2004; Schmitt-Beck and Partheymüller 2014; Schmitt-Beck and Kraft 2014; Schmitt-Beck 2016; Schäfer and Schmitt-Beck 2016; for reviews see Campbell 2013; Santoro and Beck 2017; Rolfe and Chan 2018).

Reviewing existing research on political talk reveals circumstantial evidence that is suggestive when reflecting on its deliberativeness. Even more clearly, it identifies large gaps that only innovative new research can close. Detailed state-of-the-art assessments of research on the characteristics, conditions and consequences of citizens' everyday political talk have been compiled by Schmitt-Beck and Lup (2013), and Schmitt-Beck and Schäfer (2018). Their major findings are summarized below.

2.2.1. Characteristics

The bulk of studies on citizens' everyday communication has paid no attention to its deliberativeness. The general incidence and intensity of political talk are its best-explored attributes. Who people talk to and in which settings these conversations occur has been looked at by some studies but still requires more attention. Most interpersonal communication takes place in private settings and between intimate associates, but some also extends beyond the private realm of households and further into the public sphere. The content of political conversations has attracted very little attention thus far. Indeed, it is not clear what respondents actually mean by 'politics' when they report to have communicated about it. The partisan character of content has been most prominently addressed in previous research. Nevertheless, we know very little about the actual relevance of the topic that is at the heart of deliberative politics: issues and public policies to address them. Some studies suggest a tendency of everyday talks to converge on cynical views about politics.

The theory of deliberation places special emphasis on its character as a dialogue between equals. However, the extent to which it is indeed symmetrical is unclear, as communication roles and styles have gained little attention. Of particular interest is the relationship between expressing one's views and leading opinion (Lazarsfeld et al. 1944) on the one hand and listening to what others have to say (Dobson 2014) on the other. Recent theorizing about motivated reasoning (Lodge and Taber 2013) casts doubts on citizens' readiness and ability to submit to the force of the better argument, as required by the deliberative ideal. Moreover, according to the homophily hypothesis (Rogers and Bhowmik 1970), people can be expected to shy away

from experiences of diversity and tend to seek out interaction partners that confirm rather than challenge their views.

In sum, with the single exception of disagreement in a narrow partisan sense, previous research has paid scarcely any attention to characteristics of everyday political talk that are relevant aspects of its deliberativeness. Of particular importance seems a deeper understanding of the extent to which everyday political talk is indeed an essentially political activity. Scattered findings suggest that its function might often rather consist in establishing and securing harmonious social relationships, even at the cost of avoiding conflict and circumventing frank expression of one's opinions (Schudson 1997; Conover et al. 2002; Mutz 2006). If correct, this would be detrimental to the deliberativeness of communication.

2.2.2. Conditions

Equality in people's access to communication processes and opportunities to provide their views and be listened to during such processes are essentials of genuine deliberation. Participation research (e.g., Burns et al. 2001; Schlozman et al. 2012; Dalton 2017) gives rise to the expectation that this aim is difficult to achieve. It indicates that political activity presupposes skills, motivation and opportunities – conditions that are unequally distributed in society and that can be expected to be important also with regard to citizens' political talk and perhaps especially to its deliberativeness (Fuchs 2014).

Research on socio-demographic and psychological attributes associated with citizens' general engagement in everyday political talk revealed patterns of inequality regarding skills and motivation that are indeed reminiscent of findings from participation research. Dispositions such as political interest and internal efficacy but also certain personality traits seem to increase persons' disposition to talk about politics. Persons' subjectively felt freedom to speak out on politics, which may reflect groups' collective legacies from history, also appears important. Yet, these findings only concern engagement in everyday talk as such. Their implications for its deliberativeness are unclear.

The context dependence of political talk has only been studied with reference to its role in electoral behaviour. This research underlines the relevance of both socio-spatial and situational circumstances with regard to opportunities and constraints for citizens' communication with one another. Network research has shown that 'weak ties', which create linkages beyond individuals' primary zone of immediate interaction partners (Granovetter 1973), are especially conducive to experiences of partisan heterogeneity (Huckfeldt et al. 2004). Regarding the specific situational context of elections, proponents of deliberative democracy place high hopes on the capacity of citizens' deliberation to improve the quality of the electoral process (Ackerman and Fishkin 2005). However, research on political talk suggests that passive citizens' higher readiness to discuss politics during campaign periods might in fact rather diminish the argumentative quality of political discourse (Hardy and Scheufele 2009).

In sum, the conditions that increase or decrease the deliberativeness of citizens' everyday political talk have hardly been explored as of yet, since most research concentrated only on political talk as such but not its deliberative quality. Scattered findings confirm that gaining a complete understanding of this phenomenon presupposes to move beyond purely individualistic approaches by taking both situational and socio-spatial contexts into account.

2.2.3. Consequences

Proponents of deliberative democracy justified their normative claims early on with the expectation that more deliberative communication enhances the legitimacy of democratic decisions and the democratic political system (Cohen 1989). This hypothesis has gained hardly any attention so far, despite the enormous research efforts that have been invested in exploring the presumably growing legitimacy crisis of democratic governance (e.g., Dalton 2004; Torcal and Montero 2006; Norris 2011; van Ham et al. 2017). Even studies more generally interested in everyday talk have thus far neglected its implications for citizens' orientations towards the political system. Scattered findings suggest that political discussion might lead to more positive views with regard to the institutions of democratic governance (Searing et al. 2007), but it is unclear whether its deliberativeness is relevant for this outcome.

Theorists of deliberative democracy also expect that deliberation has a self-improving impact on citizens. 'They hope that participants in deliberation become better citizens in being better informed about political matters, more open-minded, more tolerant and respectful toward other opinions, better able to present and justify their own opinions, more oriented toward the common good, and more engaged in public life.' (Steiner 2012: 245) Several studies indicate that discussing politics in everyday life might entail favourable consequences for such civic orientations, but again they typically refer only to effects of political discussion per se, not to its deliberativeness. The only exceptions concern experiences of disagreement, which have been found to contribute to political tolerance and empathy (Price et al. 2002; Mutz 2006). However, some studies also point to a 'dark side' of political discussion (Torcal and Maldonado 2014). For instance, exposure to heterogeneous views and to apathetic discussants seems to be detrimental to political participation (Mutz 2006; Schmitt-Beck and Mackenroth 2010; Partheymüller and Schmitt-Beck 2012).

In sum, it has hardly been studied what implications political talk has for legitimacy beliefs. In contrast, positive and negative consequences of political talk for citizens' involvement and political engagement have been established. However, most of these findings only refer to political discussion per se, not to its deliberativeness. Moreover, many findings are methodologically weak, as they rest only on correlational evidence. Often, the possibility of reverse causation can therefore not be ruled out (Fowler et al. 2011).

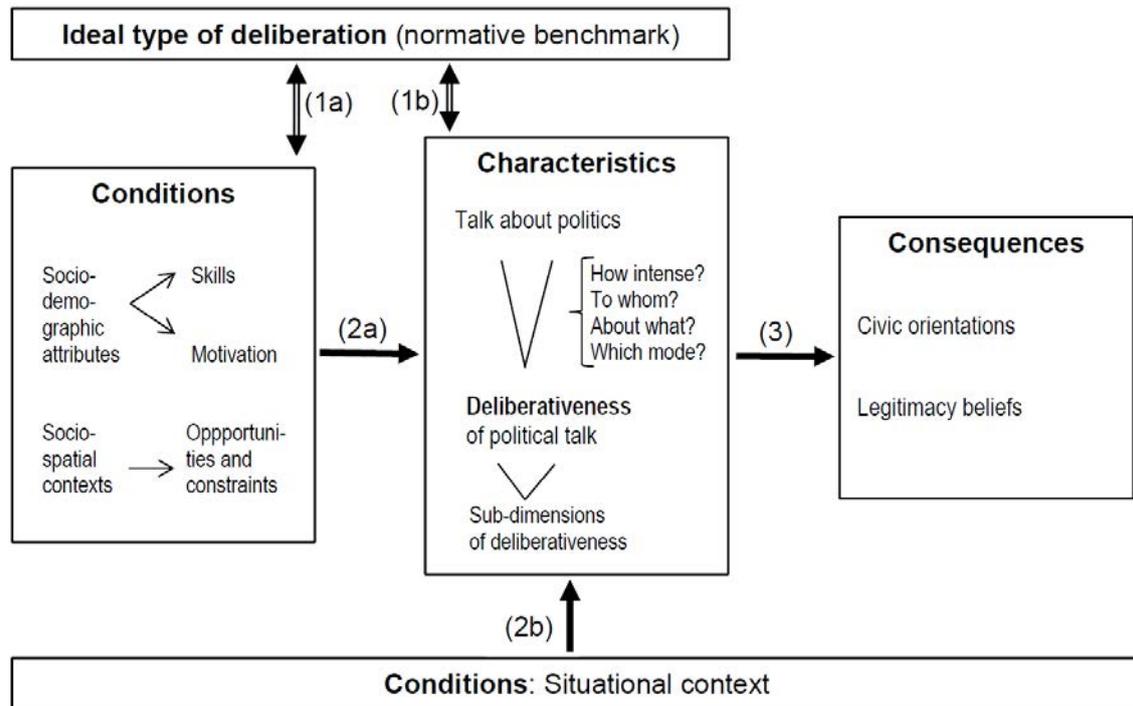
3. The Project 'Conversations of Democracy' (CoDem)

As outlined above, the recent progress in empirical research on the political communication in certain arenas of the deliberative system has been driven by three interwoven research questions, pertaining to (1) the actual deliberativeness of this communication, (2) this quality's conditions and (3) its consequences (Steiner 2012; Bächtiger and Wyss 2013; Fuchs 2014; Friess and Eilders 2015). The MZES project 'Conversations of Democracy' (CoDem) addresses these questions for everyday political talk between ordinary citizens, thereby aiming to close a major gap in the empirical study of deliberative democracy. To address this research question, a unique database has been compiled. Since little is known about citizens' interpersonal communication about politics in Germany, this country has been selected as national context for this study. As a by-product, the project thus generates the first inventory of political talk as a crucial type of citizen activity in this country.

Paralleling previous studies on the deliberativeness of talk in other arenas of democratic politics, the objectives of the project are organized into three research questions, addressing *the characteristics (RQ1), conditions (RQ2) and consequences (RQ3)* of the informal political communication, taking place between citizens in their everyday lives. To guide research on these questions, the study relies on a heuristic model that conceives the role of deliberative everyday talk within democratic politics as a three-stage process (Figure 1; cf. Bächtiger and Wyss 2013: 163; Fuchs 2014: 172, for similar models). It envisages the analytic

status of the deliberativeness of citizens' political communication in a threefold way: as object of a normative assessment (RQ1), as dependent variable (RQ2), and as independent variable (RQ3).

Figure 1: A heuristic model of the deliberativeness of everyday political talk



3.1. How Deliberative Is Citizens' Everyday Talk about Politics? (RQ1)

The first objective of the project is to measure and describe the empirical reality of citizens' political talk and to compare it with the normative benchmark of deliberation as conceived by political philosophers. Regarding the deliberative quality of the political talk occurring in citizens' lifeworld, scepticism is voiced almost routinely, even by staunch proponents of deliberation as normative ideal (e.g., Mansbridge 1999: 211; Chambers 2009). If empirically valid, this view implies that research aiming to test whether deliberation occurs in everyday talk is bound to end up in the simple conclusion that it does not. Obviously, this would not be a very informative and interesting result. Instead of employing such a simple binary logic, the project relies on a gradual understanding of deliberation and seeks to determine the deliberativeness of citizens' everyday political talk – i.e. the degree to which its empirical reality corresponds to the ideal type of genuine deliberation (Rinke 2015: 813). In line with similar studies on other arenas of political communication, the project thus conceives its object not as a discrete state that may exist or not in real politics, but as a continuum, ranging from the complete absence of any deliberative quality in actual communication to a strong or even complete match with the normative ideal, acknowledging that this ideal might in the real world 'never be fully reached' (Steiner et al. 2004: 18).

Starting from the catalogue of attributes outlined above, the complex notion of deliberativeness is furthermore decomposed into sub-dimensions to make it empirically manageable, as recommended by Mutz (2008). As markers of high deliberativeness, these attributes describe end poles of continua, which provides guidance for the empirical analyses. The attribute 'openness to everyone' concerns the 'who' of political talk, the ideal being unrestricted and equal participation by all citizens. Strictly speaking, the expectation about

the relationship between social background and engagement in deliberative talk that is most in line with the normative standard of deliberation as a 'social process' (Gastil 2008: 9-10) is thus the null hypothesis. The analyses of this sub-dimension are to discern whether the empirics conform to this expectation. If this is not the case, the extent of deliberativeness of social groups' communications needs to be investigated (which is then part of RQ2). The other sub-dimensions concern the 'how' of political talk. They thus refer to the 'analytical process' of deliberation (Gastil 2008: 9). In Figure 1, the arrows (1a) and (1b) denote the empirical matching operations that are necessary to answer RQ1. This also implies testing whether and how the various elements of deliberation are correlated with one another and actually represent a single latent construct, or rather a set of independent sub-dimensions between which there may even be trade-offs (cf. Mutz 2006). Research on other deliberative phenomena gives rise to the expectation that these analyses generate a multi-faceted portrait of the deliberative quality of citizens' political talk, with some sub-dimensions coming closer to the normative ideal than others.

To arrive at a complete answer to RQ1, more general attributes of political talk must be taken into consideration. The deliberativeness of political talk can only be analysed for citizens that actually engage in political discussions. Hence, whether and how intensely they talk about political matters must be registered. Moreover, the deliberative quality of conversations may vary according to the strength of ties and the intimacy of relationships between communication partners. Contradictory expectations exist, for instance, with regard to the role played by strong ties in experiences of political disagreement (Huckfeldt et al. 2004; Morey et al. 2012). It is therefore important to analyse with whom people communicate about politics and how this relates to the deliberative quality of these exchanges. In addition, it is crucial to investigate the content of citizens' political talk. In particular, whether and how they actually address issues of public policy needs to be explored. Lastly, differences in the modes used by citizens for communicating with one another are also to be taken into consideration. Supplementing face-to-face conversations as the archetypical manifestation of political talk, recent developments in digital media have opened up new, technically mediated options to communicate with fellow citizens about politics (Baym et al. 2004). These mode differences may have profound implications for the deliberativeness of political talk.

3.2. Which Conditions Contribute to the Deliberativeness of Citizens' Everyday Talk about Politics? (RQ2)

Drawing on a large body of research on the conditions of political participation, people's engagement in political talk of high deliberative quality can be expected to have both individual and contextual roots (Verba et al. 1995; Burns et al. 2001; Schlozman et al. 2012). On the personal side, it is likely to depend on individuals' skills and motivation, which in turn are related to their location in social structure, in particular their endowment with socio-economic resources. Skills include general attributes, such as political knowledge and cognitive capacity, as well as factors that appear more immediately relevant for interpersonal communication, such as persons' verbal eloquence and rhetorical talent. Potentially relevant motivational factors are partly political, such as interest in politics, partisanship or ideological extremity, but they also encompass more general dispositions, such as personality traits (Hibbing et al. 2011). The latter also include factors of immediate relevance for political communication, such as orientations towards the expression of conflict (Mutz 2006), which are of particular interest for assessing whether conversations about politics are indeed essentially political activities or rather social activities, guided by the desire to manage and stabilize people's relationships to one another (Schudson 1997; Conover et al. 2002). Moreover, it may also be of relevance which sources citizens use to obtain information about politics.

Since deliberation is a relational activity, it is also necessary to take into account its contextual embedding in time and space. These dimensions are exogenous to individuals, and the project aims to exploring how

they shape and condition the deliberativeness of their political communication. Like other forms of interaction between individual members of a society, political talk is tied to socio-spatial contexts that circumscribe opportunities and constraints with regard to communicating about politics (Huckfeldt and Sprague 1995). One purpose of the study is to expand this 'networks within contexts' perspective to the deliberativeness of everyday communication by inquiring how the socio-demographic and political composition of neighbourhoods, but also the geographical location and distribution of individuals' places of residence, work and leisure within these and other relevant contexts influence how closely citizens' political talk matches the deliberative ideal (arrow (2a) in Figure 1).

Deliberation is time-bound and may therefore be sensitive to changing situational circumstances. Whereas most existing research on political talk has focused only on the specific, highly politicized conditions of election campaigns, the project aims to investigate the role of temporal context by conducting a systematic comparison between the contrasting circumstances of electoral and 'between-election' democracy (Esaiasson and Narud 2013). Elections are the core institution of representative democracy, but in the (perhaps over-stylized) ideal world of deliberative democracy, citizens are expected to engage in politics and discuss policies on a permanent basis, and they should do so in a highly deliberative way. Situational circumstances should therefore – ideally – have little influence on how they discuss politics. To fully answer RQ2, it is important to inquire to which extent citizens' real political communication actually meets this expectation (arrow (2b)).

3.3. Does the Deliberativeness of Citizens' Everyday Talk about Politics Lead to the Beneficial Consequences for Democratic Politics Assumed by Deliberative Theory? (RQ3)

As already noted, deliberative theory states that communication of high deliberativeness has favourable consequences for civic orientations. It is expected to produce 'better' citizens: individuals who are more informed, active, responsible, open to the arguments of others, cooperative, fair, able to deal with problems, ready to alter their opinions' (Pellizzoni 2001: 66). These orientations are expected to give rise to 'better', more reflective public opinion (Steiner 2012: 246; Chambers 2012), which in turn may lead to 'better' policies. One mechanism to achieve this is aggregation, for instance through votes in elections or referenda. When these votes are based on preferences that have been refined through careful deliberation, they offer better guidance for policy-makers (Fishkin 1995). Another channel is political participation. Deliberating political matters in their private lifeworld might empower citizens to take part in public life more actively. This may lead to stronger engagement in expressive acts of political participation. More importantly, it can also help to connect different areas within the deliberative system. Specifically, it may increase persons' motivation and ability to move beyond the private realm by taking part in formalized discussions in public settings that are more closely linked to the political decision-making process (Conover et al. 2002). Better policies, but also the experience of deliberation itself should finally increase the legitimacy of both policies and the political system more generally (Cohen 1989). Of these expectations, the project submits those to an empirical test that pertain directly to the ramifications of deliberative communication for citizens themselves. It thus concentrates on the beginning and the end of the presumed chain of effects: *civic orientations* and *legitimacy beliefs*. System-level consequences of deliberative communication are outside the scope of the project. However, the project still contributes to a better understanding of their micro foundations.

The first hypothesis to be tested is that *more deliberative communication has a self-improving effect on citizens' political involvement, participation and orientations towards their fellow-citizens*. As discussed above, several studies indicate that political discussion may make citizens more opinionated, knowledgeable, self-confident, tolerant, empathetic, understanding, other-directed and more participatory. It is not

known, however, whether the deliberativeness of political talk is relevant for these consequences or whether these consequences are caused by the discussion itself, regardless of the discussion's quality. Moreover, it is important to note that everyday political talk sometimes also seems to lead to consequences that are detrimental to the quality of democracy, such as demobilization. It has been argued that this outcome may indeed be a direct result of exposure to political disagreement; if this assumption is correct, this particular sub-dimension of deliberative political talk leads to unfavourable rather than favourable consequences for the democratic process (Mutz 2006). With regard to a variety of civic orientations, the project subjects the self-improvement hypothesis to a direct test.

A second set of analyses examines the hypothesis that *deliberative talk about politics fulfils a legitimating function*. It focuses on the subjective side of this phenomenon: citizens' *legitimacy beliefs* (Friess and Eilders 2015: 322). As outlined above, scarcely any research has yet been conducted on this potential outcome of citizens' political talk, even without reference to its deliberative quality. By testing this hypothesis, the project breaks new ground. It focuses on the implications of the deliberativeness of political talk for dimensions of political support (Easton 1975) that encompass evaluative and affective orientations towards democracy and its central elements (Norris 2011).

4. The CoDem Research Design

Political talk concerns interdependent citizens located and distributed in space. Localities are the environments in which this phenomenon unfolds (Huckfeldt and Sprague 1995: 5). Hence, local studies are ideal for obtaining in-depth insights into its functioning (Schenk 1995). They are also ideally suited to explore how socio-spatial contexts structure citizens' interpersonal communication about politics and the extent to which it meets standards of deliberativeness. The method of choice was therefore a local study, thereby placing the project in a research tradition that encompasses several of the most fruitful inquiries into citizens' political talk. It dates back to the Columbia School's seminal Erie County, Elmira and Decatur Studies (Lazarsfeld et al. 1944; Berelson et al. 1954; Katz and Lazarsfeld 1955). The Detroit Area, Jülich, South Bend and Indianapolis-St. Louis studies are major projects of more recent date (Laumann 1973; Pappi and Wolf 1984; Huckfeldt and Sprague 1995; Huckfeldt et al. 2004).

For a number of reasons, the city of Mannheim appears particularly attractive as location for the study. With 300,000 inhabitants, Mannheim ranks ninth among the cities between 100,000 and 500,000 inhabitants and has the differentiated and complex social structure, economy, culture and political life of a typical large city in Germany. Having been shaped by metalworking industries, Mannheim is amidst a process of turning into a service city. Its structure is very varied, ranging from highly urbanized areas, some of them still bearing the hallmarks of traditional working-class quarters, nowadays partly with considerable social problems, over affluent 'postmodern' neighbourhoods to rather self-contained districts, administratively incorporated into the city only during the early 20th Century and still resembling traditional small towns or even rural villages. For our project, Mannheim offers an ideal mix of socio-spatial conditions and highly diverse political milieus (indicated by the fact that in the most recent state election, that took place in March 2016, one of its electoral districts was won by the Greens, the other by the AfD). Choosing Mannheim as location also allows building on the experiences of the 'Democracy Audit Mannheim' (van Deth 2014), which was also conducted at the MZES.

The methodological core of the project (Figure 2) is a standardized survey based on a register-based random sample (Component 1: MR1). It was conducted during the run-up to the federal election of 24 September 2017, and with a strong substantive focus on this event. Accordingly, the population was restricted to voting-age residents of Mannheim with German citizenship. The aim was to conduct 1,400 interviews. Face-to-face

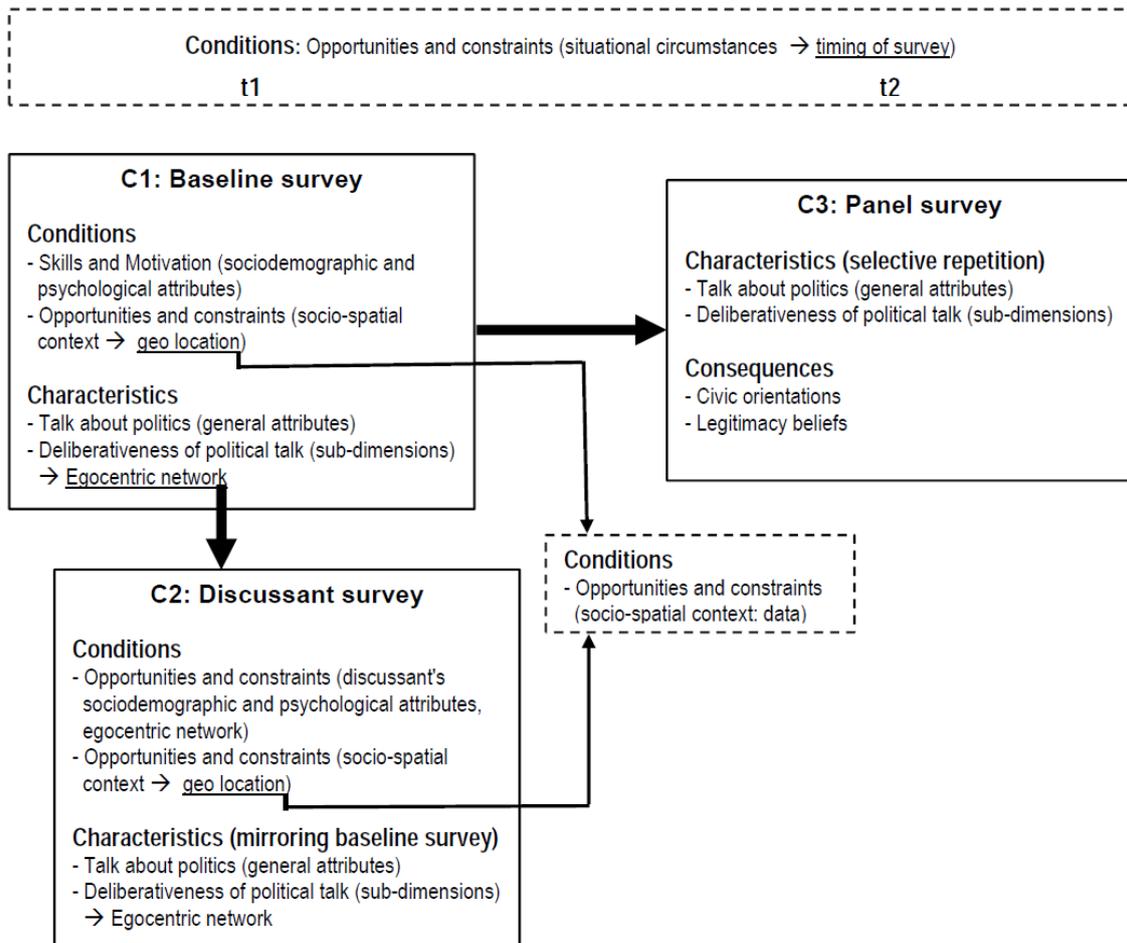
(CAPI) interviewing was chosen as mode for the survey because it promised the best data quality and allowed for longer interviews and more complex survey instruments (Groves et al. 2004). An important element of the survey was a detailed *egocentric network* instrument (Klofstad et al. 2009), a method that to date has only rarely been applied in research on political talk (Huckfeldt and Sprague 1995; Huckfeldt et al. 2004; Schmitt-Beck 2000). For each respondent, it registered information on up to three important political discussion partners, one inside and two outside of the main respondents' own households.

It takes at least two to talk about politics, and a two-sided perspective, obtained by surveying not only respondents themselves but also their discussants, promises deeper and more valid insights than a one-sided perspective, which relies exclusively on perceptual data. Snowball designs of this kind have been applied very rarely in political communication research (Hopmann 2012) and were mostly restricted to investigations of electoral behaviour (Laumann 1973; Pappi and Wolf 1984; Huckfeldt and Sprague 1995; Huckfeldt et al. 1995, 2004; for an exception see Schenk 1995). From a methodological point of view, these data promise more valid insights than conventional studies because they open up the opportunity to investigate respondents' everyday political talk from a two-sided perspective. The discussants' perceptions of their communications with the respective main respondents can be used to validate these respondents' reports about the same communications. In addition, including measures of egocentric networks also in the discussant surveys allows extending the network analyses beyond the main respondents' own primary zone of direct interaction partners to the second-order zone of persons to whom they are only indirectly linked through their discussants (Mitchell 1974). The main survey should therefore be complemented by direct readings generated through follow-up interviews with the discussants identified through the egocentric network instrument (Component 2: PDP). Observing data privacy requirements (Schnell 2012: 194-8), as many 30-minute discussant interviews as possible should be conducted by telephone or via the Web.

The third element of the research design is a panel component, consisting of re-interviews with the respondents of the main survey (Component 3: MR2), conducted several months after the federal election. With regard to the research questions, this element of the design serves two purposes. From a substantive point of view, it is necessary to explore how the deliberativeness of respondents' political talk is affected by changing situational circumstances, in this case the conditions of 'between-election' politics outside the campaign period, with its presumable heated climate of political communication. From a methodological point of view, it diminishes the risk of simultaneity bias that is a major weakness of purely cross-sectional studies when testing causal hypotheses. This survey was conducted by telephone (CATI; interview length 30 minutes).

An important add-on to this design is the inclusion of macro data describing the socio-spatial contexts within which the main respondents and the members of their egocentric discussant networks reside. The project's analytic framework thus allows studying the social ecology of citizens' everyday political communication as it unfolds through relational patterns of opportunities and constraints on four hierarchically nested levels: respondent-discussant dyads < respondents' egocentric networks (primary zones) < extended networks including respondents' second-order zone (registered through discussants' egocentric networks) < socio-spatial contexts of respondents and discussants. To match contextual macro data with survey data requires sufficiently precise information about respondents' and discussants' places of residence.

Figure 2: Overview of research design



5. Preparing Fieldwork

Preparation of fieldwork started immediately after having obtained funding approval from the Deutsche Forschungsgemeinschaft in fall 2016. Based on a thorough investigation of the market of survey firms and a competitive tender, fieldwork was commissioned to Förster & Thelen Marktforschung Feldservice GmbH (Bochum). Förster & Thelen assumed responsibility for organizing, conducting and supervising fieldwork with its own interviewer staff, using a random sample that had to be provided by the project team. The City of Mannheim was so kind as to draw this sample for the project from its register of residents. Since fieldwork was expected to take very long and therefore had to start early, the sample was drawn in March 2017. Changes in the city's population between this date and election day are therefore not reflected in the sample.

Before fieldwork started, several public relations activities were undertaken that aimed to prepare the population and especially the target persons included in the sample for the subsequent survey. These PR activities sought to generate some general awareness of the project in the city and were supposed to help increasing contacted persons' willingness to take part in the study (Blom 2016). The project was then 'marketed' under the label *Mannheimer Stadtgespräch* (Mannheim's Talk of the Town; acronym: *ma.s.g*), including a professionally designed project logo (see Appendix), which was reminiscent of the corporate design of the MZES and was used in all public communications of the project. Drawing on previous research projects conducted in cooperation with the City of Mannheim (in particular the 'Democracy Audit Mannheim'; cf. van

Deth 2014), the project team was able to convince the Mayor of the city, Dr. Peter Kurz, to support the project with an official endorsement. Supported by the PR officer of the MZES, the project team furthermore issued a press release (published on 8 May 2017; cf. [https://www2.uni-mannheim.de/1/presse_uni_medien/pressemitteilungen/2017/Mai/Mannheimer Stadtgespräch/](https://www2.uni-mannheim.de/1/presse_uni_medien/pressemitteilungen/2017/Mai/Mannheimer%20Stadtgespr%C4c4ch/)) and sought direct contact to the local media. This resulted in significant coverage in the most important media, most notably *Mannheimer Morgen* (published on 6 May 2017), the most widely read local daily newspaper, and *Rhein-Neckar Fernsehen* (broadcast on 23 May 2017), a widely viewed regional private television channel (see Appendix and <http://www.mzes.uni-mannheim.de/mannheimer-stadt-gespraech/index.php/medien/>). Furthermore, a website was set up to provide information about the project and its staff, preliminary findings and its resonance in the media for respondents and other citizens interested in the project (<http://www.mzes.uni-mannheim.de/mannheimer-stadt-gespraech/>).

During the entire field period, the project team made sure that a researcher was available by telephone at all times in case respondents had inquiries about the project. Many respondents used this opportunity to reach out to the project staff after having been contacted by Förster & Thelen interviewers and to inquire about the background and integrity of the project (often suspecting that it might be concealed market research). After the successful realization of the project's first component, the project team sent letters of thanks as well as specially designed Christmas cards to all respondents as a sign of gratitude but also as a measure of panel maintenance. To strengthen respondents' attachment to the project, this also served as an opportunity to send them some information about the project's progress as well as a specially produced information brochure on preliminary findings (see Appendix).

To prepare the surveys, the project team conducted an informal pretest of some key instruments in March 2017. It was conducted as an online survey of a convenience sample, mainly consisting of students of the University of Mannheim (N = 132). In April 2017, Förster & Thelen conducted a formal pretest of the MR1 survey's full questionnaire in close cooperation with the project staff. Since the company runs a test studio in Mannheim, the pretest with members of the target population could be carried out directly at the place where the study should be conducted. Participants were German citizens residing in Mannheim and eligible to vote in the 2017 federal election. Based on a quota plan, 16 male and 16 female respondents between 18 and 74 years were recruited for the pretest. It was realized face-to-face by four different interviewers, with project staff observing the entire process on site.

6. Fieldwork¹

6.1. Component 1: Main Respondent 1st Panel Wave Survey (MR1)

6.1.1. Population and Sampling

As discussed above, the population of MR1 should comprise all citizens with residence in the city of Mannheim who were eligible to vote in the German federal election on September 24, 2017. At the time the sample was drawn in mid-March 2017, Mannheim had 336,368 inhabitants in total. Of these, 197,021 persons were identified by the municipal register of residents as being eligible to vote in the federal election half a year

¹ We are grateful to Michael Braun of GESIS who provided and coordinated valuable consultancy to the project in all aspects of fieldwork.

later. This was therefore the precise population of the study. Accordingly, a one-step random sample (Tillé and Matei 2016) was drawn from the city's register of residents. Local face-to-face surveys on the basis of register-based random samples are extremely uncommon in Germany (in fact, neither the project team nor the company responsible for fieldwork were aware of any such study in recent years). For lack of experience with comparable studies, it was impossible to predict the study's response rate. Hence, a very large initial sample was drawn in order to ensure a sufficient number of potential target persons and to achieve the planned 1,400 interviews in the MR1 survey even under adverse circumstances. Accordingly, the initial base sample amounted to $N = 14,000$ individuals.

The initial sample included 14,000 out of 197,021 individuals, which meant that potentially up to one out of every 14 members of the population had a chance to be contacted by an interviewer. This implied a substantial likelihood that the initial sample might include persons living together in the same household. In view of the project design, it was considered undesirable to conduct several interviews within the same household. Thus, as a rule, only one person per household should be interviewed. To prepare the interviewers for such situations, the project team screened the address material before fieldwork started and flagged all cases for which the last name, the street address and the house number were identical. This screening procedure identified 691 cases in which the possibility of two or more target persons living in the same household could not be ruled out. Interviewers were instructed to conduct only one interview per household in cases in which it indeed turned out that several target individuals were living together. As a rule, the target person who was reached first and agreed first to an interview when contacted was the one to be selected for the interview. For easier handling and perpetration of the field by the interviewers, the field institute created sample points and assigned interviewers as well as target individuals to be interviewed to each sample point. Overall, by the time fieldwork was complete, 7,990 of the 14,000 available cases had been activated, thus constituting the gross sample of MR1.

6.1.2. Field Period and Number of Interviews

Fieldwork was to be organized in such a way that the aim of completing 1,400 main interviews would definitely be reached before the federal election on September 24, 2017. An early start of fieldwork therefore was advisable. The field period was thus set to start on May 16 and to end no later than on the last day before the federal election. Fieldwork was to be completed on September 23, 2017, at the latest. The number of MR1 interviews actually completed by that date amounted to 1,630 and thus surpassed the target of 1,400 interviews considerably.

6.1.3. Contacting

Interviewers were required to undertake four face-to-face contact attempts on different weekdays and at different times of the day before a target person could be written off as unit nonresponse due to unavailability. One week before being contacted by the assigned interviewer for the first time, each target person received a personalized letter of announcement by mail (see Appendix). It contained detailed information on the content and purpose of the study as well as its institutional background, the voluntary character of the participation in the survey, the rights of respondents, and issues of data privacy. The mailing also included an endorsement letter by the Mayor of Mannheim (see Appendix). The first contact by the interviewer was to be made in person. If the interviewers did not encounter anybody, they were required to leave a card with contact details so that the target person could call either the interviewer or the project team for arranging an interview appointment. If the interviewers did encounter someone in the household but not the target person, they also left a note. Generally, all contacts were to be made in person, except for the case target persons called back to arrange an interview appointment.

As mentioned above, contact attempts were made for 7,990 out of the 14,000 target individuals contained in the initial register sample, thus constituting the gross sample of MR1. The remaining 6,010 individuals did not become involved in the study. Out of the activated sample of 7,990 contacted individuals, 1,630 full interviews could be realized, corresponding to a (preliminary) response rate of 20.4%. Table 1 shows the outcomes of the contacting process in detail, based on the interviewers' contact protocols. The main sources of unit nonresponse were refusals (upon first contacts in households or by target individuals themselves) and unavailability (for various reasons) of target persons, with roughly equal shares of about 37% respectively 35%. Table 1 also reveals that the data provided by the city's municipal register were not completely perfect. To a small extent, this may have been due to the fact that the initial sample was drawn half a year before the election, but it was more likely also caused by imprecisions of the register itself, for instance if residents failed to notify the municipal administration of changes in their life circumstances, such as moving – a common source of error in register-based samples (Albers 1997).

The average contact attempt rate before an interview could be completed or the case was written off as unit nonresponse was 2.3 (SD = 1.57). As shown in Table 2, nearly half of all contacted addresses (42.5%) resulted in an interview or definitive nonresponse at the first contact. 23.5% were contacted twice, 11.9% three times, and 22.1% four times. Looking only at successfully completed interviews, the distribution does not deviate much from this average. To achieve a complete interview, interviewers needed to contact a target person on average 2.4 times.

Table 1: Results of contacting

	Frequency	Percentage
Complete interview realized	1,630	20.4
Target person not reached	2,092	26.2
Target person can be reached in the near future	93	1.2
Appointment → note appointment	20	0.3
Deletion of address / withdrawal of panel participation	697	8.7
Refusal: no time, takes too long, too much	959	12.0
Refusal: target person is ill	315	3.9
No private households	19	0.2
Uninhabited, decayed or demolished building	17	0.2
Target person died	23	0.3
Target person moved to foreign country	21	0.3
Target person moved away, address unknown	370	4.6
New address in Mannheim	5	0.1
Target person moved away, no new address / phone number provided by informant	45	0.6
Target person not reachable during field time	192	2.4
Target person not available, permanently ill or disabled according to informant	120	1.5
Interview terminated, target person refuses to continue with interview	4	0.1
Contact to target person prevented, participation forbidden	50	0.6
Informant refuses any information	53	0.7
Refusal: no interest	589	7.4
Refusal: data privacy or too personal	28	0.4
Refusal: other causes	145	1.8
Target person does not participate in surveys in general	173	2.2
Target person: absolute refusal → deletion of address / withdrawal of panel participation	115	1.4
Target person refuses: no interest in politics	146	1.8
Target person refuses any information	35	0.4
Already other target person in the household surveyed	13	0.2
Language problems	1	0.0
No communication in German possible → note language	20	0.3
Total	7,990	100.0

Table 2: Number of contacts

	Successful interviews or unit nonresponse		Only successful interviews	
	Frequency	Percentage	Frequency	Percentage
One contact	3,399	42.5	638	39.2
Two contacts	1,876	23.5	442	27.1
Three contacts	951	11.9	212	13.0
Four contacts	1,764	22.1	338	20.7
Total	7,990	100.0	1,630	100.0

6.1.4. Incentives

In population surveys, offering incentives to respondents and/or interviewers is a common way to increase response rates (Pforr et al. 2015; Stähli and Joye 2016). Accordingly, all respondents of the CoDem surveys were offered incentives. Specifically, they could choose between three different incentives: money in cash, an Amazon voucher or a gift voucher valid for purchases in local shops in Mannheim. The value of the incentives differed by the component of the study. MR1 respondents were offered incentives worth 10 Euros. 85% of them opted for cash, 13% for the Amazon voucher, no one chose the gift voucher and 2% waived their incentives.

6.1.5. Interviewers and Interviewing

In total, 79 interviewers were employed on site in Mannheim to conduct the face-to-face interviews. Although Förster & Thelen has a large interviewer pool, the number of interviewers available in the region was not sufficient to conduct the survey; many interviewers were therefore hired from other parts of the country and took temporary residence in the city. The interviewers' demographic profile was quite mixed. 48 of them (60.8%) were male. On average, the interviewers were 53 years old ($SD = 16.5$) ranging from 18 to 75 years. In nearly equal portions, interviewers either had completed a technical, middle or commercial school (29.1%), a high school (30.4%) or held a university degree (32.9%). Only few interviewers held a certificate from an elementary or secondary school with vocational training (7.6%). Besides working for the survey company, more than half of all interviewers (58.3%) were either fully, partially or self-employed. 19% of the interviewers were students and 16.5% were retirees. One third of all interviewers (36.7%) was rather new to the job, with a working experience of less than one year. On the other hand, 36.7% of the interviewers had been conducting interviews for the field institute for more than three years.

All interviewers were required to complete a special training: 53.2% attended a personal training workshop and 46.8% a Web seminar. The personal training workshop took place at the MZES and lasted a whole day. In the workshop, the project team introduced the project as well as its aims and goals. Then, the institute's leading interview trainer walked through the contact protocol as well as the questionnaire and familiarized the interviewers with the tablet computers to be used for the CAPI-interviews. More complicated questions and filter sequences were discussed in detail. The online training took two hours. Via a telephone conference, the survey company's project directors provided information on the project and introduced the questionnaire. Interviewers were then asked to go through the questionnaire independently and ask questions in a subsequent Web session.

On average, each interviewer conducted 20.6 interviews. The range was very wide, however, with a minimum of one interview and a maximum of 248 interviews per interviewer ($SD = 21.2$). The interviews lasted

around 65 minutes on average. To gain insights into the interview situation, the interviewers were expected to record their experiences after completion of each interview in a number of rating questions. Most interviews (83.4%) were conducted alone with the target person. In the remaining cases, a third person – predominantly a spouse or partner (12.1%) – was present. In 67.3% of those cases in which a third person was present, he or she did not interfere with the interview at all. In 27.5% of all cases, there was some intervention. The overall willingness of the respondents to provide answers was assessed as good (90.6% of all interviews). Directly bearing on the topic of the survey, one question asked the interviewers to rate how communicative the respondents were during the interview, 58% of the respondents were rated to be very and 34.8% as rather communicative. Only 7.2% of the MR1 respondents were characterized by the interviewers as less or not communicative at all.

6.1.6. Data Collection

Data collection started on May 16 and ended on September 23, that is, the last day before the 2017 federal election. During the entire period, fieldwork was monitored closely. Twice a week, the field institute compiled a field report, containing an overview derived from the electronic contact protocols used by the interviewers to document their activities, with frequencies for each disposition code. It also provided an aggregate as well as day-by-day overview of the most important data to document the progress of fieldwork. Based on these field reports, the project team designed various monitoring tools. The development of the survey process was discussed with the study directors of Förster & Thelen in regular telephone conferences and occasional personal meetings.

Table 3: Monitoring tool: key numbers (September 5, 2017)

(A)	Target interviews in total	1,400
(B)	Target interviews to date (given a linear development)	1,186
(C)	Actual interviews to date	1,083
(D)	Difference (C) – (B)	-103
(E)	Target interviews to date in %	84.72%
(F)	Actual interviews to date in %	77.36%
(G)	Target interviews per day (given a linear development)	10.69
(H)	Actual interviews per day to date	9.88
(I)	Difference (H) – (G)	-0.81
(J)	Target interviews per day in the future	15.47
(K)	Difference (J) – (H)	5.59
(L)	Ratio (J) / (H)	1.57
(M)	Potential interviews until end of fieldwork given the development of the last two weeks	1,524

Table 3 documents the available information for an exemplary field day (September 5, 2017), three weeks prior to the federal election, as documented by one of the monitoring tools designed by the project team. This tool was to deliver critical data for a real-time monitoring of the dynamic process of fieldwork during its entire duration. On the day chosen for the sake of illustration, the number of completely realized interviews was slightly below expectations (key number D). At this point of time, 1,083 interviews (C) had actually been completed instead of the planned 1,186 interviews (B), assuming a strictly linear completion rate towards the target of 1,400 interviews. The achieved daily average at this time was 9.9 interviews (H), as compared to 10.7 expected (G), again assuming a linear development of fieldwork. To achieve the target of 1,400

interviews, on average 15.5 daily interviews were needed (J) from this point on. This meant that the interviewers needed to conduct around 5.6 interviews more than up to this point (K). To meet this aim, fieldwork required to be intensified by the factor 1.6 (L). The data also show a recent improvement of the intensity of fieldwork. Already at this date, a continuation at a rate comparable to the last two weeks alone would have resulted in an overall number of 1,524 interviews (M).

Based on the continuous stream of the data that was coming in during the entire field period, several graphical diagnostic tools were designed. On the basis of these devices, Figures 3 to 5 document the overall development of fieldwork. Figure 3 displays how many interviews were realized each day of the field period (in bars), compared to how many interviews should have been accomplished each day to guarantee 1,400 interviews at the end of the fieldwork, assuming a linear development from the first day onwards (10.7, displayed as a horizontal line). This figure illustrates that fieldwork first progressed rather slowly. From mid-August onwards, however, the number of daily interviews increased significantly. The absolute maximum of 44 interviews on one day was reached on September 19.

Figure 4 shows how many interviews had actually been conducted per day on average up to each measurement point and how many interviews still had to be conducted per day on average for the remaining time until 23 September in order to reach the target of 1,400 interviews. From the beginning of fieldwork until the end of July, three to six interviews were conducted per day on average, which over time implied a substantial increase of the average daily number of interviews still to be accomplished for the remaining time. Until September 8, the number of realized interviews lagged behind the number required to meet the target. In the week of September 12, though, roughly two weeks before the federal election, a break-even point was reached, and after that date, the daily number of completed interviews significantly surpassed the number of required interviews. Due to this considerable intensification of fieldwork during this final phase, the overall number of completed interviews ultimately surpassed the target number by 230 or about 16%.

Figure 5 shows what this development meant for the cumulative number of cases. The straight line indicates the expected development if fieldwork had followed a strictly linear trajectory throughout the entire field period. Compared to this projected ideal, actual fieldwork underperformed until calendar week 34. However, from then on, the gap closed quickly and the final result was better than expected, exceeding the target considerably. This implies that about half of all interviews were conducted during the first 13 weeks of the field period, and the rest much faster during the final five weeks, roughly equivalent to the 'hot phase' of the federal election campaign.

Figure 3: Interviews per day (count)

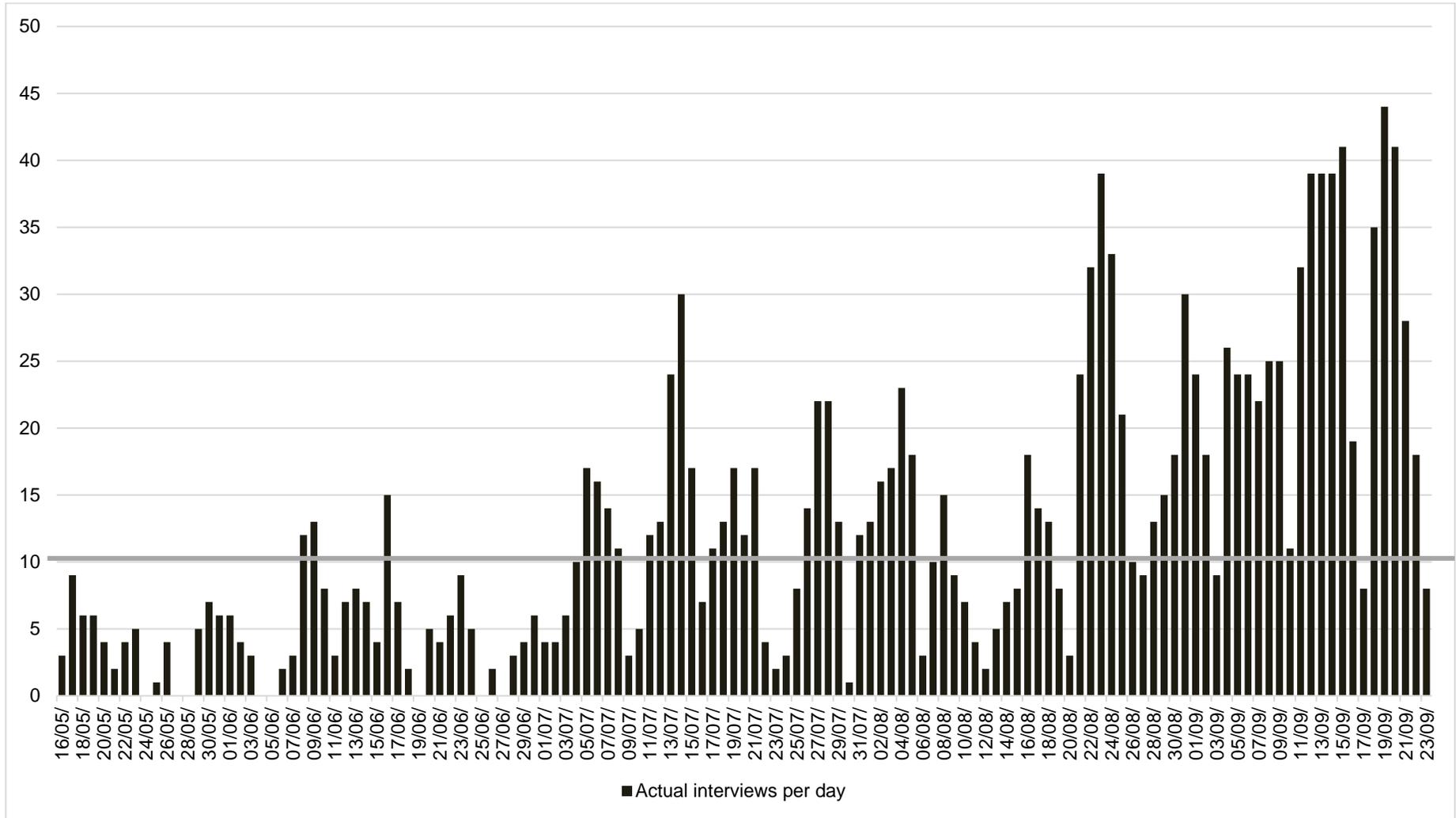


Figure 4: Actual and target interviews over time (daily averages calculated backwards and forwards)

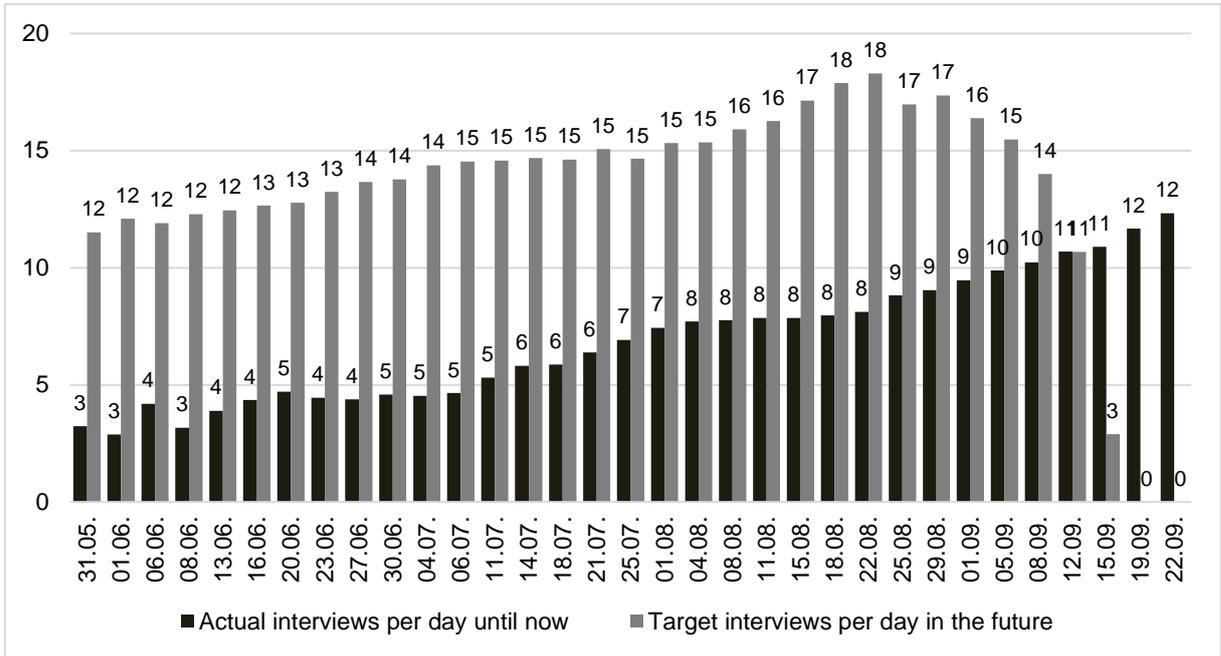
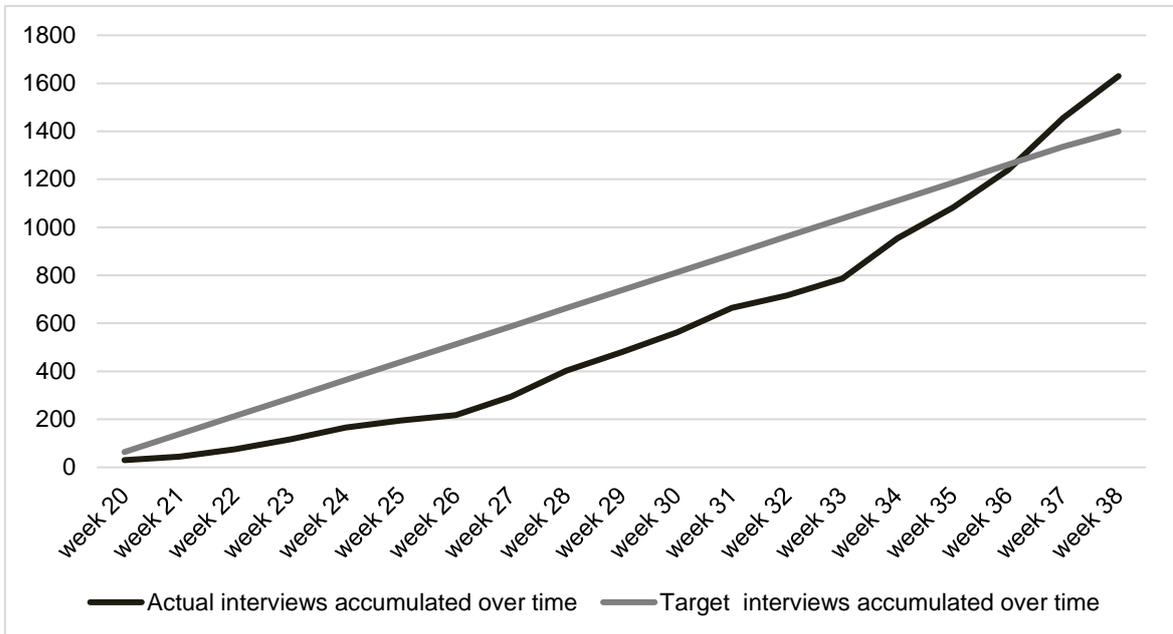


Figure 5: Actual and target interviews accumulated over time (count)



6.1.7. Quality Checks and Data Cleaning

After data collection was completed, a range of quality checks was performed to ensure that only target persons randomly drawn from the register were interviewed, that not more than one person per household was interviewed and that interviews were not falsified (Bredl et al. 2008; Schnell 2012: 227-33; Menold and Kemper 2014; Landrock and Menold, 2016).

In a first step, control cards were sent out by Förster & Thelen to all 1,630 interviewees, in which they were asked whether a CoDem interview took place and how long the interview lasted. In addition, the cards asked for respondents' gender and age. Overall, 549 completed control cards were returned to the field institute, which corresponds to a response rate of 33.7%. 545 respondents (33.4% of all participants) confirmed having taken part in the interview, a realistic duration of the interview, as well as the correct age and gender. Four control cards turned out to be negative, as respondents denied that an interview had taken place. The corresponding four interviews were immediately deleted from the dataset.

Furthermore, all cover letters that had been returned by the post office due to wrong addresses were recorded. The demographic respondent attributes gender and age were compared to the information contained in the register on the same individuals. It was also checked whether the realized sample contained individuals with the same last name living at the exact same address in order to identify undesirable accumulations of interviews in the same households. The total duration of the interviews was checked via time stamps in the dataset, followed by careful examination of all cases of negative responses as well as nonresponse to detect possibly falsified interviews. To clarify suspicious patterns, individual cases were inspected in great detail, utilizing all available information, including personal inquiries with the interviewers who had conducted these interviews.

Cases were deleted if both the indicated gender and age did not conform to the data from the register. Moreover, interviews were dropped if the difference between self-reported age as registered in the survey and the age indicated by the register exceeded ten years and close inspection of the respective case revealed no plausible explanations (such as typos). If there was substantiated reason to assume that two interviewees lived in the same household, one of these interviews was deleted, according to a systematic rule that prioritized design considerations. If only one of the two interviewees participated in both panel waves, the person who took part in both waves was retained in the MR1 dataset. If both or neither of the interviewees participated in MR2, the next-birthday method was applied to determine which case was kept in the dataset. Other inexplicable inconsistencies, such as interviews that took extremely long, led to the omission of further cases. Following these decision rules, a total of 30 interviews were deleted from the dataset. The final dataset thus consists of 1,600 complete and successfully realized interviews with main respondents in the first panel wave.

6.1.8. Response Rate

Table 4 displays AAPOR's (2016) outcome rates for the first study component. Of the total sample of 7,990 target persons, 3,309 refused to participate in the survey. No contact could be established with 2,397 individuals. In 490 cases, no contact could be established due to unknown eligibility. The overall response rate for MR1 thus amounts to 20.1%. This number does not compare favourably to the 35% reached by the German General Social Survey (ALLBUS), which uses a roughly similar design (Wasmer et al. 2017). However, as the national reference study of the German social sciences, ALLBUS represents the highest standard in face-to-face survey data collection and commands vastly larger resources to attain this goal. It is quite unrealistic for such a study to set goals that are similar to those of the CoDem survey, since the CoDem's budget is much smaller and there is the additional difficulty of having to realize a challenging design at the

level of a single locality. Calculated according to AAPOR guidelines, the cooperation rate for MR1 was 31.9%, the refusal rate 41.5%, and the contact rate 64.0%.

Table 4: AAPOR's outcome rates for MR1

Interview (Category 1)	
Complete	1,600
Partial	0
Eligible, non-interview (Category 2)	
Refusal and break-off	4
Refusal	3,202
Household-level refusal	103
Non-contact	2,092
Respondent unavailable during field period	305
Deceased respondent	23
Physically or mentally unable/incapable	120
Respondent language problem	21
Cases omitted after quality control	30
Unknown eligibility, non-interview (Category 3)	
Unknown if housing unit/unknown about address	477
Quota filled	13
Total sample used	7,990
Summary dispositions	
I=Complete interviews	1,600
P=Partial interviews	0
R=Refusal and break-off	3,309
NC=Non-contact	2,397
O=Other	194
UH=Unknown household	477
UO=Unknown other	0
Response rate: $I/(I+P) + (R+NC+O) + (UH+UO)$	20.06%
Cooperation rate: $I/(I+P)+R+O$	31.35%
Refusal rate: $R/((I+P)+(R+NC+O) + UH + UO)$	41.48%
Contact rate: $(I+P)+R+O / (I+P)+R+O+NC+ (UH + UO)$	63.97%

6.2. Component 2: Discussant Survey (PDP)

6.2.1. Population and Sampling

As outlined above, MR1 included an egocentric network battery (Klofstad et al. 2009). It consisted of name generator questions to identify respondents' most important political discussion partners inside and outside of their households, and a number of name interpreter questions eliciting information on each of these discussants and their relationships to the respondents as well as among one another. An important, though methodologically challenging element of the research design was the aim to conduct also follow-up interviews with as many persons named by the main respondents and discussants as possible (Hopmann 2012). Such snowball designs have rarely been used in research on political talk (Laumann 1973; Pappi and Wolf

1984; Schenk 1995; Huckfeldt and Sprague 1995; Huckfeldt et al. 1995, 2004). The last application in Germany dates back to the 1990 federal election (Koßmann 1996). In essence, this means that the project could not draw on any best practice experiences from comparable studies, but had to develop its own solutions for how best to recruit interviewees for this component of the study. In doing so, it was quintessential to observe Germany's strict data privacy regulations for survey research (Schnell 2012: 194-8).

Name generating worked as follows: The main respondents were asked in a first step whether they lived together with others in the same household. If so, they were asked whether they talked about politics with anyone from within their household. Those responding positively were then asked: 'Please think about that person in your household with whom you have talked most frequently about political topics within the last six months. Please tell me the first name or the initials of this person.' Furthermore, all respondents were asked: 'Now please think about that person from outside of your household with whom you talked most frequently about politics in the last six months. This could be a friend or a partner, a relative, a colleague, a neighbour or another acquaintance, but not a person you are living with. Please tell me the first name or the initials of this person. May I write down a second person from outside of your household with whom you have talked about politics?' These questions were then followed by mostly identical sequences of name interpreter questions for each discussant named by the main respondents. Overall, each main respondent could thus name a maximum number of three political discussion partners. Together, these persons constituted the population of the project's discussant survey.

In total, the MR1 respondents named 1,107 household discussion partners (PDP1), 1,305 first (PDP2) and 1,016 second discussion partners outside of their households (PDP3) when responding to the name generator questions. Thus, the overall number of political discussion partners generated by the egocentric network instrument amounted to 3,428 individuals. On average, each main respondent named 2.1 discussants. As Table 5 shows, only 9.8% of all main respondents did not name any political discussion partners. This is a very good response rate for this kind of question, surpassing the outcomes of comparable surveys considerably (Schmitt-Beck 2000: 168). Nearly half of all main respondents (47.7%) provided information on all three political discussion partners, which is also a good rate (Schmitt-Beck 2000: 168). Nearly equal numbers of main respondents either provided information on one household and one non-household political discussion partner (PDP1 and PDP2: 12.9%) or on two non-household but no in-household discussion partners (PDP2 and PDP3: 15.8%). 8.6% of all main respondents only named a discussion partner within their households, and 5.2% one discussion partner outside of their households.

Table 5: Main respondents naming political discussion partners

	Frequency	Percentage
Main respondents naming no PDPs	157	9.8
Main respondents naming PDP1	138	8.6
Main respondents naming PDP2	83	5.2
Main respondents naming PDP1 and PDP2	206	12.9
Main respondents naming PDP2 and PDP3	253	15.8
Main respondents naming PDP1, PDP2 and PDP3	763	47.7
Total	1,600	100.0

The PDP component of the design aimed to collect interviews with as many of these political discussion partners as possible. As anticipated, this part of the study proved to be the most challenging one. The only restriction regarding potential target persons was that they had to be an identifiable member of a main respondent's egocentric network of political discussants. The recruitment process required obtaining contact

information of such persons, contacting them successfully and motivating them to take part in an interview. As expected, developing a workable protocol for these steps that conforms to the strict German data privacy legislation turned out to be a challenge. The most problematic part was obtaining the information necessary to contact the discussants. This was only possible by way of a complicated multi-stage procedure, of which a key part had to be delegated to the main respondents who had named network partners. German data privacy regulations prohibit following the procedure typically applied by previous studies incorporating follow-up interviews of this kind (Pappi and Wolf 1984; Schenk et al. 1992; Rössler 1997; Stocké 2005), that is, to simply ask the main respondents directly for telephone numbers or other contact data on their discussants. Such information cannot be legally elicited without first obtaining the explicit permission of the discussant it pertains to. It was therefore necessary to ask the main respondents to play an active role in the recruitment process by inquiring of their discussion partners whether they allowed them to pass on their contact data (phone numbers or email addresses) to the survey institute. After having obtained the discussants' consent, the main respondents were then expected to forward these contact details to the field institute. Based on the received information, the field institute then tried to contact these discussants and interviewed them if they could be reached and (again) agreed to take part in the survey. Obviously, this elaborate indirect recruitment procedure entailed a long sequence of potential points of abortion and depended to a very large extent on the main respondents' willingness and ability to cooperate with the project.

Given these complications, it does not come as a surprise that only a rather small number of the discussants whose information was registered by the egocentric network instrument could actually be interviewed. Unfortunately, since this information was not included in the contact protocols, it cannot be verified how many of the main respondents agreed to ask at least one of their political discussion partners for her participation in the survey in the first place. How many of the main respondents who were in principle willing to cooperate with the project actually asked one or more discussants to take part in the PDP survey, and how many of the discussants they approached agreed or refused to do so is likewise unknown. What is known, however, is that at the end of this complex 'black box' process, contact information for 668 political discussion partners who were willing to participate in the study (390 from within main respondents' household, 278 from outside their households) reached the field institute. Contacting these individuals resulted in 317 interviews.

6.2.2. Field Period

Fieldwork was to be conducted in such a way that as many political discussion partners as possible could be interviewed. As the main respondents who had agreed to serve as 'recruiters' needed some time to check back with their discussants whether they allowed to be contacted by the field institute, the field period only started on June 16 and continued until October 26, 2017. Interviewing for the discussant survey thus extended beyond the federal election on 24 September. Consequently, the questionnaire needed to be partly reprogrammed during the field period. This particularly concerned all questions referring to voting behaviour in the 2017 election. Questions eliciting voting intentions had to be replaced by recall questions addressing discussants' actual voting behaviour.

6.2.3. Contacting

For budgetary as well as pragmatic, methodological reasons a mixed-mode design was chosen for the discussant survey. While the political discussion partners within the main respondents' households were interviewed online via a self-administered Web survey, the discussants from outside of these households were interviewed by telephone (CATI). Discussants within the household were contacted via email three times at most and asked to participate in the survey. As to the telephone interviews with political discussion partners outside of the main respondents' households, interviewers had to undertake a maximum of 15 telephone

contact attempts on different weekdays and at different times before an individual could be written off as unit nonresponse due to unavailability.

Table 6 documents the contact process. Out of 668 available telephone numbers and email addresses, 317 complete interviews could be generated. 222 of the 390 household political discussion partners (57%) who had been contacted by email and asked to complete the Web survey never responded. Of the 278 discussants from outside main respondents' households, 129 (46%) did not participate in the survey. Most frequently, these target persons were not available via telephone at any time (e.g., no one picked up, interviewers only reached the answering machine). Some of them refused to participate in the survey although, according to the main respondents who had mediated the contact, they had initially agreed. 14 telephone numbers turned out to be wrong and could not be corrected during the field period. On average, it took 3.3 contact attempts (SD = 3.5) by the interviewer to obtain a telephone interview or to write the case off as nonresponse. To realize a complete interview, interviewers needed to contact discussion partners 2.7 times on average (SD = 2.9).

Table 6: Results of contacting

	Frequency	Percentage
Complete interview realized	317	47.5
Not member of target group (CATI)	3	0.4
No one picks up phone / phone busy (CATI)	21	3.1
Target person not available when called (CATI)	5	0.7
Target person refused (CATI)	43	6.4
Answering machine (CATI)	42	6.3
Wrong telephone number / no connection (CATI)	14	2.1
No interview possible (CATI)	1	0.1
Target person refused (Web)	222	33.2
Total	668	100.0

6.2.4. Incentives

Since it was clear from the outset that contacting discussants for interviews would be difficult, a relatively complex incentive scheme was used. Discussants were offered an incentive for participating in the survey. Like the main respondents, they could choose between three different incentives, all worth 10 Euro. 54% of the respondents opted for cash, 36% for the Amazon voucher, and 10% for the gift voucher. Since contacting the discussants critically depended on the main respondents' cooperation, which in turn depended very much on the interviewers' ability to motivate main respondents to take an active part in the study, both main respondents and interviewers were offered extra incentives for their efforts. The main respondents received additional five Euros for each political discussion partner successfully recruited into the pool of discussants, and another five Euros if an interview was actually realized. The interviewers received an extra incentive of five Euros for each political discussion partner whose contact details they could acquire.

6.2.5. Interviewers and Interviewing

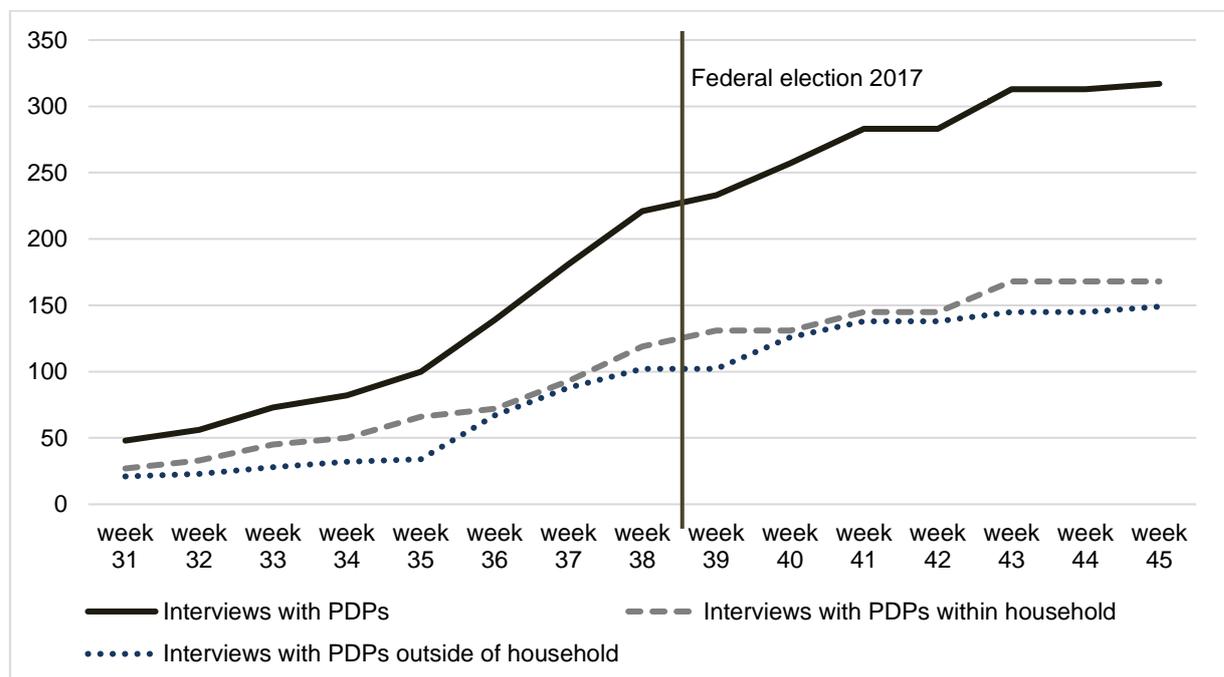
The online survey with discussants from main respondents' households was self-administered. Five interviewers were employed to conduct the telephone interviews with discussants from outside the main respondents' households. The interviews were conducted from Förster & Thelen's CATI studio in Bochum. Three interviewers were male, two female. Their average age was 43 years (SD = 16.9); ages ranged from 22 to

66 years. All of them were students or held a university degree. Their experience as interviewers varied in duration. All interviewers were required to participate in a personal training workshop in the CATI-studio. On average, each interviewer conducted 31 interviews (SD = 36). The overall range of interviews per interviewer was from two to 93 interviews. The interviewers were asked two rating questions about the interviews. They assessed the interviewees' willingness to take part in the survey as overall good. Around 68% of the respondents were considered as very communicative, 22% somewhat communicative and only 10% less communicative. Both the telephone and the online interview took around 31 minutes on average.

6.2.6. Data Collection

Data collection started on June 16 and ended on October 26, 2017. Fieldwork was closely monitored. Twice a week, the field institute compiled a field report. Based on these data, Figure 6 displays the cumulative number of successfully conducted interviews with political discussion partners (PDP) over time. As the solid line in black shows, the number of interviews only slightly increased until calendar week 35. Subsequently, the number sharply increased (from 100 to more than 200) until calendar week 38. From then on, the number of discussant interviews slowly but continuously increased until the reservoir of contact data was exhausted and the final number of 317 completed interviews was reached. As the dashed line for household discussion partners and the dotted line for non-household discussion partners in Figure 6 show, the number of successfully completed interviews with household partners was always somewhat higher throughout the entire field period than the number of interviews with non-household discussants.

Figure 6: Discussant interviews accumulated over time (count)



6.2.7. Quality Checks and Data Cleaning

Due to the complicated multi-stage process that ultimately led to the discussant interviews, it was clear that careful quality checks were necessary in order to ensure that the interviewed individuals were identical to the political discussion partners named by the main respondents as members of their egocentric networks.

To that end, the information on the demographic attributes gender and age was compared between the discussant dataset and the proxy information given by the main respondents in response to the name inter-preter questions. As a rule, all cases with mismatching data on both attributes were omitted. Moreover, discussant interviews were dropped if the age reported by the main respondent and the age provided by the discussants themselves differed by ten years or more without any plausible explanations (such as typos). These extensive quality controls were guided by a conservative philosophy. Whenever it appeared doubtful that an interview had actually been conducted with the right target person, it was deleted from the dataset. In total, this led to the exclusion of 37 interviews, which is a quite substantial share of all interviews. In addition, four interviews needed to be deleted because the MR1 interviews from which they had been derived had been deleted as a result of quality control (see above). On the other hand, six interviews were added to the 276 interviews. These interviews originated from the MR1 survey and resulted from occurrences where erroneously two persons from the same household had been interviewed. According to the study guidelines, in these cases only one interview was to be maintained in the MR1 dataset. In the interest of sufficient case numbers to allow for meaningful analyses, the respective other interviews were added to the PDP dataset. The final dataset thus consists of 282 follow-up interviews with political discussion partners.

6.2.8. Response Rates

Table 7 provides key parameters describing the process of recruiting egocentric network members for the PDP survey. Of the 1,600 successfully interviewed main respondents, 1,443 named at least one discussant in response to the name generator questions. Overall, these 1,443 main respondents named 3,428 discussants. These individuals constituted the population of the PDP survey. Specifically, it consisted of 1,107 political discussion partners within main respondents' households (PDP1), 1,305 first named political discussion partners outside these households (PDP2), and 1,016 second named out-of-household discussants (PDP3).

Table 7: Key data on the snowballing process for PDP interviews

	Frequency
1. MR1 interviews	1,600
2. MR1 mentioning at least one PDP in egocentric network	1,443 (90.2% of 1.)
3. Total number of PDPs in egocentric network	3,428
4. MR1 providing contact information of PDP	518 (35.9% of 2.)
5. PDPs for whom contact information provided	668
6. MR1 successfully recruiting at least one PDP for interview	246 (17.0% of 2.)
7. Correct PDPs successfully interviewed	282 (8.2% of 3.)

Since observance of German data privacy laws required a key part of the recruitment process to be delegated to the main respondents, many details of the recruitment process of discussants for PDP interviews are unknown. This concerns the number of main respondents who were actually willing to contact their political discussion partners and to ask them whether they would like to participate in the PDP survey and the – presumably smaller – number of those who transformed this motivation into activity by actually asking their discussants. It also includes the – presumably yet again smaller – number of discussants who reacted positively to these approaches. All that is known is the final outcome: At the end of this in large parts opaque recruitment process, 518 main respondents submitted contact data of 668 individuals (374 of which belonged to the MR1 respondents' households) who were reported to be willing to take part in the discussant survey. Out of this pool, 317 complete interviews could be successfully generated, of which, however, a sizable number had to be deleted after quality control. This resulted in a final dataset of 282 unequivocally correct

interviews with discussants of altogether 246 main respondents. This corresponds to a response rate of 8.2% among the population of all discussants mentioned as members of main respondents' egocentric networks, and of 17.0% among those who named at least one network member (equivalent to 15.4% of all MR1 respondents). 162 of these PDP interviewees were household members (corresponding to 14.6% of this particular sub-population of discussants). 75 (5.7%) respectively 45 (4.4%) concerned first- and second-named discussants from outside these households.

Table 8: AAPOR's outcome rates for PDP

Interview (Category 1)	
Complete	276
Partial	0
Added household interview	6
Total	282
Eligible, non-interview (Category 2)	
Refusal and break-off	43
Refusal	222
Respondent unavailable during field period	5
Technical problems - sound quality	1
Cases omitted after quality control	41
Unknown eligibility, non-interview (Category 3)	
No answer	21
Answering machine	42
Not eligible (Category 4)	
Out of sample - other strata than originally coded	3
Non-working number	14
Total sample used	668
Summary dispositions	
I=Complete interviews	276
P=Partial interviews	0
A=Added interviews	6
R=Refusal and break-off	265
NC=Non-contact	5
O=Other	1
UH=Unknown household	63
UO=Unknown other	0
Response rate: $I/(I+P) + (R+NC+O) + (UH+UO)$	45.25%
Cooperation rate: $I/(I+P)+R+O$	50.92%
Refusal rate: $R/((I+P)+(R+NC+O) + UH + UO)$	43.55%
Contact rate: $(I+P)+R+O / (I+P)+R+O+NC+ (UH + UO)$	88.85%

For the steps from the initial pool of contact data for 668 discussants to the 282 successfully completed interviews with correct target persons, AAPOR's (2016) outcome rates can be calculated (Table 8). 265 individuals refused to be interviewed (although according to the information provided by the main respondents they had initially agreed to take part). The contact details of 63 individuals could not be verified, as the phone was never answered. The resulting AAPOR response rate for PDP interviews was 45.2%, which is

fairly good. Differentiated by type of network member, this corresponds to 43.4% for the household discussion partners, 48.7% for the first-named out-of-household discussants, and 48.9% for the second-named out-of-household discussants. The cooperation rate was 50.9%, the refusal rate 43.6%, and the contact rate 88.9%.

How does this outcome fare in comparison to previous studies using similar snowball designs to study political talk? To the extent they could be retrieved from publications, Hopmann (2012) has compiled various kinds of response data for studies of this kind. Compared to these studies, the number of main respondents providing contact information in the CoDem project appears rather low. Huckfeldt and Sprague (1995) reached 50%, Huckfeldt et al. (2004) 49%, and Rössler (1997) 45%, whereas the corresponding number for the CoDem project amounts to 35.9% (Table 7). Given that all these reference studies were conducted more than two decades earlier, it seems reasonable to attribute this to the general trend of declining response rates in survey research. The share of political discussants for whom contact information was provided by main respondents was also lower in the CoDem project than in previous studies (Laumann 1969: 90%, Pappi and Wolf 1984: 82%, Huckfeldt and Sprague 1995: 43%, Rössler 1997: 32%, Roch 2005: 24%). Even when ignoring the substantial amount of error contained in the contact information conveyed by main respondents to the survey institute, the corresponding share for the CoDem study amounts to only 19.5% (668 potential target persons relative to a population of 3,428 – to which, as it turned out, several of them actually did not belong). Yet, when looking at the outcomes of earlier studies as a time series that of CoDem once again seems less out of range, since a clear and quite dramatic downward trend over time cannot be overlooked. With regard to response rates obtained from interview attempts with discussants for whom contact information was available, the outcome of the CoDem study seems satisfactory, especially when yet again taking into account the general tendency towards declining response rates in survey research (Laumann 1969: 69%, Pappi and Wolf 1984: 50%, Huckfeldt and Sprague 1995: 52%, Rössler 1997: 62%, Roch 2005: 41% – compared to CoDem's 45.2%). All in all, this evidence suggests that the relatively weak outcome of the PDP component of the CoDem project is the result of the conjunction of two phenomena: the pervasive long-term decline of response rates that generally renders survey research more difficult, but in particular also the adverse conditions that resulted from the methodological constraints imposed by Germany's strict data privacy regulations on complex designs of the kind applied in the CoDem study.

Yet another angle to assess the outcome of the PDP component of the project refers to the relationship between the PDP interviews and the MR1 respondents they refer to. As outlined above, the aim was to conduct as many discussant interviews as possible, without any constraints. This can lead to very different patterns of matching MR1 and PDP interviews. At one extreme, PDP interviews could cluster on a small number of main respondents whose complete discussant networks were interviewed. At the other extreme, it could also be that each interviewed discussant relates to another main respondent, with no overlap at all. The actual data structure turns out to be much closer to the latter pattern than to the former (Table 9). It occurred very rarely that more than one discussant interview was realized for one and the same MR1 interview, altogether only for 32 main respondents (corresponding to just 13.0% of those 246 main respondents for whom valid PDP interviews could be conducted). By contrast, the number of cases in which PDP interviews could be conducted with three members of main respondents' egocentric networks amounts to just four. The by far most frequent constellation consists of main respondents with one follow-up interview (214 or 87.0%). The PDP data are thus useful for dyadic analyses, but not for analyses of larger networks.

Table 9: PDP interviews related to MR1 interviews

	MR1 recruiting ... for successful interview	
	Frequency	Percentage
PDP1	138	56.1
PDP2	48	19.5
PDP3	28	11.4
PDP1 and PDP2	15	6.1
PDP1 and PDP3	5	2.0
PDP2 and PDP3	8	3.3
PDP1, PDP2 and PDP3	4	1.6
Total of MR1	246	

6.3. Component 3: Main Respondent 2nd Panel Wave Survey (MR2)

6.3.1. Population and Sampling

The population of the project's third component is the sum of all MR1 interviews. However, for legal reasons, re-interviews could only be attempted with the main respondents who, upon completion of their first-wave interviews, had given their consent to being contacted again. Overall, 1,245 main respondents (77.8%) out of 1,600 had been willing to serve as panelists and to participate in a 30-minute telephone interview. Of these, 877 main respondents actually participated in the second panel wave.

6.3.2. Field Period

Since one of the project's aims is to explore the impact of situational circumstances on citizens' political talk, the second wave of the main respondent interviews was planned to be conducted several months after the federal election, assuming that this would be a time of 'normal' politics. MR1 was thus to register the mechanisms of citizens' everyday talk during the highly politicized circumstances of an election campaign, whereas MR2 was to reflect the conditions of 'between-election' communications. Accordingly, fieldwork was scheduled to start on January 9, 2018, that is, three and a half months after the federal election, and originally set out to be completed within about one month. Since interviewing was more tedious than expected, fieldwork was only completed on March 12, 2018. More importantly, the aim to conduct the second wave under conditions of 'normal politics' was not achieved in the desired way. The reason was the exceedingly long and complicated process of government formation that followed the 2017 election (Siefken 2018). Since none of the established combinations of prospective coalition partners – CDU/CSU and FDP or SPD and Greens – had emerged from the election with a majority of seats in the Federal Parliament, cooperation models had to be considered that none of the parties had aimed for. Forming a new government therefore took much longer than ever before in German history, and the spectre of a new election that might need to be called if no new government coalition could be agreed upon loomed large in public debate for many months. Ultimately, a government could be formed, but only at the second attempt, after negotiations about a possible tripartite coalition of CDU/CSU, FDP and Greens had failed. Since neither the successful completion nor the duration of this process could be anticipated with any certainty after the completion of MR1, fieldwork for MR2 was postponed. As a consequence, interviewing for MR2 largely paralleled the subsequent

– controversial, but ultimately successful – process of negotiating and deciding about a renewal of the Grand Coalition between Christian Democrats and Social Democrats, which had also governed before but had been strictly rejected by the SPD at first.

6.3.3. Contacting

Interviewers were required to undertake a maximum of 15 contact attempts by telephone on different week-days and at different times before a respondent could be written off as unit nonresponse due to unavailability. On average, it took 7.8 contacts (SD = 9.7) by the interviewer before a target person either completed an interview or was written off as unit nonresponse. To result in a successful interview, interviewers needed to contact main respondents 4.4 times on average (SD = 3.9).

Table 10 gives an overview of the results of the contacting process. Of the 1,245 main respondents who were willing to participate in the second panel wave, 877 (70.4%) completed a second-wave interview. 11.5% of the main respondents who had agreed to a second interview ultimately refused to do so when contacted again. 15.8% could not be reached via telephone at any time, either because the target person did not pick up the phone, was not reachable via telephone, or because a wrong telephone number had been recorded during the first-wave interviews.

Table 10: Results of contacting

	Frequency	Percentage
Complete interview realized	877	70.4
No one picks up phone / phone busy	28	2.2
Target person not available when called	16	1.3
Appointment	19	1.5
Target person refused	143	11.5
Answering machine	80	6.4
Wrong telephone number / no connection	74	5.9
Termination by target person and end of interview	6	0.5
Termination with new appointment	2	0.2
Total	1,245	100.0

6.3.4. Incentives

Like in the first wave, all respondents were offered an incentive to take part in the survey. To counteract panel attrition, the incentive was increased by five Euro to 15 Euros in total. Again, respondents could choose between three different incentives. 79% opted for cash, 16% for the Amazon voucher, and 5% for the gift voucher.

6.3.5 Interviewers and Interviewing

In total, 31 interviewers were employed to conduct telephone interviews with the main respondents. They were working from Förster & Thelen's telephone studio in Bochum. 42% of them were male. On average, the interviewers were 37 years old (SD = 14.8), with the overall age distribution ranging from 19 to 66 years. The majority of interviewers held a certificate from a high school (55%), followed by those with a certificate

from a technical, middle or commercial school (23%). Most of the interviewers were students (45%). While some interviewers were rather new to the job with an experience of less than a year, others had been conducting telephone interviews for the field institute for more than 15 years.

All interviewers were required to attend a personal training workshop of three hours, which took place on site in the telephone studio and was conducted jointly by the project staff and Förster & Thelen's project supervisors. The project team provided some general information on the project and informed the interviewers about the project's general setup. The institute's own specialists then walked interviewers through the questionnaire. Fieldwork started immediately afterwards, under personal observation of the project staff, which could also intervene to settle starting problems. On average, each interviewer conducted 28 interviews (SD = 46), with a minimum of one interview and a maximum of 223 interviews per interviewer. The interviews took around 30 minutes on average. To gain insight into the interview situation, the interviewers were prompted to answer two interviewer questions after its completion. According to these responses, almost all respondents (89%) showed a good willingness to participate in the survey. 24% appeared to be very communicative, 48% rather communicative and 28% less or not communicative at all.

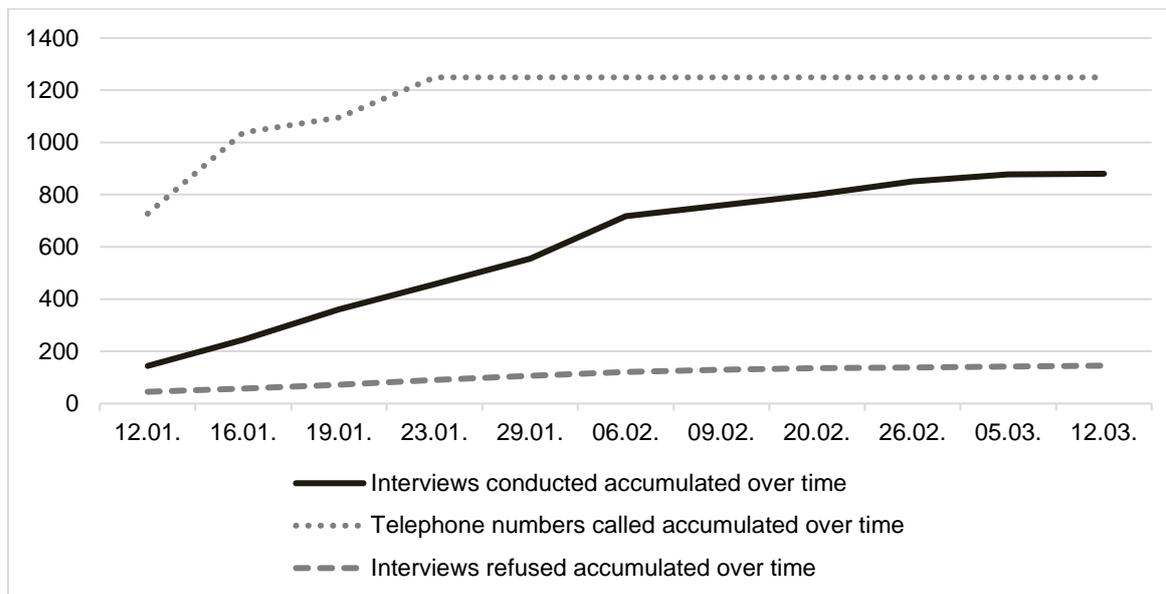
6.3.6. Data Collection

The progress of fieldwork was closely monitored and regularly discussed in conference calls with the survey institute's responsible staff. Once a week, a field report was submitted to the project staff. Based on these data, the development of fieldwork was closely observed (Figure 7). As indicated by the black line, the majority of interviews were conducted until the beginning of February. From then on, the number of successfully conducted interviews decreased. Towards the end of fieldwork, hardly any interviews with main respondents could be realized any more, either because target persons did not pick up the phone or were not reachable via telephone at any time. Contact attempts were terminated when the reservoir of possible interviews was completely exhausted. The dotted line displays the cumulative count of telephone numbers called over time. By January 23, all telephone numbers had been called at least once. The dashed line displays the number of refusals accumulated over time. The number of refused interviews slightly increased until the end of January but remained quite stable afterwards.

6.3.7. Quality Checks and Data Cleaning

After completion of the data collection, several quality checks were performed to ensure that only persons who had already participated in MR1 were interviewed in the second wave. To that end, the basic demographic attributes gender, age and residence registered during the second wave were compared to the corresponding data from the first wave. The checks indicated no problems with identifying the correct target persons during the re-interview process. Consequently, no cases needed to be deleted from the dataset.

Figure 7: Development of fieldwork accumulated over time



6.3.8. Response Rate

As outlined above, 1,245 of the 1,600 MR1 respondents agreed at the end of their MR1 interviews to take part in a second panel wave. Thus, only 77.8% of the MR1 respondents constituted the pool of respondents who could be contacted again to conduct an MR2 interview. Table 11 displays AAPOR's (2016) outcome rates for these respondents. While 877 complete interviews could be generated from this pool, 151 respondents ultimately refused an interview despite having agreed to it during their MR1 interviews. For 108 respondents, no interviews could be realized, as it was not possible to reach them via telephone at any time. 74 telephone numbers were false and could not be corrected until the end of fieldwork. According to AAPOR, the response rate for the second panel wave among main respondents was thus 74.9% – a panel re-interview rate that is satisfactory, but not excellent. The cooperation rate was 83.8%, the refusal rate 12.9%, and the contact rate 89.4%. Relating successfully conducted MR2 interviews to all MR1 respondents instead of only to the base sample of MR1 respondents who had been willing to take part in the second panel wave results in a relatively low re-interview rate of 54.8%.

7. Sampling Bias and Representativeness

Random sampling aims to generate datasets that mirror the populations on which they are based in every respect. Since the CoDem study builds on a register-based random sample, coverage error (Groves et al. 2004: 67-92) should be minor to negligible. To be sure, the accuracy of the register depends to some extent on residents' cooperation, for instance their readiness to notify the municipal administration of address changes. Therefore, it cannot be expected to be completely flawless. Moreover, as mentioned, the sample reflects the register at its state of half a year before election day. However, the coverage bias caused by this kind of error should generally be very small and, in any case, considerably smaller than the coverage error connected to any other method of sampling for population surveys. A much more serious source of potential bias comes from nonresponse. Many factors intervene in the process of identifying respondents and collecting data, leading to (unit) nonresponse. As these factors typically operate not in a random fashion but systematically, they can lead to biased samples that deviate more or less strongly from their population (Groves

et al. 2004: 54-9, 169-87; Courser et al. 2009; Schnell 2012: 157-84; Stoop 2016). Since the project aims to collect data that can be generalized to the target population of all residents of Mannheim who were eligible to vote in the 2017 German federal election, it is necessary to examine the characteristics and the extent of the resulting sampling error by inspecting the representativeness of the collected data.

Table 11: AAPOR's outcome rates for MR2

Interview (Category 1)	
Complete	877
Partial	0
Eligible, non-interview (Category 2)	
Refusal and break-off	8
Refusal	143
Respondent unavailable during field period	16
Other, non-refusals	19
Unknown eligibility, non-interview (Category 3)	
No answer	28
Answering machine	80
Not eligible (Category 4)	
Non-working number	74
Total sample used	1,245
Summary dispositions	
I=Complete interviews	877
P=Partial interviews	0
R=Refusal and break-off	151
NC=Non-contact	16
O=Other	19
UH=Unknown household	108
UO=Unknown other	0
Response rate: $I/(I+P) + (R+NC+O) + (UH+UO)$	74.89%
Cooperation rate: $I/(I+P)+R+O)$	83.76%
Refusal rate: $R/((I+P)+(R+NC+O) + UH + UO))$	12.89%
Contact rate: $(I+P)+R+O / (I+P)+R+O+NC+ (UH + UO)$	89.41%

As documented above, many of the target persons selected for inclusion in the study could not be reached by interviewers at any time or, if successfully contacted, refused to take part. This occurred already during interviewing for MR1 and again during fieldwork for the re-interviews of MR2. The process of recruiting and contacting discussants for follow-up interviews entails an even higher potential for such disturbances than regular interviewing. Comparing the realized samples for MR1, MR2 and main respondents for whom at least one PDP interview was successfully conducted to a number of population parameters (measured at the time of the federal election), the following section offers a diagnosis of the amount and kind of sampling bias in the data collected by the study. Specifically, it looks at three basic demographic parameters: the districts of the city in which respondents resided, gender and age. In addition, it is also examined whether sampling bias was connected to respondents' behaviour at the 2017 federal election (turnout and second votes). Specifically, for the derivative components of the research design, sampling bias can also be analysed with reference to attributes that have been registered during MR1 interviews but are unknown for the population. Accordingly, specifically for the MR2 interviews and those MR1 respondents with whom PDP

interviews could be realized, the following section also inspects sampling bias with regard to education as a further key demographic attribute and political interest as an important indicator of political motivation.

7.1. City Districts

Being based on a one-stage, register-based random sample, the MR1 survey aimed to mirror the distribution of the population across the various districts of the city of Mannheim. Tables 12 to 16 trace in great detail how well the regional distributions corresponded to the population at varying successive stages of the MR1 survey process. Table 12 shows how well the realized sample of 1,600 MR1 respondents matches the distribution of the population across the city's districts. The table documents the deviations for each district as well as overall across all districts in detail, using Pedersen's (1979) volatility index as a summary measure. Columns 1 and 2 display the distribution of the electorate over the city districts in absolute numbers and percentages at the time of the 2017 election. Based on this distribution, the target distribution of what the realized sample should have looked like in case of perfect representativeness is calculated in column 3. Columns 4 and 5 show the actual distribution of respondents across the city districts within the MR1 sample. Columns 6 and 7 depict the differences between the distribution of city districts between target and realized sample in absolute numbers and percentages. Column 8 displays the ratio between the actual and the target sample, and column 9 shows the inverse ratio.

According to Table 12, some districts' shares almost perfectly match the actual proportions of eligible voters (e.g., Almenhof, Wallstadt). Others, however, are substantially over- or underrepresented. Feudenheim stands out as a district that is represented in the sample almost twice as strongly as it should be in case of a completely even sampling process, but Lindenhof and Gartenstadt are also clearly overrepresented. In contrast, other city districts are underrepresented in the sample. This particularly concerns Schwetzingenstadt, which should be represented in the sample almost ten times stronger than it actually is. Other problematic cases are Hochstätt and Luzenberg, where the number of respondents amounts only to a fourth resp. a third of what it should have been in an ideal world without sampling error. However, the latter are small districts in which one interview more or less already made a big difference to their representation in the sample. Therefore, at closer inspection these deviations appear less dramatic. The share of Innenstadt/Jungbusch also is too low. When assuming that sampling bias is related to districts' socio-economic character, it appears rather unsurprising that Feudenheim 'overperformed' while Hochstätt, Luzenberg and Innenstadt/Jungbusch 'underperformed'. Schwetzingenstadt, however, is a middle-class neighbourhood, for which a much better outcome could be expected. The Pedersen index indicates that the overall extent of the deviations between target and realized distributions for MR1 amounts to a quite sizable 16.4%. A non-parametric chi-square test shows that the deviations are highly significant ($\chi^2(23, N= 1,600) = 254.48, p < 0.001$). With regard to how well the city districts are represented in the realized sample of MR1, a substantial sampling error is thus to be noted.

Table 13 displays largely similar patterns of over- and underrepresentation for MR2. Again, the strength of districts such as Almenhof and Wallstadt in the sample comes quite close to their actual number of eligible voters, whereas Feudenheim sticks out as a particularly strongly overrepresented district, and Hochstätt, Schwetzingenstadt as well as Innenstadt/Jungbusch as especially weakly represented ones. Luzenberg is completely missing in the second wave. This has to do in part with the fact that it is a small district, where only few respondents were to be expected even under ideal circumstances. The overall Pedersen index amounts to 20.1%, and the differences are again highly significant ($\chi^2(23, N= 877) = 185.54, p < 0.001$). Overall, the sample of the second wave thus deviates even more strongly from the population than the first wave. However, the similarity of the basic patterns suggests that the recruitment process for MR2 interviews was not a source of new systematic errors beyond those already manifest in the MR1 data.

Tables 14 to 16 split up the findings of Table 12 by zooming in on the successive steps of the sampling process, thereby allowing to better understand at which stage the deviations recorded by Table 12 first emerged. Table 14 compares the initial register sample of 14,000 target persons that has been drawn by the municipal administration for the project to the distribution of the overall population. It shows only very slight deviations. The Pedersen index amounts to just 2.4%. Hence, the initial sample was equally balanced and matched the distribution of the city's voters across the districts very well. Table 15 compares the activated sample of the target persons who were actually contacted during the interviewing process to the initial sample drawn from the register. As outlined above, in order to be on the safe side even in the unlikely case of a very low response rate, a very large number of target addresses was deliberately included in the initial sample. Of these 14,000 persons, only 7,960 were actually processed during the contacting phase.

Table 15 shows that geographic bias was first introduced in the survey process during this 'activation' stage. The selection of cases into the activated sample was made in such a way that some districts figured too strongly in the contacting process, although these deviations were not dramatic (Neckarstadt-West, Vogelstang). Others, however, were much too weakly represented in the subset of the target persons who were actually contacted. Table 15 reveals that the substantial underrepresentation of Hochstätt, Luzenberg, Schwetzingenstadt and, to a lesser extent, Innenstadt/Jungbusch emerged indeed at this stage of the survey process. Hochstätt and Luzenberg were thus not primarily underrepresented because of their low socioeconomic profile but because of an uneven inclusion of target persons in the activated sample. As indicated by the Pedersen index, which amounts to 10.8%, the deviations resulting from the selection of target persons from the initial sample for inclusion in fieldwork were overall the largest across the different stages of the survey process. As Table 16 shows, nonresponse bias in the strict sense of whether or not an interview could be successfully conducted with a person included in the activated sample did not generate similarly strong deviations. Aggregated, the deviations amounted to a Pedersen index value of 8.7, which is not all that small. However, this value is the result of an accumulation of numerous minor deviations. The only sizable deviation yet again concerns Schwetzingenstadt. This district was thus not only included in the active sample with a much too small share, but in addition also delivered a relatively large amount of unit nonresponse. Hence, the underrepresentation of this district in MR1 is the combined result of two successive stages of 'underperformance'.

Table 17 compares the distribution of city districts in the MR2 subsample, consisting of those MR1 respondents who were successfully re-interviewed, to the full sample of the first wave. It confirms the conclusion drawn above that the panel process did not introduce noteworthy additional biases into the study. All in all, the regional distribution of MR2 and MR1 respondents is quite similar (except that Luzenberg is completely missing in this sub-sample). In an analogous way, Table 18 compares the MR1 respondents for whom at least one PDP interview could be realized to the complete MR1 sample. Unsurprisingly, more substantial deviations emerge here. It appears that it was somewhat easier to obtain interviews with discussants of main respondents residing in Oststadt and Neckarstadt-West than of main respondents from other districts (which does not imply that the respective discussants themselves also lived in these districts). At the same time, no follow-up interviews could be realized with any discussants of main respondents from Hochstätt and Luzenberg. Several other districts are underrepresented in the subsample of main respondents with related PDP interviews (Schönau, Waldhof, Rheinau, Neuostheim, Neckarau).

Table 12: Distribution of city districts: MR1 compared to population

	1	2	3	4	5	6	7	8	9
City district	Electorate	Electorate (%)	Target MR1 sample	Actual MR1 sample	Actual MR1 sample (%)	Diff. actual - target	Diff. actual - target (%)	Ratio	Inverse ratio
Almenhof	4,724	2.4	38	40	2.5	2	0.1	1.04	0.96
Feudenheim	10,687	5.4	87	159	9.9	72	4.5	1.83	0.55
Friedrichsfeld	3,760	1.9	30	36	2.3	6	0.3	1.18	0.85
Gartenstadt	7,855	4.0	64	97	6.1	33	2.1	1.52	0.66
Hochstädt	1,095	0.6	9	2	0.1	-7	-0.4	0.23	4.35
Innenstadt/Jungbusch	14,574	7.4	118	62	3.9	-56	-3.5	0.52	1.92
Käfertal	16,494	8.4	134	125	7.8	-9	-0.5	0.93	1.08
Lindenhof	9,884	5.0	80	125	7.8	45	2.8	1.56	0.64
Luzenberg	1,144	0.6	9	3	0.2	-6	-0.4	0.32	3.13
Neckarau	10,227	5.2	83	71	4.4	-12	-0.7	0.86	1.16
Neckarstadt-Ost	19,606	9.9	159	120	7.5	-39	-2.4	0.75	1.33
Neckarstadt-West	8,010	4.1	65	94	5.9	29	1.8	1.45	0.69
Neuhermsheim	3,011	1.5	24	14	0.9	-10	-0.7	0.57	1.75
Neuostheim	2,020	1.0	16	13	0.8	-3	-0.2	0.79	1.27
Niederfeld	5,399	2.7	44	51	3.2	7	0.5	1.16	0.86
Oststadt	8,976	4.5	73	47	2.9	-26	-1.6	0.65	1.54
Rheinau	15,656	7.9	127	156	9.8	29	1.8	1.23	0.81
Sandhofen	9,342	4.7	76	96	6.0	20	1.3	1.27	0.79
Schönau	7,685	3.9	62	48	3.0	-14	-0.9	0.77	1.30
Schwetzingenstadt	6,493	3.3	53	6	0.4	-47	-2.9	0.11	9.09
Seckenheim	9,145	4.6	74	93	5.8	19	1.2	1.25	0.80
Vogelstang	8,828	4.5	72	64	4.0	-8	-0.5	0.89	1.12
Waldhof	6,516	3.3	53	28	1.8	-25	-1.6	0.53	1.89
Wallstadt	6,158	3.1	50	50	3.1	0	0.0	1.00	1.00
Total	197,289		1,600	1,600					
Pedersen index (difference in %):							16.4		

Table 13: Distribution of city districts: MR2 compared to population

	1	2	3	4	5	6	7	8	9
City district	Electorate	Electorate (%)	Target MR2 sample	Actual MR2 sample	Actual MR2 sample (%)	Diff. actual - target	Diff. actual - target in (%)	Ratio	Inverse ratio
Almenhof	4,724	2.4	21	21	2.4	0	0.0	1.00	1.00
Feudenheim	10,687	5.4	48	86	9.8	38	4.4	1.79	0.56
Friedrichsfeld	3,760	1.9	17	21	2.4	4	0.5	1.24	0.81
Gartenstadt	7,855	4.0	35	63	7.2	28	3.2	1.80	0.56
Hochstätt	1,095	0.6	5	1	0.1	-4	-0.4	0.20	5.00
Innenstadt/Jungbusch	14,574	7.4	65	23	2.6	-42	-4.8	0.35	2.86
Käfertal	16,494	8.4	73	57	6.5	-16	-1.9	0.78	1.28
Lindenhof	9,884	5.0	44	70	8.0	26	3.0	1.59	0.63
Luzenberg	1,144	0.6	5	0	0.0	-5	-0.6	0.00	
Neckarau	10,227	5.2	45	29	3.3	-16	-1.9	0.64	1.56
Neckarstadt-Ost	19,606	9.9	87	65	7.4	-22	-2.5	0.75	1.33
Neckarstadt-West	8,010	4.1	36	46	5.2	10	1.2	1.28	0.78
Neuhermsheim	3,011	1.5	13	7	0.8	-6	-0.7	0.54	1.85
Neuostheim	2,020	1.0	9	7	0.8	-2	-0.2	0.78	1.28
Niederfeld	5,399	2.7	24	28	3.2	4	0.5	1.17	0.85
Oststadt	8,976	4.5	40	37	4.2	-3	-0.3	0.93	1.08
Rheinau	15,656	7.9	70	93	10.6	23	2.7	1.33	0.75
Sandhofen	9,342	4.7	42	56	6.4	14	1.7	1.33	0.75
Schönau	7,685	3.9	34	19	2.2	-15	-1.7	0.56	1.79
Schwetzingenstadt	6,493	3.3	29	6	0.7	-23	-2.6	0.21	4.76
Seckenheim	9,145	4.6	41	59	6.7	18	2.1	1.44	0.69
Vogelstang	8,828	4.5	39	33	3.8	-6	-0.7	0.85	1.18
Waldhof	6,516	3.3	29	14	1.6	-15	-1.7	0.48	2.08
Wallstadt	6,158	3.1	27	36	4.1	9	1.0	1.33	0.75
Total	197,289		877	877					
Pedersen index (difference in %):							20.1		

Table 14: Distribution of city districts: Initial register sample compared to population

	1	2	3	4	5	6	7	8	9	
City district	Electorate	Electorate (%)	Target register sample	Actual register sample	Actual register sample (%)	Diff. actual - target	Diff. actual - target (%)	Ratio	Inverse ratio	
Almenhof	4,724	2.4	335	306	2.2	-29	-0.2	0.91	1.10	
Feudenheim	10,687	5.4	758	780	5.6	22	0.2	1.03	0.97	
Friedrichsfeld	3,760	1.9	267	245	1.8	-22	-0.2	0.92	1.09	
Gartenstadt	7,855	4.0	557	591	4.2	34	0.2	1.06	0.94	
Hochstädt	1,095	0.6	78	83	0.6	5	0.0	1.07	0.94	
Innenstadt/Jungbusch	14,574	7.4	1,034	1,044	7.5	10	0.1	1.01	0.99	
Käfertal	16,494	8.4	1,170	1,106	7.9	-64	-0.5	0.94	1.06	
Lindenhof	9,884	5.0	701	674	4.8	-27	-0.2	0.96	1.04	
Luzenberg	1,144	0.6	81	109	0.8	28	0.2	1.34	0.74	
Neckarau	10,227	5.2	726	769	5.5	43	0.3	1.06	0.94	
Neckarstadt-Ost	19,606	9.9	1,391	1,315	9.4	-76	-0.5	0.95	1.06	
Neckarstadt-West	8,010	4.1	568	589	4.2	21	0.1	1.04	0.97	
Neuhermsheim	3,011	1.5	214	222	1.6	8	0.1	1.04	0.96	
Neuostheim	2,020	1.0	143	131	0.9	-12	-0.1	0.91	1.09	
Niederfeld	5,399	2.7	383	377	2.7	-6	0.0	0.98	1.02	
Oststadt	8,976	4.5	637	634	4.5	-3	0.0	1.00	1.00	
Rheinau	15,656	7.9	1,111	1,193	8.5	82	0.6	1.07	0.93	
Sandhofen	9,342	4.7	663	693	5.0	30	0.2	1.05	0.96	
Schönau	7,685	3.9	545	582	4.2	37	0.3	1.07	0.94	
Schwetzingenstadt	6,493	3.3	461	412	2.9	-49	-0.3	0.89	1.12	
Seckenheim	9,145	4.6	649	659	4.7	10	0.1	1.02	0.98	
Vogelstang	8,828	4.5	626	635	4.5	9	0.1	1.01	0.99	
Waldhof	6,516	3.3	462	412	2.9	-50	-0.4	0.89	1.12	
Wallstadt	6,158	3.1	437	439	3.1	2	0.0	1.00	1.00	
Total	197,289		14,000	14,000						
Pedersen index (difference in %):							2.4			

Table 15: Distribution of city districts: Activated sample compared to initial register sample

	1	2	3	4	5	6	7	8	9
City district	Register sam- ple	Register sam- ple (%)	Target acti- vated sample	Actual acti- vated sample	Actual act. sample (%)	Diff. actual - target	Diff. actual - target (%)	Ratio	Inverse ratio
Almenhof	306	2.2	174	219	2.8	45	0.6	1.26	0.79
Feudenheim	780	5.6	443	505	6.3	62	0.8	1.14	0.88
Friedrichsfeld	245	1.8	139	132	1.7	-7	-0.1	0.95	1.06
Gartenstadt	591	4.2	336	409	5.1	73	0.9	1.22	0.82
Hochstätt	83	0.6	47	12	0.2	-35	-0.4	0.25	3.93
Innenstadt/Jungbusch	1,044	7.5	594	272	3.4	-322	-4.0	0.46	2.18
Käfertal	1,106	7.9	629	638	8.0	9	0.1	1.01	0.99
Lindenhof	674	4.8	383	486	6.1	103	1.3	1.27	0.79
Luzenberg	109	0.8	62	19	0.2	-43	-0.5	0.31	3.26
Neckarau	769	5.5	437	507	6.4	70	0.9	1.16	0.86
Neckarstadt-Ost	1,315	9.4	748	682	8.6	-66	-0.8	0.91	1.10
Neckarstadt-West	589	4.2	335	436	5.5	101	1.3	1.30	0.77
Neuhermsheim	222	1.6	126	99	1.2	-27	-0.3	0.78	1.27
Neuostheim	131	0.9	74	78	1.0	4	0.0	1.05	0.95
Niederfeld	377	2.7	214	256	3.2	42	0.5	1.19	0.84
Oststadt	634	4.5	360	293	3.7	-67	-0.8	0.81	1.23
Rheinau	1,193	8.5	678	726	9.1	48	0.6	1.07	0.93
Sandhofen	693	5.0	394	477	6.0	83	1.0	1.21	0.83
Schönau	582	4.2	331	363	4.6	32	0.4	1.10	0.91
Schwetzingenstadt	412	2.9	234	62	0.8	-172	-2.2	0.26	3.78
Seckenheim	659	4.7	375	457	5.7	82	1.0	1.22	0.82
Vogelstang	635	4.5	361	471	5.9	110	1.4	1.30	0.77
Waldhof	412	2.9	234	139	1.7	-95	-1.2	0.59	1.69
Wallstadt	439	3.1	250	222	2.8	-28	-0.3	0.89	1.12
Total	14,000		7,960	7,960					
Pedersen index (difference in %):							10.8		

Table 16: Distribution of city districts: MR1 compared to activated sample

	1	2	3	4	5	6	7	8	9
City district	Activated sample	Activated sample (%)	Target MR1 sample	Actual MR1 sample	Actual MR1 sample (%)	Diff. actual - target	Diff. actual - target in (%)	Ratio	Inverse ratio
Almenhof	219	2.8	44	40	2.5	-4	-0.3	0.90	1.11
Feudenheim	505	6.3	102	159	9.9	57	3.6	1.57	0.64
Friedrichsfeld	132	1.7	27	36	2.3	9	0.6	1.34	0.75
Gartenstadt	409	5.1	82	97	6.1	15	0.9	1.18	0.85
Hochstädt	12	0.2	2	2	0.1	0	0.0	0.83	1.20
Innenstadt/Jungbusch	272	3.4	54	62	3.9	8	0.5	1.14	0.88
Käfertal	638	8.0	129	125	7.8	-4	-0.2	0.97	1.03
Lindenhof	486	6.1	98	125	7.8	27	1.7	1.28	0.78
Luzenberg	19	0.2	4	3	0.2	-1	-0.1	0.79	1.27
Neckarau	507	6.4	102	71	4.4	-31	-1.9	0.70	1.43
Neckarstadt-Ost	682	8.6	137	120	7.5	-17	-1.1	0.88	1.14
Neckarstadt-West	436	5.5	89	94	5.9	5	0.3	1.06	0.94
Neuhermsheim	99	1.3	20	14	0.9	-6	-0.4	0.70	1.43
Neuostheim	78	1.0	16	13	0.8	-3	-0.2	0.83	1.20
Niederfeld	256	3.2	51	51	3.2	0	0.0	0.99	1.01
Oststadt	293	3.7	59	47	2.9	-12	-0.7	0.80	1.25
Rheinau	726	9.1	146	156	9.8	10	0.6	1.07	0.93
Sandhofen	477	6.0	96	96	6.0	0	0.0	1.00	1.00
Schönau	363	4.6	73	48	3.0	-25	-1.6	0.66	1.52
Schwetzingenstadt	62	0.8	12	6	0.4	-6	-0.4	0.48	2.08
Seckenheim	457	5.7	92	93	5.8	1	0.1	1.02	0.98
Vogelstang	471	5.9	95	64	4.0	-31	-1.9	0.68	1.47
Waldhof	139	1.7	28	28	1.8	0	0.0	1.01	0.99
Wallstadt	222	2.8	44	50	3.1	6	0.3	1.12	0.89
Total	7,960		1,600	1,600					
Pedersen index (difference in %):							8.7		

Table 17: Distribution of city districts: MR2 compared to MR1

	1	2	3	4	5	6	7	8	9
City district	MR1	MR1 (%)	Target MR2	Actual MR2	Actual MR2 (%)	Diff. actual - target	Diff. actual - target (%)	Ratio	Inverse ratio
Almenhof	40	2.5	22	21	2.4	-1	-0.1	0.96	1.04
Feudenheim	159	9.9	87	86	9.8	-1	-0.1	0.99	1.01
Friedrichsfeld	36	2.3	20	21	2.4	1	0.1	1.06	0.94
Gartenstadt	97	6.1	53	63	7.2	10	1.1	1.18	0.85
Hochstätt	2	0.1	1	1	0.1	0	0.0	0.91	1.10
Innenstadt/Jungbusch	62	3.9	34	23	2.6	-11	-1.3	0.68	1.47
Käfertal	125	7.8	69	57	6.5	-12	-1.3	0.83	1.20
Lindenhof	125	7.8	69	70	8.0	1	0.2	1.02	0.98
Luzenberg	3	0.2	2	0	0.0	-2	-0.2		
Neckarau	71	4.4	39	29	3.3	-10	-1.1	0.75	1.33
Neckarstadt-Ost	120	7.5	66	65	7.4	-1	-0.1	0.99	1.01
Neckarstadt-West	94	5.9	52	46	5.2	-6	-0.6	0.89	1.12
Neuhermsheim	14	0.9	8	7	0.8	-1	-0.1	0.91	1.10
Neuostheim	13	0.8	7	7	0.8	0	0.0	0.98	1.02
Niederfeld	51	3.2	28	28	3.2	0	0.0	1.00	1.00
Oststadt	47	2.9	26	37	4.2	11	1.3	1.44	0.69
Rheinau	156	9.8	86	93	10.6	7	0.9	1.09	0.92
Sandhofen	96	6.0	53	56	6.4	3	0.4	1.06	0.94
Schönau	48	3.0	26	19	2.2	-7	-0.8	0.72	1.39
Schwetzingenstadt	6	0.4	3	6	0.7	3	0.3	1.82	0.55
Seckenheim	93	5.8	51	59	6.7	8	0.9	1.16	0.86
Vogelstang	64	4.0	35	33	3.8	-2	-0.2	0.94	1.06
Waldhof	28	1.8	15	14	1.6	-1	-0.2	0.91	1.10
Wallstadt	50	3.1	27	36	4.1	9	1.0	1.31	0.76
Total	1,600		877	877					
Pedersen index (difference in %):							6.2		

Table 18: Distribution of city districts: MR1 with at least one PDP interview compared to all MR1

	1	2	3	4	5	6	7	8	9
City district	MR1	MR1 %	Target MR1 with PDP	Actual MR1 with PDP	Actual MR1 with PDP (%)	Diff. actual - target	Diff. actual - target (%)	Ratio	Inverse ratio
Almenhof	40	2.5	6	5	2.0	-1	-0.5	0.81	1.23
Feudenheim	159	9.9	24	21	8.5	-3	-1.4	0.86	1.16
Friedrichsfeld	36	2.3	6	6	2.4	0	0.2	1.08	0.93
Gartenstadt	97	6.1	15	18	7.3	3	1.3	1.21	0.83
Hochstädt	2	0.1	0	0	0.0	0	-0.1		
Innenstadt/Jungbusch	62	3.9	10	7	2.8	-3	-1.0	0.73	1.37
Käfertal	125	7.8	19	20	8.1	1	0.3	1.04	0.96
Lindenhof	125	7.8	19	21	8.5	2	0.7	1.09	0.92
Luzenberg	3	0.2	0	0	0.0	0	-0.2		
Neckarau	71	4.4	11	7	2.8	-4	-1.6	0.64	1.56
Neckarstadt-Ost	120	7.5	18	23	9.3	5	1.8	1.25	0.80
Neckarstadt-West	94	5.9	14	22	8.9	8	3.1	1.52	0.66
Neuhermsheim	14	0.9	2	2	0.8	0	-0.1	0.93	1.08
Neuostheim	13	0.8	2	1	0.4	-1	-0.4	0.50	2.00
Niederfeld	51	3.2	8	9	3.7	1	0.5	1.15	0.87
Oststadt	47	2.9	7	17	6.9	10	4.0	2.35	0.43
Rheinau	156	9.8	24	12	4.9	-12	-4.9	0.50	2.00
Sandhofen	96	6.0	15	19	7.7	4	1.7	1.29	0.78
Schönau	48	3.0	7	3	1.2	-4	-1.8	0.41	2.44
Schwetzingenstadt	6	0.4	1	1	0.4	0	0.0	1.08	0.93
Seckenheim	93	5.8	14	14	5.7	0	-0.1	0.98	1.02
Vogelstang	64	4.0	10	9	3.7	-1	-0.3	0.91	1.10
Waldhof	28	1.8	4	2	0.8	-2	-0.9	0.46	2.17
Wallstadt	50	3.1	8	7	2.8	-1	-0.3	0.91	1.10
Total	1,600		246	246					
Pedersen index (difference in %):							13.6		

7.2. Demographics

Table 19 shows the distribution of gender and age groups among Mannheim residents eligible to vote and the realized samples of MR1 and MR2. The numbers indicate that the gender distributions of both survey waves come quite close to the electorate's gender distribution. Slightly more female than male residents were interviewed in both waves, which corresponds to the actual gender distribution in the electorate. There is no statistically significant difference regarding the distribution of gender neither between the eligible voters and the sample of the main respondents in the first panel wave ($\chi^2(1, N= 1,600) = 0.61, p = 0.436$) nor between the eligible voters and the sub-sample of MR2 respondents ($\chi^2(1, N= 877) = 0.16, p = 0.693$). Among the main respondents with at least one PDP follow-up interview, the gender distribution is perfectly even. However, its difference to the population is likewise insignificant ($\chi^2(1, N= 246) = 0.32, p = 0.575$). Both panel waves also slightly deviate from the reference distribution of age. In particular, eligible voters aged 44 years and younger are underrepresented in both MR1 and MR2. In contrast, eligible voters aged between 60 and 74 years are overrepresented. The deviations are highly significant for both MR1 ($\chi^2(5, N= 1,600) = 62.62, p < 0.001$) and MR2 ($\chi^2(5, N= 877) = 49.60, p < 0.001$). By contrast, the sub-sample of those main respondents with one or more PDP interviews could be realized is actually closer to the reference distribution than both MR1 and MR2. Yet, its difference to the population is still significant ($\chi^2(5, N= 246) = 12.21, p < 0.05$).

Table 19: Gender and age: MR1, MR2 and MR1 with at least one PDP interview compared to population

	Elec- torate	Elec- torate (%)	MR1	MR1 (%)	MR2	MR2 (%)	MR1 with PDP	MR1 with PDP (%)
<i>Gender</i>								
Male	95,121	48.2	787	49.2	417	47.5	123	50.0
Female	102,168	51.8	813	50.8	460	52.4	123	50.0
<i>Age</i>								
18-29 years	37,343	18.9	235	14.7	122	13.9	52	21.1
30-44 years	43,279	21.9	297	18.6	157	17.9	51	20.7
45-59 years	50,837	25.8	463	28.9	263	30.0	72	29.3
60-74 years	36,964	18.7	374	23.4	218	24.9	53	21.5
75-89 years	25,914	13.1	225	14.1	114	13.0	17	6.9
90+ years	2,952	1.5	6	0.4	3	0.3	1	0.4
Total	197,289		1,600		877		246	

Source: Electoral register of the City of Mannheim.

Table 20 shows how MR2 respondents and MR1 respondents for whom at least one PDP interview could be conducted compare to the MR1 sample with regard to education. Since an external reference distribution is not available, it is not possible to compare these formal qualifications levels to the population. However, it is obvious that highly educated citizens are very strongly represented within all three CoDem surveys. Even without numerical reference to a population statistic, it seems highly likely that these shares are considerably higher than the true share of highly educated persons in the population of Mannheim voters. This kind of bias in favour of higher educated strata is regularly observed in German academic surveys (Ortmanns and Schneider 2016). According to Table 20, highly educated MR1 respondents also were somewhat more likely to complete also an MR2 interview and – even much more likely – to generate at least one PDP interview, whereas the opposite was the case for MR1 respondents with the lowest level of formal education. However,

these deviations are not large. Presumably, the education bias introduced already during MR1 interviews is stronger than the biases that later on came about with regard to the derivative components of the design. While the deviations are not significant between MR1 and MR2 ($\chi^2(6, N= 877) = 9.82, p = 0.113$), they are highly significant between MR1 in total and MR1 with at least one discussant interview ($\chi^2(6, N= 246) = 21.73, p < 0.000$).

Table 20: Education: MR2 and MR1 with at least one PDP interview compared to MR1

	MR1	MR1 (%)	MR2	MR2 (%)	MR1 with PDP	MR1 with PDP (%)
Still at school	5	0.3	2	0.2	0	0.0
Finished school without school-leaving certificate	15	0.9	6	0.7	1	0.4
Lowest formal qualification of Germany's tripartite secondary school system, after 8 or 9 years of schooling	394	24.6	183	20.9	37	15.0
Intermediary secondary qualification, after 10 years of schooling	373	23.3	206	23.5	57	23.2
Certificate fulfilling entrance requirements to study at a university of applied science	181	11.3	109	12.4	28	11.4
Higher qualification, entitling holders to study at a university	611	38.2	365	41.6	123	50.0
Other school-leaving certificate	14	0.9	6	0.7	1	0.4
Total	1,593		877		246	

7.3. Voting Behaviour and Political Interest

Table 21 compares turnout intentions among MR1 (counting respondents that were 'certain not to vote' or 'unlikely to vote' as non-voters) and turnout as recalled during the MR2 (post-election) interviews with the actual outcome of the 2017 federal election in Mannheim. Whereas real turnout amounted to just 73%, a much higher turnout of more than 95% was registered for MR1 and MR2 respondents as well as MR1 respondents with at least one discussant interview. These deviations are highly significant for MR1 ($\chi^2(1, N= 1,587) = 457.18, p < 0.001$), MR2 ($\chi^2(1, N= 877) = 225.89, p < 0.001$), and main respondents with at least one PDP interview ($\chi^2(1, N= 246) = 88.14, p < 0.001$). Obviously, the CoDem study was not immune against the well-known phenomenon of over-reporting turnout that is highly common in election studies (Holbrook and Krosnick 2010). Presumably, this is a joint result of social desirability bias that leads non-voters to claim to have voted, but in particular also of a decreased likelihood to participate in social and political surveys among non-voters (Voogt and Saris 2003).

Table 22 looks at party votes in the 2017 federal election. It compares the distributions of the vote intentions of all MR1 respondents as well as of the MR1 respondents with related PDP interviews and recalled vote choices of MR2 respondents with the second vote shares obtained by the parties in Mannheim. In contrast to turnout, the analysis on party votes reveals a relatively even picture, with one exception. Voters of the CDU and SPD are somewhat, and voters of the Greens more strongly overrepresented in both waves of the MR interviews (CDU and SPD more clearly in the second than in the first wave) as well as among MR1

respondents with follow-up discussant interviews. By contrast, voters of the Left as well as voters of small parties who did not surpass the five-percent threshold are always somewhat underrepresented. More importantly, voters of the right-wing populist AfD are clearly underrepresented in each component (by about the half, with some variation). These deviations between survey data and the population are highly significant for MR1 ($\chi^2(6, N= 1,173) = 87.59, p < 0.001$), MR2 ($\chi^2(6, N= 731) = 55.10, p < 0.001$) and main respondents who recruited at least one discussant for an interview ($\chi^2(6, N= 200) = 22.66, p < 0.001$). These results are in line with repeated findings that shares of right-wing parties are not adequately captured by population surveys, either because adherents of such parties hardly reveal their true preferences (social desirability bias) or because they more often refuse to take part in surveys altogether (Johann et al. 2016). Thus, this parallels to some extent the bias found with regard to turnout.

Table 21: Turnout: MR1, MR2 and MR1 with at least one PDP interview compared to population (%)

Turnout (intention)	Population	MR1	MR2	MR1 with PDP
Voters	73.0	96.8	95.6	99.6
Non-voters	27.0	3.2	4.4	0.4
Total	197,289	1,587	877	246

Source: <https://www.bundeswahlleiter.de/bundestagswahlen/2017/ergebnisse/bund-99/land-8/wahlkreis-275.html>. Missing values due to undecidedness in MR1 as well as refusals in both MR1 and MR2 on these variables are ignored.

Table 22: Party votes: MR1, MR2 and MR1 with at least one PDP interview compared to population (%)

Votes	Population	MR1	MR2	MR1 with PDP
CDU	27.1	28.6	30.1	22.5
SDP	21.2	23.0	24.1	26.5
The Greens	13.2	18.0	18.1	21.5
FDP	11.2	12.6	11.2	12.5
The Left	9.1	7.5	7.8	6.0
AfD	12.8	4.8	5.9	7.5
Other party	5.3	5.5	2.9	3.5
Total	142,574	1,173	731	200

Source: <https://www.bundeswahlleiter.de/bundestagswahlen/2017/ergebnisse/bund-99/land-8/wahlkreis-275.html>. Missing values due to undecidedness in MR1 as well as refusals in MR1 and MR2 on these variables are ignored.

Table 23 looks at political interest. Since population statistics are not available for political interest, the table only displays distributions for all MR1 and MR2 respondents as well as those MR1 respondents for whom at least one PDP interview could be completed. Nearly half of all main respondents in the first panel wave (44.6%) indicated a strong or very strong interest in politics. This share of interested participants even increases among MR2 and main respondents who successfully recruited at least one discussant for an interview. In contrast, the share of politically very little or not at all interested participants simultaneously decreases. These deviations are significant for MR1 and MR2 ($\chi^2(5, N= 877) = 94.22, p = 0.000$) as well as for all MR1 and the subset of those MR1 with at least one derivative discussant interview ($\chi^2(5, N= 246) = 22.30, p < 0.000$). This result is in line with studies, which demonstrated that political interest increases the likelihood to participate in political surveys (Keeter et al. 2006; Tourangeau et al. 2010).

Table 23: Political interest: MR2 and MR1 with at least one PDP interview compared to MR1

	MR1	MR1 (%)	MR2	MR2 (%)	MR1 with PDP	MR1 with PDP (%)
Very strong	247	15.4	134	15.3	41	16.7
Strong	467	29.2	288	32.8	87	35.4
Middling	622	38.9	346	39.5	88	35.8
Very little	198	12.4	92	10.5	21	8.5
Not at all	66	4.1	17	1.9	9	3.7
Total	1,600		877		246	

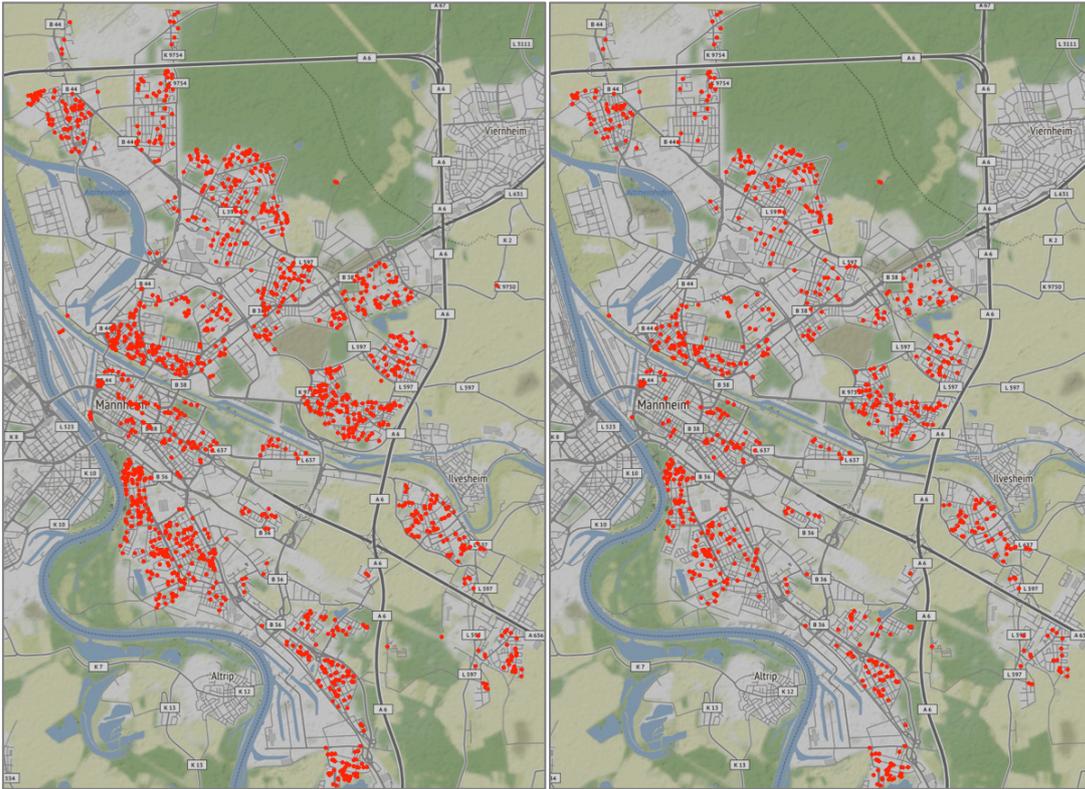
8. Weighting

The previous section has shown that MR1 and MR2 deviate more or less strongly from the population regarding basic demographic attributes. While the value of weighting for analyses of survey data is controversial (Gabler et al. 1994), at least for descriptive analyses it may make sense to subject the data to weighting in order to obtain distributions that are closer to the population values (Gabler et al. 2015). It was therefore decided to construct a number of basic demographic weights for both waves of the main respondent interviews. Weights to compensate for deviations of gender, age and city district of residence as well as gender combined with age were calculated based on the marginal distributions of these attributes in the population (Mannheim residents eligible to vote in the federal election 2017; source: electoral register of the City of Mannheim). In addition, a weight variable combining all three demographic attributes was calculated by means of iterative proportional fitting (IPF).

9. Linking Context Data

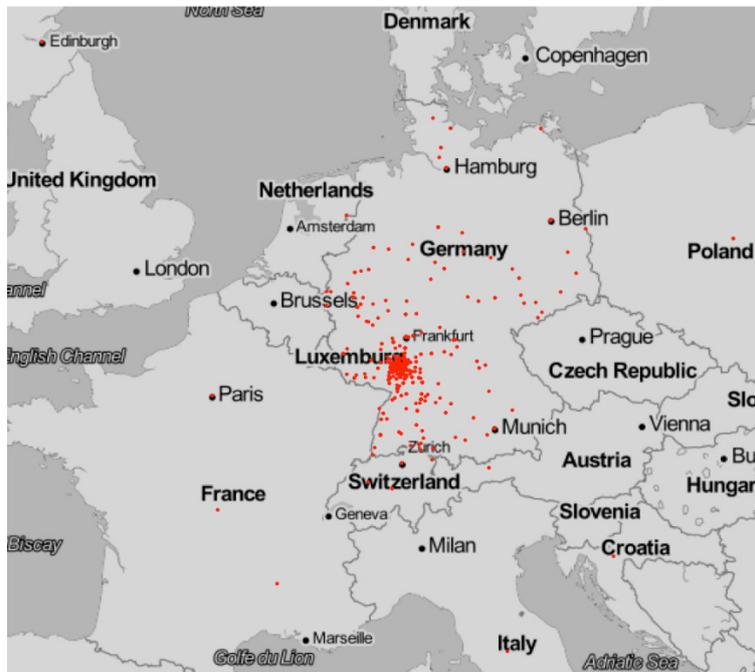
As outlined above, the project seeks to study citizens' political talk also as a spatial phenomenon that is contingent on attributes of the socio-geographical contexts within which they reside and relate to one another. Hence, during the process of data collection it was important to obtain information not only about the main respondents' but also their discussants' residential locations. Main respondents' addresses were contained in the register sample. The residential locations of the political discussion partners, however, had to be elicited during the MR1 interviews. For the members of main respondents' egocentric networks who were not members of their own households, corresponding questions were therefore incorporated in the set of name interpreter questions asked for each of them. However, in view of data privacy requirements, but also considering the potentially offending character of such questions for respondents themselves, it was not an option to inquire the discussants' precise addresses. Instead, main respondents were first asked whether their discussion partners lived in Mannheim or outside of Mannheim. In the former case, respondents were then asked to name the city district or neighbourhood of Mannheim in which their discussion partner resided. In the latter case, respondents were asked to provide the name of the city, town or village of residence. If they were not willing to name the residence of their discussants, interviewers probed for the distance to Mannheim in kilometres. According to the data collected through this instrument, 57.3% of the 2,321 political discussion partners from outside of the main respondents' households lived in Mannheim, whereas 41.2% resided somewhere else. Only for about 1.5% of the discussants, no residential information could be obtained.

Figure 8: Geographical dispersion of MR1 (on the left) and MR2 (on the right) over Mannheim



Note: Maps created with the R package ggplot2 (Kahle and Wickham 2013).

Figure 9: Geographical dispersion of political discussants



Note: Map created with the R package ggplot2 (Kahle and Wickham 2013).

The incorporation of this residential information in the survey data allows for two approaches to context-sensitive analysis (Thrift 1983; Therborn 2006; Ethington and McDaniel 2007). The first is conventional contextual analysis, in which respondents' addresses are used to assign them to administrative units within which they reside and for which macro information is available from official statistics (Friedrichs and Nonnenmacher 2014; for political science applications see Klein 2007; Johnston and Pattie 2018). For the city of Mannheim, such data are available in the form of aggregate statistics on demographic and socio-economic attributes at the level of city districts as well as in the form of election outcomes at the level of electoral districts. While relatively efficient, this approach to contextual analysis is not without problems. Relying on data that pertain to administrative units, researchers run the danger of falling victim to the fallacy of reifying such units as quasi-natural 'givens' by unquestionably assuming their relevance for the structuration of citizens' social and political experience (Kwan 2012). Instead, they should be understood as proxy measurements for the areas in which contextual effects actually come about. Validity issues arise if administrative units do not correspond to the 'truly relevant' (Weaver 2014: 879) socio-geographical mapping of a society.

Although they are methodologically more demanding than the customary approach of relying on existing data for given administrative units, more recently developed sophisticated techniques using geocoded data and geographical information systems allow to address this problem (Schnell 2012: 319-20). As a complement to conventional context analysis, the project therefore seeks to explore the potential of analyses using georeferenced data. This approach to study the contextual embeddedness of phenomena of individual political behaviour is much more fine-grained and flexible. It opens up new opportunities for understanding political behaviour as a phenomenon that unfolds in space. This new way to study the role of space for politics draws on georeferenced data that can be linked with survey data in flexible ways via geocodes that are assigned to respondents based on their addresses (Abernathy 2017; Bluemke et al. 2017; Hillmert et al. 2017).

To transform the main respondents' addresses into geocodes, the project used a service provided by GESIS. It relies on official data from the Federal Agency for Cartography and Geodesy and operates in full observance of data privacy regulations. GESIS coded the locations in the geocode format ETRS89. This format was converted to the WGS84 standard format in order to be able to match the survey data with georeferenced data. Figure 8 illustrates how the homes of the MR1 and MR2 respondents are scattered all over Mannheim. The locations of the political discussion partners were geocoded manually by the project team, applying two approaches. In cases in which political discussants lived outside of Mannheim and a German municipality was indicated as residence, the geographical centres of these municipalities were coded, following standard geographical practice (Zandbergen 2008, 2009). To that end, data from the Federal Statistical Office incorporating the geographical centres for all German municipalities in WGS84 standard format were used. The second approach was applied to all non-German locations (e.g., United States, Switzerland). To retrieve the geocodes of these units' geographical centres in WGS84 standard format, the geo-browser 'GeoHack' (<https://tools.wmflabs.org/geohack/>), offered by the Wikipedia OpenStreetMap (<https://www.openstreetmap.org>), was used. The same approach was applied to geocode the places of residence of political discussants living in Mannheim. These discussants were assigned the geographical centres of the city districts in which they live (according to the information elicited from the main respondents). The geocodes assigned to the main respondents and their most important discussion partners will allow the project to draw on many kinds of geo-referenced data that are available from public and private agencies. To illustrate the outcome of this operation, Figure 9 displays the geographical locations of the individuals named by MR1 respondents' as members of their egocentric networks (excluding political discussion partners residing as far away as the U.S., Russia and Syria). The figure shows that discussants clearly clustered within and around Mannheim, but that a fair number of them also lived quite a distance away from the main respondents – in some cases thousands of kilometres.

10. Summary and Conclusion

The MZES project 'The Conversations of Democracy (CoDem)' aims to address a major gap in the empirical study of deliberative politics. Although democratic theory's deliberative turn stimulated increasing interest in the role of talk in the quality of democratic politics, research has paid hardly any attention to ordinary citizens' informal conversations about politics so far. No assured knowledge exists about how this form of political communication performs as compared to the high normative standards of deliberation. Moreover, there is no robust evidence on the factors that lead to a higher deliberative quality of everyday political talk or on whether it actually has the beneficial influences on the democratic process expected by deliberative theory.

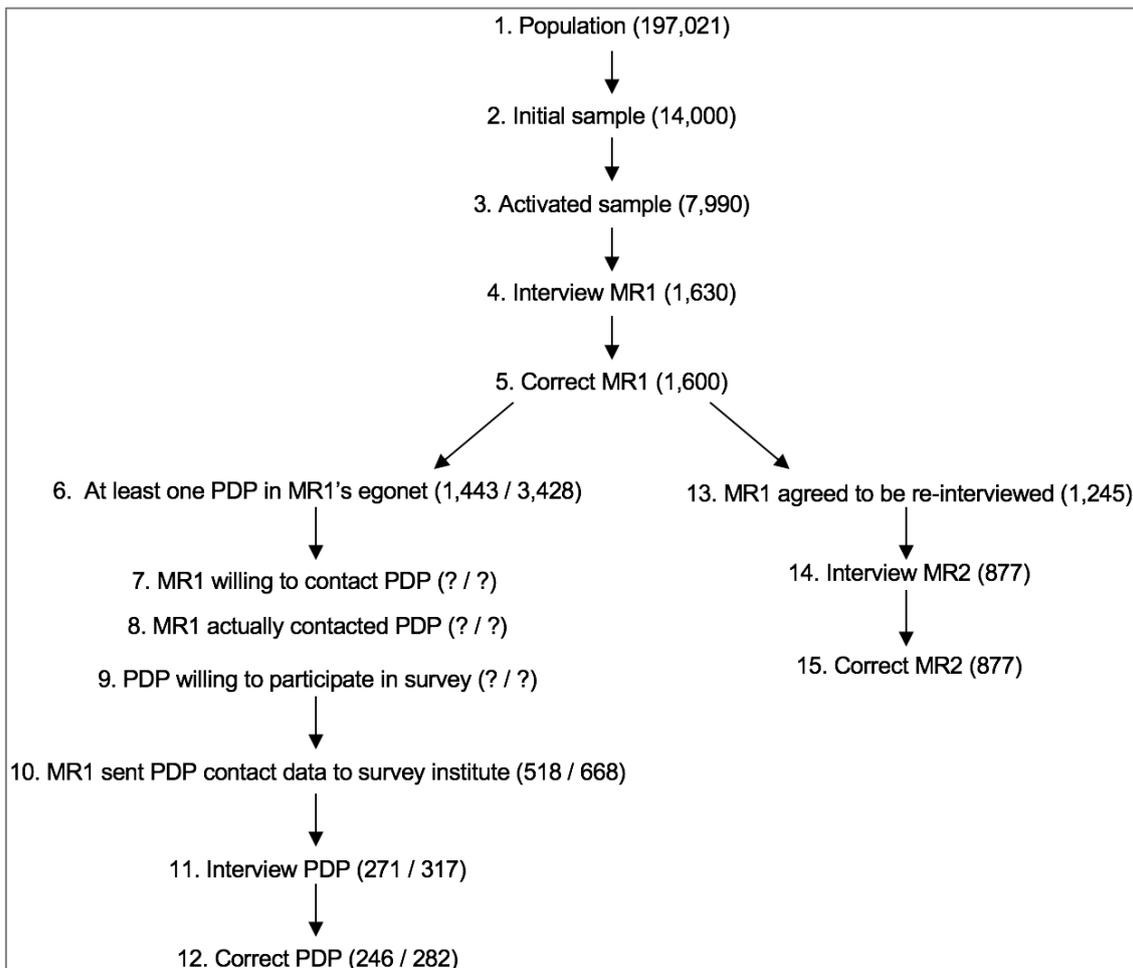
The project seeks to contribute to a deeper understanding of people's conversations about public affairs as the most basic form of political communication and foundation of democracy's deliberative system by investigating their deliberativeness as well as their conditions and consequences. Complementing research on political communication in institutional arenas of the deliberative system, the aim of the project is to answer three interrelated research questions: (RQ1) How deliberative is citizens' everyday talk about politics? To assess the deliberative quality of people's interpersonal communication, this communication is empirically described on a range of sub-dimensions and systematically compared to the ideal type of genuine deliberation. (RQ2) What conditions contribute to the deliberativeness of citizens' everyday talk about politics? Building on approaches from participation research, the project focuses on individuals' personal skills and motivations as well as on opportunities and constraints that result from their embeddedness in socio-spatial and situational contexts. (RQ3) Does the deliberativeness of citizens' everyday talk about politics lead to the beneficial consequences for democratic politics assumed by deliberative theory? To address these research questions, the project combines a two-wave panel survey of a random sample of citizens of the city of Mannheim who were eligible to vote in the 2017 German federal election (MR1, MR2), with a snowball survey of political discussants (PDP) and aggregate data on socio-political contexts.

Figure 10 provides a complete overview of all stages of the survey process for all three components of the study design. Overall, data collection worked very well for certain elements of the design, but less well for others. For instance, the number of interviews realized within the baseline survey of main respondents is considerably higher than aimed for (1,600 instead of just 1,400). With 200 MR1 interviews above target, this component of the study – challenging as it was, given the general lack of experiences with large-scale face-to-face surveys at the local level – ran much better than expected, although the response rate was not very high. The data are also of good quality and mainly display sampling biases that are well known in academic survey research. The number of discussants, for whom proxy information was obtained by way of the egocentric network instrument included in these interviews, is also very high. Partly, this is a result of the fact that very few main respondents did not provide information on at least one network partner. In total, the network instrument elicited detailed information on 3,428 discussants. Of these, 1,107 resided in the same households as the main respondents. The rest mostly lived in Mannheim, but often also in other, sometimes quite distant, places. As many as 47.7% of the main respondents provided proxy information on complete egocentric networks consisting of three discussants.

Whereas the MR1 component surpassed expectations, the realization of the MR2 component fell somewhat behind. Assuming a re-interview rate of 80%, a target of 1,280 interviews had been envisaged for this element of the research design. However, the actually achieved re-interview rate was considerably lower with 54.8%. This was the joint result of a relatively high share of refusals to being contacted for re-interviews already during the MR1 interviews, and a satisfactory, but not excellent response rate among those who had initially consented to be contacted again. One may speculate whether the relatively high initial refusal rate was due to the quite demanding content of the questionnaire.

Whether the snowball component of the design worked rather well or rather badly is difficult to tell. It was clear from the outset that the discussant survey was the methodologically most challenging part of the entire design. The final success rate of 8.2% relative to the population of all discussants on which proxy information could be obtained does not seem outstanding, but compared to previous studies using similar designs it appears to match a long-term trend towards declining response rates in survey research generally, and in particular also for follow-up components within more complex survey designs (Hopmann 2012).

Figure 10: Overview of survey process for MR1, MR2 and PDP



Note: For PDP interviews (steps 6 to 12), the first number in brackets refers to MR1 respondents, the second to discussants. Stages 7 to 9 are only displayed for analytic purposes, as no information is available on how the field process went at each of these stages.

Apart from this general trend, the complicated and indirect method of recruiting discussants that was impressed on the project by Germany's strict regulatory regime in data privacy certainly contributed to the rather low number of interviews that could finally be achieved. It forced the project team to forego control over a crucial stage of the contacting process, since privacy regulations required this to be delegated to the main respondents. The result was a black box within the recruitment process, with several successive points of potential abortion: Main respondents may have been unwilling to participate in recruiting their discussants for the project in the first place. Even when initially willing to do so, they may still not have made the necessary practical steps in the end. And finally, discussants may have refused up front. It is unfortunate that this stepwise process inevitably went its course in complete intransparency. The only visible outcome was the

address data that main respondents conveyed to the survey institute – this is the stage at which a massive drop occurred (corresponding to step 10 in Figure 10). Only 518 of the 1,443 main respondents with ego-centric networks (35.9%) submitted contact data to the survey institute, and this information concerned only 668 individuals who were – as it turned out, in part only allegedly – members of the discussant population of 3,428 network members. From this pool, 317 interviews were generated. However, extensive testing identified a significant number of cases where there was reason to doubt that the correct persons had been interviewed. The final dataset that resulted after excluding these cases pertains to only 17.0% of the main respondents who discussed politics with members of their social networks, and to 8.2% of the population of network members elicited through the egocentric network instrument included in the MR1 surveys. The indirect procedure of recruiting discussants for PDP interviews thus resulted not only in massive non-cooperation on the part of main respondents and/or nonresponse on the part of discussants, but was also quite error-prone. On the other hand, despite these massive obstacles, the 282 discussant interviews that could be generated are certainly not a quantity negligible with regard to potentials for quantitative analysis.

How did these divergent developments add up with regard to the realization of the overall design? Table 24 provides an overview of the outcome of data collection across all three components of the study. Obviously, the most desirable outcome is a combination of both main respondent panel waves with at least one, if not more, discussant interviews. All in all, 190 cases meet this condition. However, only four of them reach the maximum of both panel waves for the main respondents plus interviews with all three political discussion partners. 22 cases combine both panel waves with two discussant interviews. While these numbers are too small for meaningful analyses, this disappointing diagnosis does not extend to those cases in which two successfully completed panel waves coincide with one discussant interview. Their number amounts to 164. In 50 instances, a discussant interview could be conducted with reference to a main respondent who could not be re-interviewed in the second panel wave. While it will not be able to perform genuine network analyses with these data, they will be very useful for analyses of main respondent-discussant dyads.

Table 24: Accumulation of datasets

	Frequency	Percentage
MR1	667	41.7
MR1 + MR2	687	42.9
MR1 + PDP1	35	2.2
MR1 + PDP2	10	0.6
MR1 + PDP3	5	0.3
MR1 + MR2 + PDP1	103	6.4
MR1 + MR2 + PDP2	38	2.4
MR1 + MR2 + PDP3	23	1.4
MR1 + PDP1 + PDP2	4	0.3
MR1 + PDP1 + PDP3	1	0.1
MR1 + PDP2 + PDP3	1	0.1
MR1 + MR2 + PDP1 + PDP2	11	0.7
MR1 + MR2 + PDP1 + PDP3	4	0.3
MR1 + MR2 + PDP2 + PDP3	7	0.4
MR1 + MR2 + PDP1 + PDP2 + PDP3	4	0.3
Total	1,600	

To collect these data, a number of very serious methodological obstacles had to be addressed with limited resources. In particular, Germany's strict data privacy regulations and the necessity to rely on a complicated,

indirect procedure to recruit political discussants that left project staff with little control rendered the realization of an important component of the project design particularly difficult. All in all, however, the CoDem project was able to generate a unique dataset that promises to contribute to a better understanding of the micro-foundations of the system-level consequences of citizens' everyday political communication with one another.

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Appendix

Additional project material can be downloaded via the following link:
<https://www.mzes.uni-mannheim.de/publications/wp/appendix-wp-173.pdf>