

Interpersonal communication and opinion leadership in the context of the 2009 German federal election

How the Internet raises the bar for most, but lowers it for
some; and how ideas seem to flow from the Internet to the
general public via opinion leaders

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Author: Max A. Odefey, MSc Phil

Supervisor and first reviewer: Prof. Dr. Harald Schoen
Second reviewer: Prof. Dr. Thomas Saalfeld
Third reviewer: Prof. Dr. Johannes Marx
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Abstract

This study investigates how political interpersonal communication and opinion leadership on the Internet differ from face-to-face interaction. Based on evidence from a survey conducted on the largest online social network in Germany at the time of the 2009 federal election, the characteristics, sources and perceived influence of those conversing about politics online and offline are juxtaposed.

The data reveals that, in aggregate, differences present in face-to-face discussions are amplified when people communicate online. Particularly those who are less active political discussants regard the Internet as a rather unpolitical medium. Only very few people who refrain from influencing others face-to-face act as opinion leaders on the Internet. In fact, it seems that online opinion leadership is primarily a consequence of offline opinion leadership.

At the same time, the analysis shows that aggregate data pointing to a reinforcement of differences online is insufficient for refuting the mobilising power of the Internet. The small number of online discussants and online opinion leaders who are not active face-to-face are characterised by especially low levels of internal efficacy and political interest, suggesting that the Internet provides a space for political interaction for some of those who are less confident in political matters.

Finally, the results demonstrate that people consider face-to-face discussions to have a considerably higher impact on their political views than interpersonal communication on the Internet and that opinion leaders make disproportionately more use of campaign information on the Internet than non-leaders. Since opinion leaders probably draw on the political information they have gathered online

when they influence the views of others, Lazarsfeld et al.'s (1944) Two-Step Flow Model seems to play a role in the dissemination of online campaign information. A noteworthy part of the campaign information available on the Internet probably reaches the general public via face-to-face conversations with opinion leaders. And, as these discussions have such a crucial impact on people's political views, the Internet's influence on political opinion formation is likely to be more significant than suggested by the comparison of direct effects.

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1 Introduction

The uptake of electronic tools for the purpose of interpersonal communication has been staggering in recent years. Over the last three years, the percentage of German citizens communicating via online social networks has doubled and now stands at close to a third of the population. In 2010, 42 percent of Germans chatted with others online. This constitutes an almost two-fold increase since 2004. Also in 2010, email penetration among the German population reached 77 percent (De Sombre, 2010).

Unsurprisingly, many scholars are intrigued by the question of how interpersonal communication on the Internet differs from face-to-face interaction. Some of them have focused on what I call first-level differences: the disparities in attributes between the two modes of communication (e.g., Daft & Lengel, 1986; Dennis & Valacich, 1999; Burgoon et al., 2000; for an overview see Kumar & Benbasat, 2002). These academics point out that face-to-face situations typically enable conversation pairs to respond to each other in a speedier fashion than is possible in an electronic environment. When people exchange emails, for example, feedback is not as immediate as when one interacts in person. What is more, most forms of computer-mediated communication limit the variety of signals that can be used. Gesture, mimic, posture, and other non-verbal cues cannot be employed in many kinds of online communication. In contrast to face-to-face communication, computer-mediated interaction can take place independent of time and space barriers. And, despite the significantly higher reach in terms of number of people, the cost of online communication is lower than that of in-person interaction (Lupia & Sin, 2003).

Another, somewhat more complex line of research examines the effects of the above disparities in characteristics on communication activity. While systematic analysis of these second-level differences is still lacking in the field of political science, a number of political scholars have discussed potential differences in discussion participation. One popular camp draws on the relative anonymity of online communication to suggest that the Internet motivates those to discuss politics who are too shy to do so in person. Shah, Cho, Eveland, Kwak, and Kwak (2005), for example, expect that many people find it easier to participate in political discussions and to share their personal views on the Internet. Similarly, Dahlgren (2005, p. 156) asserts that “the Internet seems to offer opportunities to participate for many people who otherwise find that there are too many taboos and too much discomfiture in talking about politics in their own face-to-face environments”. And, by encouraging those to talk about politics who remain passive offline, the Internet has an equalizing effect on discussion participation.

Such equalisation would be particularly significant, as many consider interpersonal political communication to be beneficial for the functioning of our democratic system. Citizens who discuss politics are more politically informed as well as more likely to vote and to engage in other forms of participation, which leads Kim, Wyatt, and Katz (1999, p. 362) to conclude that “conversation *is* the soul of democracy”. At present, the hypothesized equalisation of interpersonal communication is not sufficiently backed by evidence. Hence, this study will examine whether those who refrain from discussing politics with others face-to-face instead engage in interpersonal political communication on the Internet.

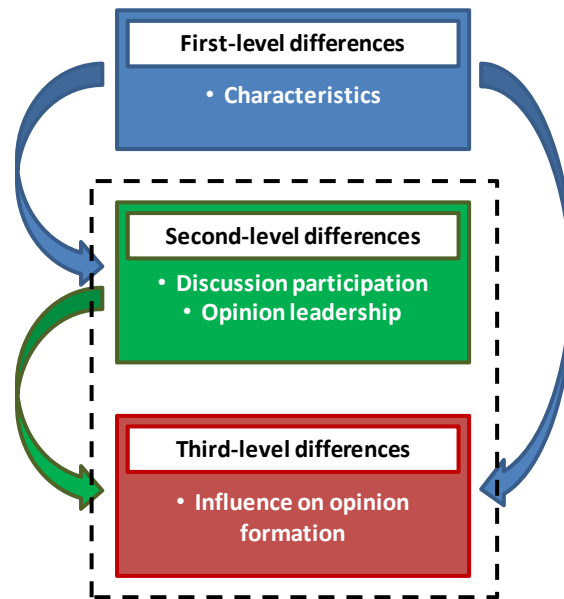
Dressler and Telle (2009) extend the notion of increased participation of the less active to the exercise of influence in interpersonal discussions about politics,

suggesting that the Internet may motivate those to influence the political opinions of others who refrain from doing so face-to-face. This issue may not be as central to the functioning of democracy, but it certainly is of great interest to those running political campaigns. Individuals who exert influence on the views of others are traditionally called opinion leaders. Political campaigners seek to provide these opinion leaders with suitable information and to mobilize them to spread the information within the electorate. Hence, political campaigners require a thorough understanding of the characteristics and sources of opinion leaders. With this in mind, the present study will assess whether, as Dressler and Telle (2009) propose, there are indeed opinion leaders whose influence is confined to the online realm. Moreover, the attributes and information sources of opinion leaders on the Internet will be analysed in detail.

The examination of opinion leadership activity leads on to a third level of differences between communication on the Internet and face-to-face. This third level deals neither with the characteristics of communication nor with discussion participation but with the effect of interpersonal discussions on the citizens' political opinions. In this respect, academics typically look at how the influence of communication on the Internet compares to that of face-to-face interaction. Some are convinced that online communication, because of its unique characteristics, has a more significant influence on people's political opinions. Subramani and Rajagopalan (2003) assert that communication on the Internet, due to its reach, efficiency, and flexibility, is more persuasive than in-person interaction. Similarly, Sun, Youn, Wu, and Kuntaraporn (2006) claim that online communication has a stronger effect on people's views than face-to-face interaction, because of its pace and expediency. Given the lack of empirical

support for the above assertions, I will compare the strength of influence of online and offline communication on people’s political views. It is worth noting that this comparison will rely solely on people’s perception of influence rather than on measurement of actual influence.

Figure 1: Differences between online and face-to-face communication analysed in this study



The second and third-level differences between political communication online and face-to-face, which this study focuses on, are shown in Figure 1. In order to systematically assess these disparities the study is organized in three parts. The first two chapters explain in more detail why the selected problems merit careful consideration. The two subsequent sections examine the differences both theoretically and empirically. A final chapter concludes the study with a summary and a general appraisal of the results.

Section 2 scrutinizes whether an equalisation of the citizens’ participation in interpersonal political communication can be regarded as beneficial for our democratic culture. To begin with, interpersonal communication is put into the

wider context of political communication research. Based on Dahlgren's (2005) break down of the public sphere, interpersonal communication is located within the interactive dimension of political communication. Section 2.2 defines private interpersonal communication, the main subject of this thesis, by contrasting it with public deliberation, another form of interpersonal communication. While public deliberation is a rule-governed form of interaction with the goal of making political decisions, private interpersonal communication describes the informal day-to-day conversations among citizens. Section 2.3 highlights the existing inequalities in participation in face-to-face communication about politics. Women as well as those with low levels of education, social gregariousness, and political interest are less prone to discussing politics with others. In order to assess if it would be advantageous to encourage the inactive to engage in interpersonal communication about politics, sections 2.4 and 2.5 provide a detailed account of the effects discussion participation can have on the citizenry and how these effects may be evaluated. Chapter 2.4 presents substantial empirical evidence showing how interpersonal communication enhances people's political knowledge and the quality of their opinions. As discussions broaden the range of arguments people take into account when forming their political opinions and motivate people to reflect on their views, they are likely to have a positive impact on the quality of political decisions. The chapter also describes the work of several researchers illustrating the close association of political discussion activity and engagement in various forms of civic and political participation, a vital element of democratic self-government. The subsequent section sketches out two potential negative effects of interpersonal communication. According to Noelle-Neumann's (1974) "spiral of silence", interpersonal discussion can lead to a silencing of minority

opinions and, thereby, create equality concerns. Secondly, since most political discussions take place between like-minded individuals, discussions tend to lead to a polarisation of opinions. Rather than ameliorating people's understanding of different viewpoints, such conversations merely reinforce the status quo. But the section also explains why the applicability of the spiral of silence theory to interpersonal communication is highly questionable and that group polarisation is limited to discussions within homogeneous groups. While the majority of interpersonal discussions happen in homogeneous environments, many people discuss politics with those who hold divergent views. And, it is these heterogeneous interactions that are particularly valuable for the functioning of democracy. Considering these generally positive effects of interpersonal communication, it would be beneficial to encourage those individuals to participate who are currently less or not engaged. Before examining the Internet's capacity to do so, however, the foundations need to be laid for the second subject of investigation: opinion leadership.

Section 3 not only defines the term opinion leadership as it is used in the present study but also explains why it is important for political campaigners to understand the attributes and behaviour of opinion leaders. A description of the research origins of the opinion leadership concept in section 3.1 serves as an introduction to the topic. In the 1940's, Lazarsfeld and his colleagues were the first to suggest that some individuals influence the political views of others in their social environment by providing them with advice and relaying media information to them. Critics have pointed out that Lazarsfeld, Berelson, and Gaudet's (1944) Two-Step Flow Model, which views opinion leaders as mediators between the media and the general public, needs to be seen in the context of various other

flows of information and influence. Based on the discussion of the Two-Step Flow Model, section 3.2 defines the term opinion leadership as it was conceived of by Lazarsfeld – the same conception that is used in the present study. For Lazarsfeld et al. (1944), opinion leadership is a behavioural variable describing the informal exertion of influence on others in a specific field of interest. When comparing different studies, it is important to clearly distinguish between this and other conceptions of opinion leadership, which define opinion leadership as a general character trait or by the level of engagement in political participation. Similarly, one needs to be cognisant of differences in measurement which may impact the quality and comparability of empirical data. Hence, section 3.3 contrasts the self-designating method employed in the present study with alternative approaches. Following these methodological distinctions, section 3.4 provides a detailed account of the role of opinion leaders in individual political opinion formation. It is illustrated that most media information flows directly from the media to the general public, but that opinion leaders have considerable influence on the subsequent evaluation of the received information. Three theories of social influence are described to explain the reasons non-leaders have to conform to the views of opinion leaders and why opinion leaders may be motivated to exercise influence. Non-leaders may follow the advice of opinion leaders in order to reduce the cost of information search and assessment, to be associated with the social group embodied by the opinion leader, or to attain social support. Opinion leaders, on the other hand, may give advice in order to attain a position of superiority and to legitimize their own viewpoints. Given the solid theoretical and empirical foundation of the opinion leaders' influence function, it is easy to see why political campaigners are greatly interested in the

characteristics and information sources of opinion leaders. Prior to assessing these attributes of opinion leaders on the Internet, however, the existing research on opinion leadership in face-to-face situations needs to be examined. These findings from previous studies, which are presented in sections 3.5 and 3.6, serve as a useful point of reference for the analysis of online opinion leaders.

Section 4 presents a theoretical analysis of interpersonal communication and opinion leadership on the Internet. Section 4.1 assesses the Internet's impact on discussion participation by drawing on two established theories about computer-mediated communication. Applying Social Presence Theory to interpersonal communication about politics provides support for the equalisation hypothesis. The theory suggests that those who are too shy and too introverted to discuss politics face-to-face express themselves with an increased forthrightness on the Internet. In contrast, the application of Social Network Theory to interpersonal political communication indicates that the Internet supplements and extends face-to-face behaviour rather than changes the nature of discussion relationships. It is illustrated that the two theoretical concepts also point to different answers to the question whether there is a meaningful group of opinion leaders who exercise influence solely online. Few studies to date have examined political opinion leaders on the Internet. Therefore, research on marketing opinion leaders and on concepts similar to political opinion leadership are employed to derive hypotheses about the characteristics and political information sources of online political opinion leaders (see sections 4.2.2 and 4.2.3). These related studies suggest that offline opinion leaders and online opinion leaders share similar characteristics and rely more than non-leaders on the Internet for obtaining political information. A similar approach is used in section 4.3.1 to develop hypotheses regarding the third

major field of investigation, the comparison of the perceived influence of different sources on people's political opinions. Based on Social Presence Theory as well as findings from the realm of marketing, I propose that online communication is less impactful than face-to-face interaction. Before the hypotheses are tested, however, section 5.1 describes the sample and methodology used. Detail is provided on the VZ networks, the online social network on which the data for the present study was collected. Following a comparison between the VZ sample and representative surveys, the results of the empirical analysis are presented in section 5.2.

2 Interpersonal communication

2.1 Within the context of political communication research

Habermas' (1962) concept of the public sphere is one of the key reference points for political communication theory and research, as it provides a useful framework for the academic debate about politics, interpersonal discussion, and the media. The public sphere entails the spaces, independent of the economy and the state, in which citizens get together to deliberate and exchange ideas about current political affairs (Calhoun, 1992). Within such spaces the media and interpersonal discussions shape political opinions.

According to Habermas (1962), the public sphere developed for the first time in the salons of late-eighteenth-century France as a counterbalance to the state and sought to make public policy more accountable to the citizens (Fraser, 1990). Spreading literacy, the rise of mass media, the ascent of the middle class, and growing importance of democratic institutions contributed to the development of the public sphere. The enactment of individual rights guaranteeing freedom of expression, free press, and free assembly also played a crucial role in the process (Kinder, 1998).

Dahlgren (2005) differentiates between three dimensions of political communication that together comprise the public sphere. The structural dimension includes all formal institutional elements of the media and the laws protecting the freedom of communication. At the heart of this perspective lies the requirement that the institutions of the public sphere must be accessible to all citizens. Hence, media ownership, regulation, media policy and economics, as well as the rules of

access are important components of the structural dimension. The representational dimension captures the content produced by the various types of one-to-many media – the mass media as well as more specific publications such as newsletters and campaign materials. The most critical representational issues include fairness, truthfulness and comprehensiveness, diversity of viewpoints, balanced presentation, and ideological tolerance. The structural and representational dimensions provide the framework for the interactive dimension. On the one hand, the interactive dimension includes the citizens' interpretation and use of media content, the process through which individuals receive and utilize what has been communicated to them by the media. On the other hand, the interactive dimension entails the citizens' discussions about political issues. It is these interpersonal discussions that the next section will focus on.

2.2 Public versus private interpersonal communication

The academic dialogue about interpersonal communication has been complicated by the use of different conceptions of political talk. The spectrum of definitions ranges from casual, informal interaction to rule-governed, structured encounters (Wyatt, Katz, & Kim, 2000). The former are typically referred to as private interpersonal communication, the later as public interpersonal communication. Tarde's ([1899] 1989) notion of conversation about political events among people sitting in coffee houses is a classical example of the private kind. In contrast, public interpersonal communication typically refers to debates within a formal context such as a civic forum.

Public interpersonal communication usually denotes the process of public deliberation, in which informed citizens exchange rational arguments on a given

policy issue (Scheufele, 2000). Deliberation is an inclusive problem-solving process that provides citizens with the opportunity to acquire meaningful political judgements. It is characterized by non-dominance, logical argumentation, and reciprocal comprehension. After individual viewpoints have been voiced and assessed, the goal is to resolve conflicts and to converge on a mutually acceptable solution. Deliberation seeks to provide people with new arguments which lead them to revise their attitudes and arrive at well-informed views (Moy & Gastil, 2006). According to Chambers (2003), deliberation does not necessarily aim at consensus, as citizens are free to pursue their own interests. Nonetheless, citizens involved in deliberation are committed to justifying decisions to the other discussants.

Procedurally, deliberation typically requires careful problem analysis, specification of evaluation criteria, and weighing of alternative solutions (Dewey, 1954). Coleman and Götze (2001, p. 6) list a number of conditions of ideal public interpersonal communication, namely “access to balanced information”, “an open agenda”, “time to consider issues expansively”, “freedom from manipulation or coercion”, “a rule-based framework for discussion”, “participation by an inclusive sample of citizens”, “scope for free interaction between participants”, and “recognition of differences between participants, but rejection of status-based prejudice”.

Schudson (1997) is probably the most vocal proponent of the importance of public interpersonal communication. He believes that informal discussions among intimates happen only for their own sake and do not provide benefits to society. In his view, political discussion is inherently complicated and conflict-ridden, which is why rules are required to guide the interaction. To be beneficial, political

conversations need to follow a set agenda and need to be oriented towards making decisions. Political discussions need to be a problem-solving process among people from different backgrounds rather than simply a sociable exchange among like-minded individuals. Only through public deliberation will people develop sensible judgements and will sound government become possible (Kim et al., 1999).

Although few are as pessimistic as Schudson (1997) about private interpersonal communication, numerous other scholars are convinced that public deliberation creates certain benefits. Gutmann and Thompson (1996) point to the positive effect on tolerance for other people's views. Chambers (1996) believes that deliberation enhances the citizens' understanding of and ability to justify their preferences. Fishkin (1995) anticipates an increase in social capital. Deliberation fosters communication networks and enhances political expertise enabling citizens to engage more effectively in community affairs. Overall, the equal and open exchange of arguments inherent in deliberation is bound to promote empathy among citizens (Mendelberg, 2002).

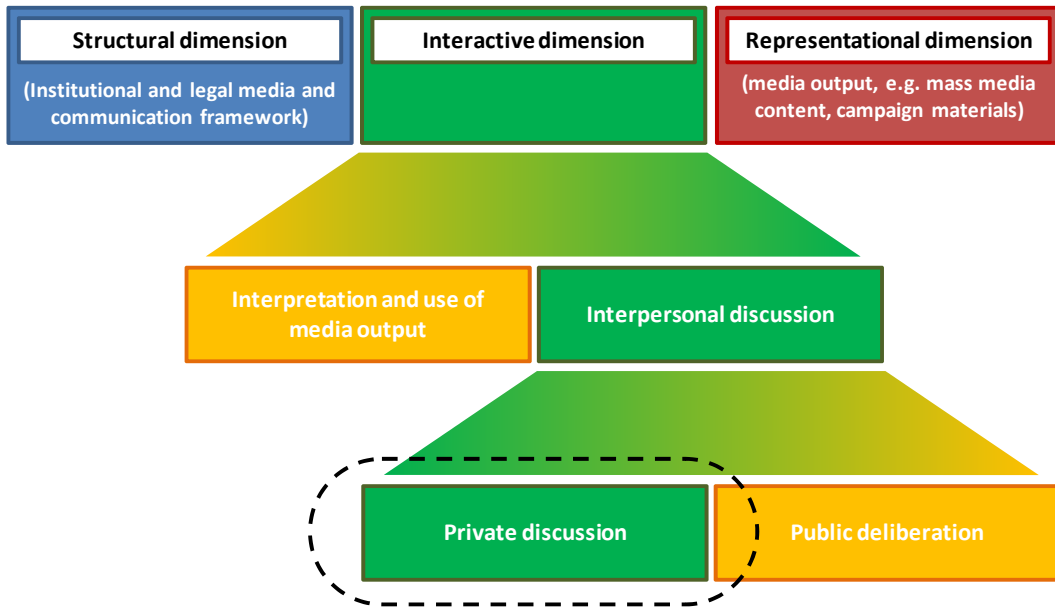
Despite these potential advantages, public deliberation has limited practical relevance. In reality, it is often not possible to include all the individuals affected by a policy decision in the deliberative process. The introduction of online rule-based public forums has raised hopes of enabling public deliberation on a large scale. But even online public forums are hard to scale up and usually reach only a core group of activists (Kavanaugh et al., 2006). For effective deliberation to take place, the number of participants needs to be restricted. Dahlberg's (2001) analysis reveals that online deliberation projects fail to activate representative samples of citizens and shows problems in attracting participation. The inability

to incorporate all affected views creates inequality concerns (Ryfe, 2005). Furthermore, many people are unwilling to participate in public deliberation due to doubts about their argumentative abilities and fear of being isolated in the discussion. As public interpersonal communication is rather demanding, it has been limited to a small number of highly politically active citizens (Schmitt-Beck, 2008).

Private interpersonal communication, in contrast, is more personally satisfying, because discussants are less exposed than in public deliberation (Conover, Searing, & Crewe, 2002). An experiment conducted by Wyatt, Katz, Levinsohn, and Al-Haj (1996) shows that people are more willing to speak up in private settings than they are in public deliberation. Since opinion expression is less inhibited by social factors, private interpersonal communication seems particularly powerful.

What is more, private interpersonal communication is a much more common form of interaction. Private interpersonal communication is often spontaneous and melds together with everyday conversations about issues other than politics (Wyatt et al., 2000). Many people talk about politics with family members, with friends, and with colleagues at work. In several Western European and North American countries, as much as 40 percent of citizens report to discuss political issues several days a week or every day. Germany has one of the highest rates of political discussion activity with 47 percent talking about politics with high frequency (Schmitt-Beck, 2008). It is this prevalent form of interaction, private interpersonal communication, that constitutes this study's principal subject of investigation (see Figure 2).

Figure 2: Focus of this study within the context of political communication research



2.3 Who participates in interpersonal communication?

While private discussion activity in Germany is high by international standards, the figures indicate that not everyone participates in political discussions to a similar extent. In fact, research shows that certain individuals are less likely than others to engage in interpersonal communication about politics. Women are less prone to discuss politics than men. Those who are less well-educated, less socially integrated, and less politically interested are also less disposed to communicate about politics.

Gender and the level of education are considered to be the most important socio-demographic determinants of private interpersonal political communication. A number of studies show that males are more prone to discuss politics (e.g., Brickell, Huckfeldt, & Sprague, 1995; Bennett et al., 2000). Kornelius and Roth (2004) differentiate between political discussions at home and political talk with

friends and acquaintances. A study they conducted in Germany in 2003 reveals that men and women discuss politics to a similar extent at home, but that women are significantly less likely to have conversations about political matters with their friends. According to Kornelius and Roth (2004), educational differences are even more pronounced than gender disparities, however. Those holding a high school degree, the German Abitur, are not only substantially more likely to talk about politics with their friends but also converse more frequently with other family members. Several other researchers confirm that education is linked to interpersonal political interaction (La Due Lake & Huckfeldt, 1998). As Verba, Schlozman, and Brady (1995) point out, those with insufficient education often lack the skills necessary to contribute to political discussion. Well-educated individuals are typically better at absorbing intricate political information (Rosenberg, 1988). The lower one's education level, the higher is the cost of participating in political interaction, reducing the incentive to contribute (Downs, 1957). La Due Lake and Huckfeldt (1998), who find a statistically relevant relationship between education and frequency of political discussion, assert: "Education creates the human capital resources that lead to effortless engagement within the political system" (p. 568).

Unsurprisingly, those who are not well-integrated within their social environment are also less prone to converse about politics with others. Kornelius and Roth (2004) illustrate that those engaged in volunteer organisations are significantly more prone to discuss politics with friends and family members. Leighley (1990) points out that the likelihood of being exposed to politically active citizens increases with the size of an individual's social network. Social integration is usually accompanied by higher levels of trust and engagement in community

organisations, both of which are associated with participation in political discussions (Price & Cappella, 2002). Members of civic organisations and voluntary associations have ample opportunity to meet people, to discuss social and political issues with them, and to develop additional social relationships (Verba et al., 1995). Stamm, Emig, and Hesse (1997) regard interpersonal communication as the principal mechanism of community integration.

Political interest can be seen as the motivational basis for interpersonal communication activity. Huckfeldt, Ikeda, and Pappi (2000) assert that a person's level of political interest is possibly the best predictor of political discussion activity. Similarly, Beck (1991) stresses the importance of political attentiveness, as measured by attention to election campaigns, concern about election outcome, and level of political information. He finds a significant positive correlation between political attentiveness and exchange with personal sources. Bennett et al. (2000) confirm that psychological involvement in public affairs, measured by attention to the election as well as general interest in politics, is a potent determinant of political discussion.

In summary, some citizens are less likely than others to engage in private discussions about political matters. A low level of education hampers a person's participation in interpersonal communication about politics. If a person's social network does not provide sufficient opportunities for interaction, engagement in political discussions is unlikely. Those who are less interested and less involved in the subject matter naturally are less motivated to discuss public policy issues.

2.4 Individual effects of interpersonal communication

These inequalities in discussion participation raise the question whether it would be desirable to motivate those who are currently less active or inactive to talk about politics. Many academics claim that interpersonal communication about politics is beneficial for the health of a democracy. Most of them, however, do not articulate the criteria they use for judging whether a given effect is positive. In my view, clear valuation standards are a precondition for the proper assessment of outcomes. Hence, before evaluating the effects of private interpersonal communication on our democratic system, I will outline the valuation standard applied in this study.

Aristotle (6.1317b) describes democracy as the “government of each by all, and of all by each” in accordance with the principles of equality and liberty. To him democracy is intrinsically valuable, because its procedures treat citizens as free and equal and facilitate self-government. Others see the value of democracy in its ability to bring about the best outcomes. Arneson (2003, p. 122), for example, asserts that “what renders the democratic form of government for a nation morally legitimate (when it is) is that its operation over time produces better consequences for people than any feasible alternative mode of governance”. For the purpose of this analysis, I see no need to debate the relative merits of procedural and consequential arguments. Instead, I take it for granted that there is both intrinsic value in the free and equal rule of the people and instrumental value in its good outcomes. Hence, I will evaluate the effects of interpersonal communication based on whether such communication advances or hinders the citizens’ ability to govern themselves and on whether it can be expected to improve or worsen the quality of the outcomes of the democratic process. Both of these are ultimately

subjective matters, but unfortunately political philosophy does not provide us with an objective set of criteria.

With this yardstick in mind, let us turn to the assessment of the effects of private political discussions. Many scholars point to the capacity of interpersonal communication to render citizens more knowledgeable about politics. Sietman (2005) highlights that private discussions, unlike public ones, do not always entail logical argumentation. Nonetheless, she stresses that private discussions increase the quality of people's opinions and their comprehension of political questions. A study conducted by Moy and Gastil (2006) illustrates that informal discussion among citizens is significantly associated with political know-how. Bennett, Flickinger, and Rhine (2000) studied empirical evidence over the last 30 years and found the relationship between political knowledge and discussion to be stable across the time period. Schmitt-Beck (2000) reveals positive correlations between the intensity of discussion activity across a range of different types of discussion relationships and political involvement among West-German citizens. De Vreese and Boomgaarden (2006) emphasize the relationship between private interpersonal communication and political sophistication. Discussion engagement enhances people's capability and motivation to gain a deeper understanding of political issues (cf. Finkel, 1985).

It is Wyatt et al. (2000) who establish a significant correlation between political conversation and "consideredness", a more specific measure of competence based on the quality of the reasons a respondent quotes for holding certain political views. Similarly, Price and Cappella (2002) find that interpersonal communication extends the range of arguments taken into account when forming one's opinion. And, they point out that the enlarged repertoire of arguments

produces political views of higher quality. Price, Nir, and Cappella (2006) show that not only face-to-face discussants but also those who engage in political discussions on the Internet score higher on “argument repertoires” scales.

Kim et al. (1999) establish a relationship between political discussion activity and the clarity, consistency, and ideological coherence of a person’s arguments. It is often only when people have a chance to discuss their views with others that they realize their conflicting nature. Expressing their opinions vocally makes it easier to organize them in a coherent way. Scheufele (2001) even suggests that interpersonal political communication is a necessary condition for fully grasping political issues and for incorporating them into one’s existing knowledge.

While one may not agree that it is a necessary condition, the above studies illustrate that political talk is associated with an improved understanding of political matters and of the different views individuals may hold. Since the citizenry has the power to elect politicians who govern in a way the citizens deem appropriate, one would expect enhanced political knowledge among the electorate to have an indirect positive impact on the quality of the outcomes of the democratic system. And, even if one doubts this indirect instrumental benefit, it is hard to deny that a more politically savvy citizenry is better able to realize its right of self-government.

More fundamentally, political discussions advance the realization of this right by connecting individual citizens with political life. As Bryce ([1888] 1973) pointed out many decades ago, it is this connection that constitutes one of the most crucial functions of private political talk. Citizens incorporate the information they receive from the political realm into private conversations. These private conversations shape their opinions, voting decisions, and participatory behaviour.

All of these factors, in turn, impact the political domain. Because of this connecting function, private interpersonal communication can be seen as a prerequisite of informed self-government (cf. Wyatt et al., 2000).

Finally, it is worth examining the relationship between political discussion activity and political participation, because political participation is probably the most direct form of the citizens' self-government in today's democracies. Böhnke (2011) puts it bluntly: "When people say democracy they mean political participation" (p. 18, translated from German).

Many academics have shown that political talk promotes political participation (De Vreese & Boomgaarden, 2006). Kornelius and Roth (2004) illustrate that those regularly engaged in political discussions with friends and family are more likely to vote. Schenk (1982) reveals a correlation between political conversation activity and engagement in citizens' initiatives in Germany. La Due Lake and Huckfeldt (1998) establish a positive relationship between political discussion frequency and a number of traditional forms of political participation: Campaigning for a candidate or party, being present at candidate or party rallies, putting signs, buttons or bumper stickers on show, donating money, and voting. La Due Lake and Huckfeldt (1998) make reference to Putnam's (1995) idea of social capital. They argue that "social capital is realized through networks of political communication, thereby enhancing the likelihood that individuals will become politically engaged" (p. 569). McLeod, Scheufele, and Moy (1999) examine two forms of participation. Institutionalized participation includes voting and contacting government officials. Non-traditional participation is measured by one's willingness to partake in and to speak up at civic forums on an important social or political issue. Public forums enable citizens to discuss their views on a

given subject with government officials as well as with other citizens. McLeod et al.'s (1999) analysis establishes statistically relevant relationships between talk and each form of participation. Moy and Gastil (2006) also find evidence for a link between interpersonal political talk and both partaking in public forums and sustained campaign involvement. Overall, there is strong evidence for the relationship between political discussion and various forms of political participation.

2.5 Collective effects of interpersonal communication

Schudson's (1997) comments outlined in section 2.2 illustrate that not everyone regards private political discussions as beneficial for democratic societies. Among the potential drawbacks of interpersonal communication, two aggregate level effects have received considerable attention among scholars. Firstly, Noelle-Neumann's (1974) spiral of silence suggests that private political discussions may contribute to a silencing of the minority. Such an effect could be considered to violate the equality principle at the heart of self-government. Secondly, group polarisation theory holds that interpersonal communication within homogeneous groups tends to amplify prevailing individual opinions. And, because most interpersonal communication takes place within homogeneous environments, these discussions more often than not enforce the status quo. It is difficult to judge the impact of group polarisation on the functioning of democracy. Intuitively, it seems that the resulting bias in favour of the prevailing political view within the social group is more likely to impair than to enhance the quality of the output of the political system. At the same time, individuals with more firmly held political

opinions are more prone to vote, an essential part of the citizens' self-government (Binder, Dalrymple, Brossard, & Scheufele, 2009).

2.5.1 Spiral of silence

According to Price et al. (2006), the most renowned theory of collective social influence effects is Noelle-Neumann's (1974) spiral of silence, which is based on conformity research, most prominently that of Asch (1956). Noelle-Neumann (1974) postulates that the "climate of opinion" conveyed by the media and through personal conversations influences people's willingness to voice their views. Those who see themselves as belonging to the majority are more prepared to speak up. In contrast, those who perceive their views to be contrary to the majority opinion are less eager to voice them. In a spiral of silence, the disproportionate communication activity of the majority shifts the perceived public opinion further in the majority's favour. As minorities refrain from voicing their opinion, the majority view becomes yet stronger.

It is worth highlighting that the silencing of the minority is driven as much by the current perceived climate of opinion as by the expected changes in public opinion. Those who recognize their viewpoint as gaining traction are more likely to be eager to engage in political discussions, whereas those who see support for their opinion on a political issue fading are less likely to plan to voice their view (Binder, et al., 2009). The desire not to become isolated is stronger than the wish to stand up for one's own judgements (Noelle-Neumann, 1977).

Noelle-Neumann's (1974) theory has many facets, some of which do not deal with social influence but focus on media effects. Noelle-Neumann's (1974) initial research shows, for example, how biased media coverage that misrepresents the

prevailing majority opinion can trigger a shift in public opinion. While the theory's contribution to the study of media effects on public opinion formation is remarkable, I will focus on the spiral of silence's conclusions with regards to personal opinion expression. According to Noelle-Neumann (1974), the relationship between personal opinion expression and perceived public opinion is reciprocal. Interpersonal discussions contribute to the perceived climate of opinion. In turn, the climate of opinion influences people's willingness to speak up. Hence, the social effect of interpersonal discussions is that they indirectly contribute to the silencing of the minority. As it is difficult to test the first element of the relationship, namely the influence personal opinion expression has on the perceived climate of opinion, research has concentrated on the second element. Most academics interested in the social effects postulated by the theory investigate whether the perceived majority opinion influences people's willingness to voice their views. If this link would be refuted, this would at the same time disprove the supposed indirect effect.

Empirical results regarding this connection are mixed. Taylor (1982) found that perceived public support is related to willingness to express one's opinion for those that are part of the majority. In contrast, Katz and Baldassare (1992) who analysed respondents' readiness to speak to a reporter on a given issue found no proof for the spiral of silence. A meta-analysis of numerous survey studies conducted by Glynn, Hayes, and Shanahan (1997, p. 452) concludes that there is a "very small, but statistically significant, relationship between the degree to which a person believes others hold similar opinions and the willingness to express those opinions". 19 out of the 25 analysed studies established a correlation between willingness to speak up and perception of prevailing public opinion. The impact

of the perception of future public support was confirmed by eight out of 11 enquiries. The mean Pearson r was only .05 for both relationships, though.

It is worth pointing out that, although Noelle-Neumann's (1974) initial work analysed people's willingness to contribute to casual conversations, most research on the spiral of silence has focused on public opinion expression rather than historical private interpersonal communication (Binder et al., 2009). Willingness to talk to a newspaper reporter, to donate for a certain cause, and to display bumper stickers are among the measures of opinion expression. These studies have not investigated what I understand as interpersonal political communication between individuals. Hence, for the purpose of this thesis I will focus on studies examining interpersonal political discussions rather than the above forms of opinion expression.

Again, empirical findings are inconclusive. Glynn and McLeod's (1984) analysis of individual expectations of the outcome of the U.S. presidential election and stated likelihood of engaging in future political discussion provides confirmatory evidence for the spiral of silence. Those who perceive support for their viewpoints to be fading are less willing to engage in interpersonal political discussion, while more of those who believe that their political party is gaining momentum plan on talking to others. Fuchs, Gerhards, and Neidhardt's (1992) study of German citizens reveals no significant differences in willingness to engage in casual discussions with others between those opposing and those supporting the perceived majority opinion on immigration policy. Scherer (1990) even found that Germans who perceive themselves to support a minority position are somewhat more eager to participate in interpersonal discussions about the 1987 population

census. Overall, the empirical evidence casts doubt on the supposed link between interpersonal communication and the silencing of the minority.

Research showing people positioned at the extremes of the political spectrum to be more talkative raises further questions regarding the applicability of the spiral of silence to interpersonal communication. Schmitt-Beck (2008, p. 345) refers to cross-national research which illustrates “that supporters of minority parties as well as persons who are ideologically more extreme engage more readily in political discussion than adherents of the governing majority and ideologically moderates”. If those positioned at the extremes of the left/right scale and those favouring a minority party are generally more actively involved in political discussions than moderates, it is unlikely that interpersonal political discussion really has a silencing effect. Opinion intensity and involvement in the subject, both of which are associated with extreme political positions, apparently outweigh the negative effect that the perceived lack of support for one’s position has on one’s willingness to speak up (Hellevik & Bjørklund, 1991).

2.5.2 Group polarisation

Another core concept of discussion effects is group polarisation. It focuses on the development of opinions within individual social groups rather than at the level of the society. Whereas media effects play a central role in the spiral of silence theory, group polarisation deals only with the effects of interpersonal communication. It can be differentiated from Noelle-Neumann’s (1974) theory in a few other important respects. According to the spiral of silence, there is a relationship between the extent to which a person shares the perceived majority opinion and her planned opinion expression. Political discussion leads to a

perceived strengthening of the already most widely held view. Group polarisation, on the other hand, postulates that discussions within a homogeneous group tend to strengthen the group members' opinion intensity. The concept of group polarisation does not conflict with findings that those with more extreme political views are more active in discussions. Even if supporters of minority parties are generally more talkative in their immediate social environment, discussion within homogeneous social groups may well strengthen the opinions people already hold. What is more, in contrast to spiral of silence studies, group polarisation research examines effects of historical interpersonal communication.

Moscovici and Zavalloni (1969) define group polarisation as “the phenomenon whereby the mean postdiscussion opinion of a group (i.e., the average of all group members' opinions) is more extreme than the mean prediscussion opinion” (Binder et al., 2009, p. 317). The extremity of the opinion is understood as the intensity of the agreement or disagreement with a certain opinion. It is assessed by asking group members to what extent they concur with a specific statement regarding a current political topic.

The group setting is a crucial determinant of the extent to which opinions become polarized. Brown (1986b) emphasizes the importance of pre-discussion similarity of opinions among group members and firmness of pre-discussion attitudes. If many group members already hold strong positions on a given issue, polarisation tends to be amplified. Homogeneous discussion groups are predisposed to produce more extreme collective views, as existing opinions simply need to be reinforced (Sunstein, 2000). The connection between homogeneous discussion and opinion extremity is unsurprising. Discussion with like-minded people provides a space for thinking about one's attitudes and for reflecting on additional

arguments in favour of one's viewpoint. Research on heterogeneous groups, in contrast, shows that opinions in such settings are not prone to polarisation (Brown, 1986b; Mutz, 2002). Discussion within diverse groups may even lead to a reduction in attitude extremity (Binder et al., 2009).

Hence, whether interpersonal communication, in aggregate, leads to political opinions of higher intensity seems to depend on the nature of the majority of discussion relationships. If most conversations take place with like-minded others, then, political discussions more often than not should produce more polarized views. Thus, it is worth examining whether heterogeneous or homogeneous relationships are more prevalent.

Early scholars in the field of political communication, most prominently Lazarsfeld et al. (1944), viewed interpersonal political communication as taking place primarily between firmly connected individuals. These relationships are characterized by adherence to shared social norms as well as mutual sympathy and trust. But in 1973 Granovetter famously emphasized the importance of weakly-tied connections between people. According to Granovetter (1973), the strength of affiliation is judged based on factors such as the time spent together, emotional proximity, and mutual understanding. Strong ties usually include connections between spouses, relatives, and friends. Weak ties normally comprise neighbours, acquaintances, and colleagues. Granovetter (1973) points out that these types of relationships are particularly important, because they provide discussants with new information from outside their own circle of contacts.

Although trends towards individualisation and greater geographic mobility are apt to augment the importance of political communication through weak ties, most political discussions today still take place between family members and friends

(Bennett et al., 2000; Wyatt et al., 2000). In a study on the 1988 presidential election conducted by Beck (1991), 42 percent of respondents named their spouse, 26 percent their relatives, and 15 percent their friends as their main discussant about politics. Only 14 percent regarded co-workers as their primary political conversation partners. Meffert's (1999) analysis of Cross-National Election Survey data showed an average of 52 percent of a person's political discussants to be spouses and other relatives. What is more, the vast majority of non-relative discussion partners were considered to be close friends.

The data shows that family and close friends form the lion's share of a person's political communication network. This primary group is typically composed of like-minded individuals with similar social and political views (Wyatt et al., 2000). Lenart (1994) refers to evidence showing that family members share the same candidate preference in 80 percent of cases. What is more, whenever persons freely choose their discussion partners, they tend to deliberately select others with compatible viewpoints. Huckfeldt and Sprague (1987) point out that discussion relationships tend to be homogeneous, because people select to connect with some individuals while they avoid others. People choose to discuss political issues with some and refrain from doing so with others (cf. Schenk, 1994). MacKuen (1990) asserts that the alleged friendliness of the conversation environment, defined as the likelihood of meeting views resembling one's own, is correlated with the willingness to engage in political discussion. As political disagreement produces dissonance, one would expect people to avoid those who hold divergent viewpoints in order to avert dissonance (Festinger, 1957).

Consequently, we find a high level of agreement among discussants (Beck, 1991). Beck, Dalton, Greene, and Huckfeldt's (2002) analysis of a nationwide 1992

election survey showed that a significant majority of Americans find themselves in homogeneous personal networks favouring one of the two candidates. Darr and Graf (2007) found 58 percent of the nearly ten-thousand respondents to their survey to agree or agree somewhat with political opinions of the other individuals in their social network. Schmitt-Beck's (1994) analysis of a representative German study reveals a high degree of homogeneity across discussion relationships. Among married couples the agreement in terms of voting intentions is as high as 81 percent in Western Germany. Even with "other contacts" – the type of discussion relationship with the lowest level of homogeneity – agreement is as high as 50 to 59 percent.

Nonetheless, people's discussion networks are usually not entirely homogeneous for a number of reasons (Jones, 1986). One cannot freely choose one's relatives and co-workers, for example. Few people would change jobs in order to have more politically like-minded colleagues. Moreover, people normally don't check others' political views before starting to interact with them. One can typically only choose between a limited number of discussants, and characteristics other than political orientation will contribute to the choice (Schmitt-Beck, 2008). Most relational choices, in fact, are driven by factors besides political preferences (Huckfeldt & Sprague, 1987). Research shows that discussions with co-workers and neighbours are not characterized by an overwhelming degree of similarity of viewpoints (Niemi, 1974).

Overall, it seems that most political discussions happen within homogeneous environments, even though a significant minority of discussion dyads expose citizens to opposing political views. Hence, we would expect interpersonal discussions to foster a polarisation of opinions in the majority of cases. But Price

et al. (2006) object that group polarisation research may not be applicable to real life interpersonal political discussion. According to Price et al. (2006), group polarisation studies are confined to investigations of groups which are expected to reach some sort of agreement or shared judgement. Hence, doubt is cast on the transferability of the findings to private interpersonal political communication.

Contrary to what Price et al. (2006) claim, a number of academics have examined the relationship between attitude extremity and real life political discussion activity outside an experimental group setting. In five independent studies, Krosnick, Boninger, Chuang, Berent, and Carnot (1993) surveyed undergraduates regarding their strength of opinion and discussion frequency on various social and political issues. Their evidence reveals a positive relationship between self-reported opinion extremity and the level of interpersonal political discussion. Binder et al.'s (2009) analysis of multi-wave nationwide U.S. mail panel data even established a causal connection between the two factors, with political conversations driving attitude extremity.

Thus, we can conclude that interpersonal political communication tends to produce more intense political views. But an overall assessment of opinion polarisation also depends on the reasons underlying polarisation. It would be worrying, if people's views become more intense primarily due to normative pressures. It would be more reassuring, if the additional information received during the discussions was the main driver behind increased opinion intensity. In this case, the more intense views would be accompanied by enhanced political knowledge.

Social Identity Theory provides a possible explanation for the phenomenon of group polarisation from a normative perspective. People seek to enhance their

self-image by differentiating themselves from other groups as clearly as possible. The desire for stronger differentiation tends to produce more extreme group opinions. What is more, group members compete with one another to enact prevailing group norms in order to be most closely associated with the “normative ideal” of the group. The drive to outperform other group members in terms of norm compliance amplifies existing opinions (Tajfel, 1978; Turner, 1982). Maybe the strongest support for these processes comes from studies showing that “mere-exposure effects” can bring about opinion reinforcement (e.g., Goethals & Zanna, 1979; Pruitt, 1971a, 1971b). They demonstrate that the mere awareness of other group members’ opinions even in absence of any exchange of arguments can produce polarisation.

At the same time, many scholars have examined the relation between information processing and polarisation (e.g., Bishop & Myers, 1974; Kaplan, 1977). Among these, Persuasive Arguments Theory features prominently thanks to its sophistication and empirical backing (Burnstein, Vinokur, & Trope, 1973; Burnstein & Vinokur, 1975). The theory postulates that a person’s opinion is determined by the quantity and quality of arguments the person reflects on when forming her opinion. Group settings polarize attitudes, because they provide arguments that are incorporated into the members’ opinion formation. The validity and novelty of the arguments are important determinants of informational influence on polarisation. Summarizing the findings of 21 published articles, Isenberg (1986) concludes that both persuasive argumentation and social factors contribute to polarisation but that the power of arguments tends to be stronger.

In summary, there is sufficient evidence that interpersonal political communication tends to reinforce people’s political opinions. As most political

discussions about politics take place between like-minded individuals, more often than not they sustain or even strengthen the status quo rather than challenge prevailing opinions (cf. Berelson, Lazarsfeld, & McPhee, 1954). Fortunately, in many cases this process is accompanied by an increase in the quantity and quality of arguments supporting people's views. Nonetheless, discussions within a homogeneous environment are unlikely to foster a better understanding of and tolerance for conflicting views.

It seems that only discussions with people holding opposing political views are able to create an appreciation for conflicting opinions and empathy among citizens. Since these discussions typically take place among weakly-tied individuals, Beck (1991) concludes that the "strength of weak ties" identified by Granovetter (1973) lies in their capacity to expose people to alternative views. According to Huckfeldt and Sprague (1995), people regularly discuss political issues with weakly tied partners and that these exchanges contribute positively to the substance of the political community. Heterogeneous political discussions may be less frequent than communication with like-minded others but they are of considerable importance for our democratic system.

Overall, we find that interpersonal communication is beneficial for our democratic culture. It enhances people's political knowledge and the quality of their opinions and also promotes political and civic engagement. This can be considered advantageous both from a proceduralist and from an instrumentalist perspective. Arguments suggesting that interpersonal communication has a silencing effect on minorities and, thus, creates equality concerns, are not adequately supported empirically. While it is true that discussions with like-minded others tend to reinforce existing opinions, the impact this has on the functioning of democracy is

difficult to judge. Moreover, there is ample evidence for interaction between those holding opposing views nurturing the citizens' understanding of alternative standpoints. Given that interpersonal communication is primarily associated with positive effects, it would be desirable to motivate previously passive individuals to discuss politics. But before investigating whether the Internet is able to do so, I will turn to the second principal subject of this thesis, opinion leadership.

3 Opinion leadership

Opinion leaders are considered particularly important for the study of interpersonal communication, because it is through interpersonal discussions that they exercise influence on the views and behaviour of others. This section describes the relevant theoretical concepts and empirical findings regarding opinion leadership in face-to-face situations. After presenting the Two-Step Flow Model that introduced the idea of opinion leadership, I will contrast the definition of opinion leadership used in this study with alternative conceptions. Similarly, the technique employed herein for identifying opinion leaders will be contrasted with other methods of measurement. Following these definitional and methodological distinctions, both the reasons for non-leaders to conform to the views of opinion leaders and the motivation behind the opinion leaders' exercise of influence will be examined in detail. Finally, the present section summarizes the current state of research regarding the characteristics and sources of opinion leaders. This information forms the foundation for the subsequent analysis of opinion leadership on the Internet.

3.1 The Two-Step Flow Model

The concept of opinion leadership originates from research on media effects. With the rise of mass communication in the 1920's, academics began to examine the impact of mass media on political opinion formation. It was then that Walter Lippmann and Harold Lasswell laid the foundations of modern political communication study. Lippmann's (1922) famous book *Public Opinion* analysed political propaganda, which was seen as dangerously influential at the time.

Contrary to popular current opinion, Lippmann (1922) highlighted the positive role of the media in a democracy (Rogers, 2004). He pointed out that free media are vital for creating a lively exchange of opinions and for fostering citizen participation. Similarly, Lasswell (1927) focused on the effects of messages disseminated through mass communication channels.

Like Lippmann (1922) and Lasswell (1927), Lazarsfeld and his colleagues planned on assessing direct media effects, which at the time were seen as the most important determinant of people's opinions. In the first quantitative study examining changes in voting preferences, Lazarsfeld et al. (1944) interviewed a panel of 600 voters in Erie County. Every month over the six months before the presidential election, Lazarsfeld et al. (1944) queried the respondents about their political opinions and sources of information. Although most questions focused on media sources, subjects were also asked with whom they had talked recently about politics and whether they had listened to friends and family members discussing political issues.

To the surprise of the researchers, people reported more frequently to be exposed to and persuaded by personal political discussions than political newspaper or radio content. Particularly those with relatively little political interest, those who made their voting decision relatively late, and those who changed their preference during the six months revealed a strong dependence on personal discussions. People who were more open to influence, thus, relied more heavily on personal discussions to inform their voting decision. When asked to name the sources most critical to their opinion formation, those who had changed their voting preference more commonly quoted friends and family members.

Moreover, certain individuals were identified as particularly influential in their social environment. 21 percent of respondents reported having tried to convince others of their political ideas or having been asked for political advice. These individuals were labelled “opinion leaders” by Lazarsfeld et al. (1944). Opinion leaders were characterized by high levels of political interest, frequent participation in political discussions, and higher exposure to the media. In addition, they perceived mass media to have a significantly higher than average influence on their opinions.

These findings for the first time established a complementary relationship between interpersonal communication and the media in political opinion formation (Rogers, 2004). The evidence led Lazarsfeld et al. (1944, pp. 151-2) to suggest “that ideas often flow *from* radio and print *to* the opinion leaders and *from* them to the less active sections of the population ... The person-to-person influence reaches the ones who are more susceptible to change, and serves as a bridge over which formal media of communications extend their influence”. These remarks in the closing pages of *The People’s Choice* constitute the foundation of the Two-Step Flow Model. The rationale behind the model runs as follows: Personal influence is an important factor. It is primarily exercised by individuals who are more attentive to the media than those they influence. Hence, influential individuals take information from the media and pass them on to those less exposed to newspapers and the radio.

Since Lazarsfeld et al. (1944) had only discovered the importance of interpersonal influence by coincidence, five years later Katz and Lazarsfeld (1955) conducted a more systematic and comprehensive investigation of the Two-Step Flow Model. Their findings published in *Personal Influence* more firmly established the

concept of opinion leadership. Lazarsfeld et al.'s (1944) Erie Study relied on one end of each self-reported conversation tie. Katz and Lazarsfeld (1955), in contrast, analysed both ends of a communication dyad. Not only randomly sampled individuals but also their conversation partners were interviewed. 800 women in Decatur, Illinois, were queried in panels to determine the sources of influence on various routine decisions in the areas of politics, fashion, marketing, and cinema going. The researchers identified instances of opinion change and asked the respondents to describe the factors that had influenced those changes. People who were often quoted as having influenced others were sought for confirmatory interviews. For those individuals who reported to have influenced others, their counterparts were contacted for confirmation.

In this different experimental setting, Katz and Lazarsfeld (1955) confirmed the core conclusions drawn from the Erie Study. Interpersonal influence was reported to be more important than media influence. Furthermore, the findings validated the crucial role of opinion leaders in the process of opinion formation. They confirmed that there is a group of individuals in any social setting who act as a source of information and guidance for their immediate environment. Through their guidance function, these opinion leaders direct the process of opinion formation and change. Leadership here is understood as the informal and often unconscious day-to-day exercise of influence within small social groups of family members, friends, and neighbours. The opinion leaders' influence is based on their capacity to select and modify the information they transmit. They are not impartial reporters, but send on only certain pieces of information (Trepte & Scherer, 2005).

Despite its continuing influence to the present day, the Two-Step Flow Model has been criticized on a number of accounts. Gitlin (1978) disapproves of the theoretical foundations the model rests on. The Two-Step Flow Model conceptualizes persuasion as distinct individual instances of interaction. As Gitlin (1978) points out, this view of persuasion ignores patterns of influence that are structural and persist over time. What is more, Katz and Lazarsfeld (1955) assume the comparability of decisions in domains as different as consumer buying and politics, an assumption that Gitlin (1978) puts into question. In addition, the Two-Step Flow Model takes attitude change to be the single dependent variable. Only when attitudes change, they are considered to have been influenced. This definition inevitably ignores instances where opinions are reinforced or where a change in opinion is prevented. Finally, personal and media influence are presumed to be measurable in the same way and, hence, comparable. But, according to Gitlin (1978), the two modes of influence serve different functions and cannot be quantified and directly contrasted. Therefore, the model fails to account for the media's power to set the public agenda and to activate entire networks of support for certain opinions. As this last point of critique is of particular relevance to the present study, it will be discussed in more detail in the below.

Other scholars have criticized the Two-Step Flow Model by pointing out that influence does not just flow from the media to opinion leaders and then to non-leaders. The criticism is only valid, however, if Lazarsfeld and his colleagues regarded the two-step process as the sole flow between people. In my view, this is not the case. Lazarsfeld et al. (1944) explicitly say that media content "often" reaches the general public via opinion leaders. Hence, they allow for the fact that

ideas may also flow in other directions. Moreover, Katz and Lazarsfeld's (1955) own data points to a more complex pattern of influence. In the Decatur study, opinion leaders in three out of four domains were more frequently subject to interpersonal influence than to influence from the media, for example. Similarly, the Elmira Study carried out in 1948 as a follow-up to the Erie investigation provides evidence for the opinion leaders' reliance on personal sources of influence (Berelson et al., 1954). Both studies indicate that there is an exchange of influence in which certain individuals are both recipients and senders of influence. Thus, subsequent research has focused on investigating the kinds of flows that complement the two-step process.

In line with the results of the Elmira and the Decatur study, Troidahl and Van Dam (1965) emphasize the importance of opinion sharing. Their analysis of interpersonal discussions about public affairs reveals a significant amount of reciprocal rather than one-sided exercise of influence. In three quarters of the examined conversations, the person reported as the opinion giver also claimed to have asked the other person for her opinion. Moreover, pair-wise comparison of conversation partners showed little meaningful difference between alleged opinion giver and opinion seeker. They were similar in terms of media exposure, knowledge of news, and most attributes of social gregariousness. Troidahl and Van Dam (1965) conclude that a considerable amount of political discussion goes on between individuals who are equally well-informed by the media. Schenk's (1993) analysis of a representative German sample confirms that a large proportion of communication relationships are characterized by opinion sharing rather than unidirectional influence.

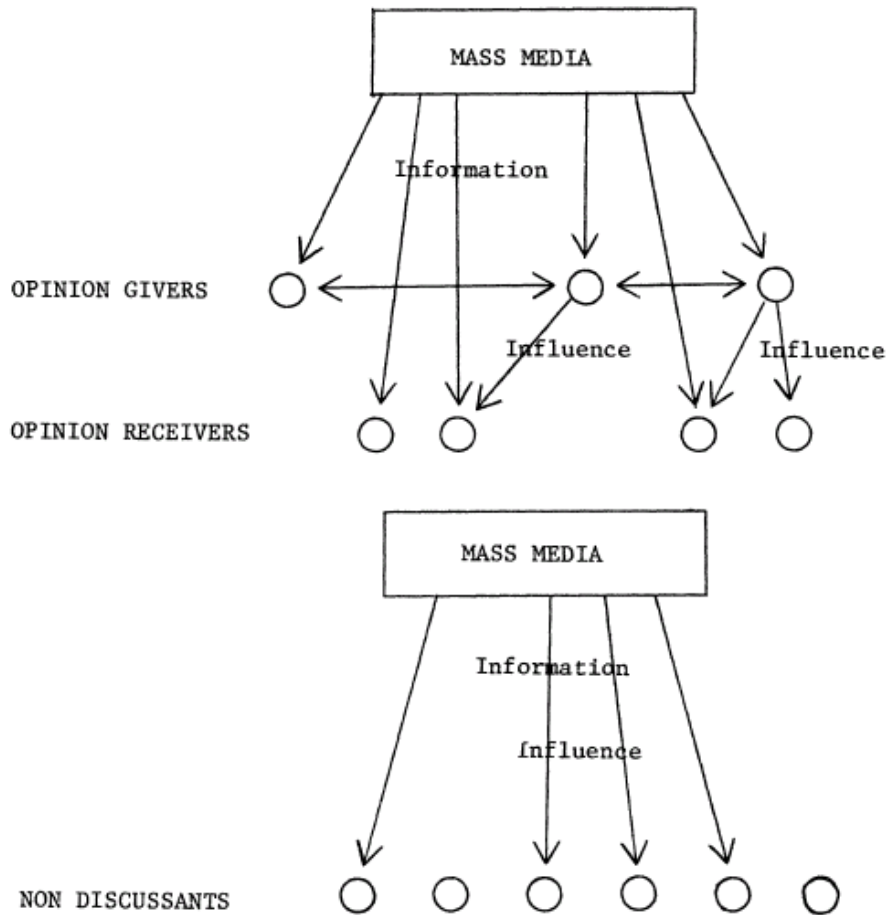
In another article, Troidahl (1966) points out that the Two-Step Flow Model does not differentiate properly between influence and information and instead assumes a standardized measure for both. The distinction is crucial in any analysis of interpersonal flow, though. Troidahl (1966) suggests that influence is likely to flow in steps, but that information often flows directly also to those who are not opinion leaders. Discussions with opinion leaders are particularly important when the directly received media content is inconsistent with the current view held by a non-leader. Besides the two-step flow of influence on opinions there is a one-step flow of information. Troidahl's (1966) one-step model of information is based on findings of earlier scholars. Deutschmann and Danielson (1960) demonstrated that opinion leaders play only a secondary role in the distribution of news information, as most information flows directly from the media. In a second step, the content received from the media induces discussions. Rogers (2003) highlights a study in which two-thirds of subjects ascribed their awareness of a major news event to the media rather than to interpersonal discussions.

As Troidahl and Van Dam (1965) point out, not everyone participates in interpersonal political discussions. There is an important group of people who receive information only from the media but do not engage in political discussions at all. These "inactives" have little news knowledge, consume hardly any print news, come from low educational backgrounds, and are often fairly socially isolated. Wright and Cantor (1967) called such people, who refrain from seeking others' advice, "opinion avoiders". Wright and Cantor (1967) confirmed that opinion avoiders not only abstain from discussing politics with others but also use media sources to a lesser degree. Similar to Troidahl and Van Dam (1965), they emphasize that opinion leaders typically also engage in opinion seeking. In fact,

53 percent of opinion seekers in the area of investigation, foreign affairs, were at the same time opinion leaders. Weimann (1994) concludes from these findings that opinion leaders are mediators only to a subset of the population (cf. Merten, 1986).

Robinson (1976) was the first to combine the Two-Step Flow Model with the ideas of opinion sharing, opinion avoiding, and direct media effects into a comprehensive Multi-Step Flow Model (see Figure 3). Like Lazarsfeld et al.'s (1944) model, Robinson's (1976) construct is based on a study of voting behaviour in national elections. It confirms that interpersonal communication tends to have a significantly stronger impact on voting preferences than the mass media, when people are exposed to both sources of influence. Those who engage in political discussion were found to be virtually unsusceptible to media influence. Robinson (1976) stresses, however, that not all people who consume media content are also engaged in political discussions. Hence, he differentiates between two groups of individuals with different patterns of influence: Opinion seekers, who are willing to discuss politics with others and are often affected by those discussions, and opinion avoiders, who are not interested in politics and are more open to the direct influence of the media. For those engaged in interpersonal communication, Robinson (1976) distinguishes the awareness stage, during which opinion leaders and non-leaders receive information from the media, from the subsequent evaluation stage, in which opinion leaders exert influence on others. Moreover, Robinson (1976) finds 68 percent of opinion givers to also receive opinions from others, confirming the importance of opinion sharing. His model allows for the fact that interpersonal influence may flow directly between two actors or indirectly, linking two parties via other persons.

Figure 3: Robinson's (1976) Multi-Step Flow Model



Source: Robinson (1976)

Finally, Robinson (1976) mentions two further streams of influence. He did not include them in his Multi-Step Flow Model, however, because his data set did not allow him to verify them. Opinion seekers do not report to have attempted to influence someone or to have been asked for political advice. Nonetheless, these non-leaders talk to each other. In such instances, no formal influence exchange is identified by the model, but more subtle processes of influence may be at work. Even if no political topics are discussed, the discussants' silence on political matters may lead to the reinforcement of their political inactivity. Furthermore, when opinion leaders are asked for advice or actively try to persuade others, non-

leaders are likely to respond in some way, for example by providing feedback. As Robinson (1976, p. 309) points out, “it would be difficult to imagine a completely unilateral influence relationship”. Hence, two further flows could be added to the below model.

To sum up, the Two-Step Flow Model is of considerable importance to the study of political opinion formation. Subsequent research was necessary, however, to portray the full complexity of the flow between citizens. As Huckfeldt et al. (2000, p. 193) point out, “any single ‘two-step flow’ of political information is best seen in the context of all the other two-step flows that a citizen experiences”. And, one may add that opinion leaders play a role not just in the dissemination of information but also in the assessment of that information. What is more, when analysing media and interpersonal influence, one need bear in mind that the two may not be of comparable nature. The assessment of media and interpersonal effects may be more complex than assumed by models which view the two as essentially competitive – an issue I will get back to later (see section 4.3.2).

3.2 The concept of opinion leadership

Notwithstanding justified criticism and evidence for direct media effects, one of the central conclusions of the Two-Step Flow Model continues to enjoy wide support. It is generally acknowledged that certain individuals – the opinion leaders – influence others through interpersonal communication. Since Lazarsfeld et al.’s (1944) initial work, countless studies have analysed various facets of opinion leadership. Not all of them, however, employ the same definition of the concept. To be able to compare their findings, it is necessary to clearly identify the definitional differences as well as their implications.

Unfortunately, Lazarsfeld et al. (1944) did not provide a clear and concise definition of the concept they introduced. The only description of opinion leadership they provide reads as follows: “In every area and for every public issue there are certain people who are most concerned about the issue as well as most articulate about it” (p. 49). This description, however, does not include some of the most crucial elements of Lazarsfeld et al.’s (1944) conception of opinion leadership. In my view, Trepte and Scherer (2005, p. 1) summarize much more fittingly how Lazarsfeld and his colleagues conceived of opinion leadership:

Opinion leaders are termed as people who are more influential within their social networks than others. They consider themselves experts in a specific area of interest ... and are asked for advice in this area ... Opinion leaders are selecting information in these areas of interest and then pass it on to others.

Opinion leaders are not necessarily those who are most involved in and who talk most frequently about a certain subject matter. What defines them as opinion leaders is that they influence the opinions of others in their social environment within a specific area of interest. As Dressler and Telle (2009) rightfully emphasize, opinion leadership as understood by Lazarsfeld et al. (1944) is not a personality trait or general characteristic but a type of behaviour. This defining behaviour can either take the form of active advice giving or it can mean passively being asked for advice. When exercising influence, opinion leaders typically select and transmit pieces of information. Finally, it is worth highlighting that the influence of opinion leaders is exerted informally as part of

the day-to-day interaction within familiar social settings (Katz & Lazarsfeld, 1955).

Unsurprisingly, most of those who subsequently examined opinion leadership adopted Lazarsfeld's early conception. Kingdon (1970, p. 256), for example, defines political opinion leaders as "those to whom others turn for advice and information on public affairs". Or, as Black (1982, p. 170) puts it: "For any given subject, there are some individuals to whom others are more likely to turn for advice." According to Rogers and Cartano (1962, p. 435), opinion leaders are "individuals who exert an unequal amount of influence on the decisions of others" and "from whom others seek advice and information".

The above definitions illustrate that Lazarsfeld as well as those who followed his conception consider opinion leadership to be confined to a single domain of expertise, politics for example. Merton (1949) termed such subject-specific influence "monomorphic". In contrast, "polymorphic", or generalized opinion leadership extends across different spheres, such as fashion and public affairs.

Even though Katz and Lazarsfeld (1955) conceived of opinion leadership as monomorphic, they were interested in assessing the degree of overlap between opinion leadership in different domains. Therefore, they conducted an analysis contrasting the number of individuals who act as opinion leaders in multiple areas with the amount of overlap that would be expected if opinion leadership in different domains was statistically independent. They found no evidence for polymorphic leadership. Marcus and Bauer (1964), however, recalculated their data set to find a small but statistically significant crossover between categories. Fashion and public affairs leadership as well as marketing and public affairs leadership was found to be related.

Eisenstein (1994) suggests that opinion leaders in the realm of politics are more likely to be polymorphic, because politics is interconnected with many other areas of interest. Hellevik and Bjørklund (1991) show that the percentage of political opinion leaders who also exert influence in domains such as health and cars is higher than among the general public. Being an opinion leader in matters of public affairs increases the chances of being an opinion leader in other areas of interest. Nonetheless, for most of the combinations studied, the majority of opinion leaders in one domain do not exert influence in the other. Overall, it seems that opinion leadership is neither entirely polymorphic nor purely domain-specific (Dressler & Telle, 2009).

It was Noelle-Neumann (1983) who, 40 years after Lazarsfeld et al.'s (1944) study, introduced one of the first and certainly the most renowned polymorphic concept related to opinion leadership. Like previous definitions, Noelle-Neumann's (1983) "personality strength" assesses the degree to which people consider themselves to be a source of advice and influence. But, the notion of personality strength is wider than the traditional conception of opinion leadership. It extends beyond behavioural variables, such as advice giving and influencing, and includes psychological characteristics like self-assertiveness, responsibility, and self-assurance (Schenk & Döbler, 2002). Personality strength reflects a person's confidence as a leader, her general ability to influence others, and her perceived impact on political and social outcomes. Personality strength is a general disposition or character trait that predicts a person's level of generalized opinion leadership. When combined with interest in a certain area, personality strength leads to domain-specific opinion leadership. Since people with high personality strength usually have multiple fields of interest, opinion leadership

typically extends into several spheres (Noelle-Neumann, 1983). Thus, personality strength is best understood as an antecedent of opinion leadership as defined by Lazarsfeld et al. (1944).

Although Noelle-Neumann (1983) clearly distinguished personality strength from opinion leadership and used appropriate terminology, some academics have adopted Noelle-Neumann's (1983) concept as a definition of opinion leadership. Hence, one has to be careful when juxtaposing the findings of these scholars with the results of those who use the traditional definition of opinion leadership. Such comparisons contrast opinion leadership with an antecedent of opinion leadership, which may create discrepancies.

Keller and Berry's (2003) "influentials" are another prominent conception of opinion leaders. Influentials are not defined by their influence on others within their social environment or by their personality traits. They are those individuals who engage most actively in civic and political participation. For Keller and Berry (2003) whether someone is an opinion leader depends on whether he has recently contacted a politician, worked for a political party, or participated politically or socially in other ways. This "engagement model of opinion leadership" does not take into account if an influential has given advice to others (Nisbet, 2005). But "influentialness" has been shown to be closely associated with the early behavioural conception of opinion leadership. Like Noelle-Neumann's (1983) concept, Keller and Berry's (2003) has been taken up by other academics. Not all of them, however, clearly distinguish between influentials and opinion leaders. Some claim to study opinion leadership, despite employing Keller and Berry's (2003) definition.

The above discussion illustrates why it is essential to review the definitions of opinion leadership used, before comparing the work of different researchers. The present study is based on Lazarsfeld et al.'s (1944) original definition of opinion leadership. Opinion leadership is understood as a behavioural variable that includes both the active and the passive exercise of influence on the political opinions of others in interpersonal discussions (monomorphic opinion leadership). In the below, I will highlight whenever reference is made to a study that uses a different definition of opinion leadership.

3.3 Measuring opinion leadership

Researchers differ not only in how they define opinion leadership but also in how they measure it. Even those who define opinion leadership in the same way as Lazarsfeld et al. (1944), rely on different methodologies of measurement. Since discrepancies in measurement can impact the quality and comparability of the results, I will briefly compare the self-designating technique used in the present study to alternative approaches, namely the key informant and the socio-metric/network techniques. Moreover, I will summarize the techniques used to assess personality strength as well as the operationalization of the engagement model of opinion leadership.

3.3.1 Key informant method

The key informant technique proceeds in two steps. First, individuals who are particularly well-informed about the flow of influence between group members are identified. These individuals are then asked to report which persons within the group act as opinion leaders (Weimann, Tustin, Van Vuuren, & Joubert, 2007). Of

the three methods described here, the key informant technique is used least frequently in practice.

Jacoby (1974) is one of the few who employed it, among other methodologies, in his study of opinion leadership for different consumer product categories. Jacoby (1974) studied influence flow within college fraternities and sororities. His work shows that it is a precondition for the application of key informant procedures that the group members know each other. The president and the social chair of each organisation served as key informants about the patterns of influence. They were asked to report whom the majority of group members would go to for advice.

The above example points to one of the fundamental drawbacks of the key informant technique. Its use is limited to small cohesive social groups, in which the members, or at least the informants, are knowledgeable about existing influence relationship. There is a substantial risk that the perception of the key informants is not an accurate reflection of reality. Those who are chosen as informants often have a relatively high social position which tends to produce biased judgements (Eurich, 1976). Dressler and Telle (2009) assert that detailed data about influence structures within the group is necessary to assess the validity of the reports of the key informants. Ironically, if this evidence is available, key informants are no longer required to identify opinion leaders. At the same time, the methodology is especially time and cost-effective, as only a few individuals need to be surveyed (Weimann et al., 2007).

3.3.2 Socio-metric and network techniques

Socio-metric procedures require all members of a social group to report whom they turn to for guidance and information. The opinion leaders are those

individuals who are identified most often by others as givers of advice and information. In a second step, network analysis is applied to systematically map the communication structure of the group. A sociogram can help to illustrate the patterns of influence as well as the relative strength of flows between discussants (Schenk & Döbler, 2002).

Weimann (1982), for example, obtained a socio-metric mapping of an Israeli Kibbutz community by interviewing each of its 270 members. Each individual was asked to report the importance, frequency, and duration of each of his conversation ties with other members of the community. Scores given by each conversation partner were added together to rate the strength of each dyad. In a next step, communication groups within the community were identified by a repeated reorganisation of the communication matrix. The members of each such clique were grouped into those located at the centre of the group, those at the margins – with few connections within the group – and ordinary members.

To identify opinion leaders, each member was interviewed regarding his awareness of certain news items as well as the source of this knowledge. The data allowed the researchers to establish which individuals within each group had activated certain information and influence flows. The study revealed that influence within cliques is exerted primarily by centrally positioned persons acting as opinion leaders. Centrality comprises three elements: The number of direct connections, the closeness to other members of the group, and the extent to which one serves as a bridge for the information and opinion exchanges of others, i.e. betweenness.

The socio-metric technique is considered the most reliable, as its complex design permits the investigation of the relationship between opinion leaders and

followers (Schenk & Döbler, 2002). Network analysis enables the researcher to examine the direction as well as the strength of the communication relationships (Kim, 2007). Rogers (2004) emphasizes the high validity of the method. At the same time, he points out that a significant number of subjects need to be interviewed in order to identify a relatively small number of influencers. Consequently, the procedure is relatively expensive and harder to administer (Weimann et al., 2007). More importantly, socio-metric techniques are limited to the relatively rare cases where all the members of a communication network can be questioned. Hence, the method is primarily employed in the analysis of small entities (Eurich, 1976).

More recently, researchers have combined network analysis with text mining techniques in order to identify opinion leaders within electronic discussion groups. Such methods are promising as they are expected to provide high quality information, but do not require extensive surveys. Bodendorf and Kaiser (2010), for example, describe a three-step process through which opinion leaders can be discovered in online forums. First, text mining is used to classify each forum user's opinion regarding a certain topic as positive, negative, or neutral. Then, relationships among participants are established based on the references users make to each other's postings. Lastly, the evidence on communication relationships forms the basis on which each user's centrality in the network is assessed. Although further studies are required to test the validity of electronic text mining and network analysis for the identification of opinion leaders, the work conducted to date indicates that such methods may play a significant role in future opinion research.

3.3.3 Self-designating method

The self-designating technique employed in the present study relies on people's judgements of their own level of opinion leadership. People are asked to rate the extent of their opinion leadership on certain scales. Self-designation is the only technique that can be used for large random samples which permit neither the interviewing of all members of the communication network nor the identification of individuals who are cognisant of the entire system of influence within the group. The applicability in the analysis of extensive survey data accounts for the popularity of the method (Trepte & Scherer, 2005).

Clearly, the quality of the results depends on the accuracy of people's self-image (Rogers, 2004). As Schenk and Döbler (2002) point out, though, subjects have a tendency to overestimate the strength of their own influence. Katz and Lazarsfeld (1955), for example, conducted follow-up interviews to confirm the results of their self-designation survey. 36 percent of the influence attempts reported by opinion leaders were not confirmed by the designated influencees. Similarly, Schenk (1993) used the socio-metric technique to validate self-reported data, finding evidence for people's tendency to overestimate their own opinion leadership qualities. In another study carried out by Yale and Gilly (1995), information seekers confirmed only a third of self-reported opinion leaders. It seems that the self-designating method "sacrifices a moderate degree of accuracy for the sake of economics and expediency" (Weimann et al., 2007, p. 177).

Lazarsfeld et al. (1944) as well as many studies that followed utilized a two-item self-report scale to measure opinion leadership. Respondents were asked whether they had recently attempted to persuade anyone of their political ideas and whether anyone had asked them for guidance on political issues lately. Individuals

who answered either of the two questions affirmatively were categorized as opinion leaders with the remainder of persons being called followers. Rogers and Cartano (1962) criticized that Lazarsfeld et al.'s (1944) dichotomous answer scale does not reflect the fact that opinion leaders differ in the frequency and force with which they influence others. I agree that opinion leadership is best understood as a continuous variable. Hence, the present study uses a five-point answer scale for each of the two questions Lazarsfeld et al. (1944) employed to measure opinion leadership. In the below, I will clearly identify any study that is based on the socio-metric or the key informant method instead of the self-designating technique utilized in the present study.

3.3.4 Measurement of related concepts

Section 3.2 introduced two important concepts related to opinion leadership, which some scholars have used synonymously with opinion leadership. As I will make reference to both personality strength and “influentials” in my analysis, it is worth reviewing the self-designating scales employed to measure each concept. Moreover, I will describe Darr and Graf's (2007) method for identifying “poli-influentials”, a concept similar to Keller and Berry's (2003) influentials.

In the 1980's, the German magazine *Der Spiegel* tasked the Allensbach Institute with developing a new procedure for identifying among its readership consumers who are particularly active and influential within their community. For the Allensbach Institute, Noelle-Neumann (1983) used evidence from a representative German sample to test a scale originally consisting of 34 items. Initially, the scale was reduced to 13 self-report items, each allocated an individual weight reflecting its correlation with the other items. In 1984, three further questions were deleted

from the scale following a series of tests showing that results were not materially impacted by the reduction (Noelle-Neumann, 2002). The final 10-item scale allows placing each respondent along a continuum of personality strength (see Table 1).

Table 1: Noelle-Neumann’s (1983) personality strength scale: Items and weighting

	Weight	
	Yes	No
1. I usually rely on being successful in everything I do.	13	7
2. I am rarely unsure about how I should behave.	14	7
3. I like to assume responsibility.	15	7
4. I like to take the lead when a group does things together.	17	8
5. I enjoy convincing others of my opinions.	15	7
6. I often notice that I serve as a role model for others.	16	8
7. I am good at getting what I want.	14	7
8. I am often a step ahead of others.	18	9
9. I have many things others envy me for.	15	9
10. I often give others advice and suggestions.	15	10/5

Source: Noelle-Neumann (1983); items translated into English by Weimann (1991)

Original validity tests have been criticized for relying solely on the correlation between the scale’s results and the interviewers’ impressions (Weimann et al., 2007). Later analysis by Weimann (1991), however, confirms the validity of Noelle-Neumann’s (1983) concept. The output of the scale was compared to results from a network analysis of the same respondents. Meaningful correlations revealed that individuals with high scores on the scale are better connected with others in the community and, more specifically, with other members of their immediate social clique. Moreover, most of the flow of influence and information was activated by persons with high scores. Testing in two different cultural contexts, namely Israel and Germany, provides further support for the measure’s usefulness and efficiency in identifying opinion leaders.

As mentioned above, Keller and Berry (2003) designed a scale which identifies political opinion leaders, or “influentials”, based on their level of engagement in civic and political participation. Respondents are presented a list of eleven political and civic activities (and one dummy item) and are asked in which of these they have engaged in during the past year. Respondents who answer affirmatively with regards to at least three activities are classified as influentials (see Appendix A for the list of activities). Later examinations confirm that the results of this participation-based methodology are significantly correlated with behavioural measures of opinion leadership, like the one used in this study. Hence, it is not surprising that the individuals classified as opinion leaders by Keller and Berry’s (2003) method have similar attributes as the opinion leaders identified by traditional techniques.

Inspired by Keller and Berry’s (2003) work, Darr and Graf (2007) designed the concept of “poli-fluentials” to measure political opinion leadership based on civic and political activities. Individuals who have engaged in at least three out of seven ways of publicly voicing their opinion and who have either donated money repeatedly or donated as well as volunteered for a political candidate are classified as poli-fluentials (see Appendix A). Contrary to Keller and Berry’s (2003) scale, Darr and Graf’s (2007) measure includes both online and offline advocacy. Like influentials, poli-fluentials have very similar characteristics as political opinion leaders identified by scales measuring advice giving and influence on others’ opinions.

As has been shown, several established scales exist for measuring opinion leadership and related concepts based on people’s self-reports. When comparing different studies, one needs to pay attention to the measurement used. Self-reports

of political advice giving, general personality strength, and political participation activity may yield different results, despite significant statistical relationships between the three concepts.

3.4 Functions of opinion leaders

Now that the term opinion leadership has been defined for the purpose of the present study, I will assess the factors that explain the opinion leaders' significance for political campaigners and for others interested in understanding processes of political opinion formation. First, I will separate the role of opinion leaders in the dissemination of information from the exertion of influence. As part of the analysis of the influence function of opinion leaders, I will outline the reasons people may have to follow their guidance and what may motivate them to influence others.

As the above mentioned critics have pointed out, the Two-Step Flow Model did not clearly separate the analysis of the flow of influence from the examination of the flow of information. Even though this differentiation was not reflected in the research design, Katz and Lazarsfeld (1955) did explain that the importance of opinion leaders for individual political opinion formation derives from two functions they fulfil. Opinion leaders have a "relay function" in that they forward information received from the media on to other citizens. At the same time, opinion leaders fulfil a "reinforcement function", which Katz and Lazarsfeld (1955, pp. 82-3) describe as follows: "When a mass media influence-attempt coincides with interpersonal communication, it appears to have much greater chance of success". Hence, reinforcement is taken to describe the opinion leaders' influence function.

3.4.1 Relay function

Deutschmann and Danielson (1960) were among the first to point out that the Two-Step Flow Model overestimates the opinion leaders' role in relaying information. They showed that most news flow directly from the media to the general public and are, in a second step, discussed with others. According to Deutschmann and Danielson (1960), it is at that stage that opinion leaders who tend to be more knowledgeable about the subject matter provide non-leaders with additional information. Deutschmann and Danielson (1960) conclude that opinion leaders primarily have a supplementary relay function. They add to, correct, and validate the information received from the media.

Subsequent research on news diffusion has generally confirmed the importance of this one-step flow of information (Troidahl, 1966), but has also shown that the extent to which media information is relayed by opinion leaders depends on its news value. Rosengren (1973, p. 84) defines the news value of a report of an event as “the number of persons that feel involved in the report of the event (and, indirectly, in the event itself)”. News value refers to reports “as perceived and used by the audience”. Deutschmann and Danielson's (1960) investigation focuses on information with average news value. Several studies support the view that opinion leaders have only a negligible or supplementary role in conveying information of low or average importance (Hill & Bonjean, 1964; Eurich, 1976; Basil & Brown, 1994).

When news have well above-average value and stand out from the daily news flow, however, opinion leaders play a more significant role in the transmission of

information (Rosengren, 1973). Hill and Bonjean (1964) find a relationship between news value of information and the importance of personal discussion for information diffusion. According to their evidence, more than half of respondents have heard about the Kennedy assassination through interpersonal sources. A meta-analysis of 34 studies on news diffusion conducted by Basil and Brown (1994) reveals a positive association between the probability of hearing the information from personal sources and the importance of the news event. Moreover, they find interpersonal communication to be almost as important as the media in the dissemination of “Magic” Johnson’s HIV test results. Müller (1970) explains that, if news is perceived as important by opinion leaders, they are more likely to forward it on, assuming that others will also consider the news as essential.

Notwithstanding wide support for the positive relationship between news value and the role of opinion leaders in relaying media information, a number of studies find media sources to be more important even for information of high news value. Larsen and Hill (1954) investigated the diffusion of news about the death of Senator Taft in 1953, an important news event at the time. The data showed that only 35 percent of university faculty members learned about the news from personal sources. Among residents of a low-rent housing community, the second surveyed group, 83 percent were first informed by the media. Weibull, Lindahl, and Rosengren (1987) examined diffusion of the news in Sweden that the Prime Minister had been murdered. They found that only a third of respondents learned about the event from other individuals. In Rogers and Seidel’s (2002) U.S. study of the terrorist attacks on September 11, 59 percent of respondents heard the news on television or on the radio. 40 percent were told about the event through

interpersonal communication. In Germany, only 23 percent learned about the attacks through discussions with others. 73 percent received the news from television or from the radio, while 2 percent were informed first via the Internet (Emmer, Kuhlmann, Vowe, & Wolling, 2002).

Greenberg (1964) also analysed the dissemination of the report of the Kennedy assassination, obviously a news item of extremely high value. Similar to Hill and Bonjean (1964), he found that personal sources were just as important as media sources for hearing about the event. Greenberg (1964) highlights that when people are at home they tend to learn about an important event via the media. When they are out they are more likely to receive the news through discussions with others. Mayer, Gudykunst, Perrill, and Merrill (1990) show that approximately half the people learned about the Challenger explosion from others. Summarizing a number of different studies, Eurich (1976) concludes that personal and media sources play an equally important role in the dissemination of information of very high news value (cf. Eisenstein, 1994). To sum up, the relay function of opinion leaders is minimal for information of low or average value, but it is at least of some significance for highly important news.

3.4.2 Reinforcement function

Whereas the importance of opinion leaders in the flow of information is limited, they are acknowledged to play a significant role in the flow of influence (Schenk & Döbler, 2002). Most information is not filtered by opinion leaders, but received directly from the media. In a second step, however, opinion leaders often exert an influence on the information evaluation and opinion formation of non-leaders, for example by reinforcing media messages. Lazarsfeld et al. (1944) were the first to

propose that interpersonal conversations have more persuasive force than mass media effects. When asked to name the sources most essential to their political opinion formation, people rank family, friends, and acquaintances higher than newspapers and the radio. Similarly, respondents in Katz and Lazarsfeld's (1955) study reported interpersonal influence to be more important than the media. Keller and Berry (2003) have shown that even opinion leaders value personal sources more highly than traditional media sources. Today, it is widely accepted that in-person discussions have more direct influence than the different types of mass media (Dressler & Telle, 2009).

Kiecker and Cowles (2002, p. 73) define such social influence as "any change, whether deliberate or inadvertent, in an individual's beliefs, attitudes, and/or behaviors, that occurs as the consequence of interpersonal communications". Academics quote a number of differences between media messages and interpersonal communication in order to explain the strong influence of discussions with others, most notably with opinion leaders. Unlike more casual interpersonal discussions, media messages are often perceived only selectively, not correctly interpreted, or even outright rejected (Schenk & Döbler, 2002). Interpersonal exchange tends to be regarded more favourably, because it is more informal and often less overtly aimed at persuasion (Eisenstein, 1994). Face-to-face communication is more flexible as it allows for feedback between opinion leader and recipient. The recipient's questions and doubts can be addressed instantaneously (Dressler & Telle, 2009). In contrast, the adaptive capacities of the media are limited. The message cannot be tailored and adjusted in the same way as in face-to-face interaction (Kotowski, 2007). What is more, interpersonal interaction is not limited to verbal and visual statements but has a larger capacity

for socio-emotional messaging. Ball-Rokeach and Reardon (1988, p. 142) point out that interpersonal discussions have “higher sensory authenticity than the mass form because it may simultaneously appeal to sight, sound, kinaesthetic, smell, taste, and touch senses”.

At the same time, media messages differ from the information conveyed through conversations in terms of objectivity. Analyses of U.S. media content suggest that American newspaper and television coverage is characterized by neutrality rather than favouritism. Graber (1980) finds explicit bias to be very rare in U.S. newspapers. This is particularly noteworthy as many newspapers were originally set up as vehicles for party propaganda (Beck, 1991). Robinson and Sheehan (1983) identify only a small number of value judgements and direct comments about the qualities and prospects of individual candidates on U.S. television. Even though Patterson and Donsbach (1996) find evidence for a measurable relationship between a journalist’s partisanship and his news decisions, they acknowledge that the relationship is not robust.

Studies of German media reports paint a different picture. Almost unanimously, they find partisan coverage across the German media universe (see Schönbach, 1977; Hagen, 1992) with a bias towards to left side of the political spectrum (Kepplinger, 2002). While the discrepancy between U.S. and German findings regarding actual partisanship is noteworthy, for the purpose of judging the relative influence of the media and of interpersonal discussions another variable is more critical, namely perceived objectivity. Independent of actual partisanship, if citizens perceive the media to be objective, they find it hard to utilize its messages in their political opinion formation, because allegedly neutral information is difficult to incorporate into one’s belief system (Huckfeldt et al., 2000). And, as

Schmitt-Beck's (1994) survey of East-German and West-German citizens shows, the majority of people do not perceive television and newspapers to be biased towards any political party. In East-Germany, for example, less than a quarter of the population regards either news source as partisan. In contrast, political discussions tend to carry a recognizable bias and, thus, are a more efficient source of political direction (Eisenstein, 1994). Because the sender often provides not only facts but also his explicit evaluation of these facts, it is easier for the recipient to accept or reject the transmitted information (Merten, 1988).

In order to better understand the influence function of opinion leaders that explains their particular relevance for political campaigners, it is worth reviewing the major theories about why people are susceptible to their influence. Deutsch and Gerard's (1955) Dual Process Theory draws the important distinction between informational and normative reasons behind influence. Park and Lessig (1977) separate the normative element into a value-expressive and a utilitarian component. When influence is utilitarian, the influencee adjusts his behaviour to avoid punishment or to attain rewards from the influencer. When influence is value-expressive, behaviour change is motivated by the desire to be associated with a positive reference group.

3.4.2.1 Dual-Process Theory

Conceptualizing findings of various small group experiments, Deutsch and Gerard (1955) differentiate between informational and normative influence. Influence is informational, if the perceived validity and quality of the conveyed information motivates the subject to conform. It is normative, when the person subject to the influence conforms simply to be viewed favourably by the influencer or his social

environment. Informational influence rests on convincing arguments, while normative persuasion is based on compliance with social norms (Kaplan & Miller, 1987).

Attempts to compare the persuasive force of normative and informational influence yield conflicting results (e.g., Burnstein & Santis, 1981; Nolan, Schulz, Cialdini, Goldstein, & Griskevicius, 2008). The difficulty of such comparison is not surprising, given that the two types of influence seldom occur in an exclusive fashion (Kelman, 1961). In most instances both kinds of influence are intertwined (Deutsch & Gerard, 1955). Which arguments are regarded as valid is ultimately a subjective question and the relationship between the discussants and the social setting of the interaction are bound to impact the perceived information quality. Whether the arguments have the shared support of their relevant social group and whether the informant is highly regarded within the group almost inevitably influences the assessment of the information. The soundness of arguments and the validity of information are judged within a given social context (Turner, 2005). In practice, it is often difficult to distinguish the normative force of a persuasive message from its factual content (Price et al., 2006).

Even though the two kinds of influence usually cannot be clearly separated, their relative importance can differ depending on the problem at hand. Kaplan and Miller (1987) juxtaposed discussions about the correctness of alternative answers with debates about judgemental or positional topics. They show that when citizens conversed over which stance should be taken in cases of conflicting interests and values, normative influence plays a larger role.

3.4.2.2 Reference Group Theory

Park and Lessig's (1977) Reference Group Theory provides a notable extension to the widely accepted informational versus normative distinction. Although Reference Group Theory originates from the field of consumer research, its findings are of considerable relevance for the study of social and political interpersonal influence. Building on Kelman's (1961) famous article *Processes of Opinion Change*, Park and Lessig (1977) decompose influence into three separate elements. Informational influence is similar to the concept proposed by Deutsch and Gerard (1955) and is further specified with reference to Kelman's (1961) internalization process. Informational influence is internalized, or accepted, if the influencee recognizes it as ameliorating his knowledge about the issue in question. Informational influence reduces the decision uncertainty perceived by the influencee (Bearden & Etzel, 1982).

The informational influence of opinion leaders is of particular importance, as many people refrain from conducting a comprehensive search and assessment of political information. Non-leaders often prefer to obtain arguments from opinion leaders, because otherwise they would have to incur considerable costs in terms of time and energy (Downs, 1957). What is more, those willing to engage in comprehensive search and evaluation are often hampered by limited cognitive abilities (Lodge, Steenbergen, & Brau, 1995). As Schenk and Döbler (2002, p. 49) put it, "the role of opinion leaders lies in assessing and evaluating information seen, heard, or read in the mass media; in this way opinion leaders are an aid to orientation in a confusing, information-overloaded world. In terms of system theory, they often function to reduce complexity." Opinion leaders can assist non-leaders in forming opinions by providing missing data and by interpreting and

presenting complex information in an easily digestible fashion (Eurich, 1976). Huckfeldt et al. (2000, p. 175) assert that in interacting with opinion leaders people are able to convert the “daunting challenge” of acquiring a view on political issues into something enjoyable and positive.

Normative influence is split into a utilitarian and a value-expressive category, both of which are linked to the person’s reference group. Park and Lessig (1977, p. 102) define a reference group as “an actual or imaginary individual or group conceived of having significant relevance upon an individual’s evaluations, aspirations, or behavior”. Utilitarian influence is driven by the desire to attain social rewards and to avert punishment from the reference group. The influencee conforms to the views of others, who he believes to value such compliance. Park and Lessig (1977) refer to Kelman’s (1961) definition of compliance, which does not entail deep-rooted opinion change. Utilitarian influence leads only to public conformity, a change of behaviour without a true change in the person’s convictions.

Compliance can be differentiated from identification, which is characterized by private acceptance – a durable conversion of opinion. When the influencee identifies with the source, he is truly convinced of the viewpoint or behaviour that he takes up. Identification forms the theoretical basis of the third type of influence, value-expressive influence. The influencee seeks to improve his self-image by associating himself with a positive reference person or group. He tries to be similar to or feels the desire to be loyal to the group, because he has a positive perception of the reference entity (Bearden & Etzel, 1982). In contrast to compliance, identification does not hinge on the observability of the influencee’s

behaviour on part of the influencer. It is dependent, though, on which reference groups the influencee views favourably and seeks to be associated with.

Once someone has established which groups he desires to be associated with, he needs information on which opinions and behaviour to adopt. And, it is often the opinion leaders who signal to the rest of the social group which attitudes and behaviours are acceptable. Opinion leaders are typically those individuals who most closely embody the central values of the group (Dressler & Telle, 2009). They tend to be particularly interested in and aware of the group's behavioural standards. Moreover, opinion leaders provide legitimization and decision support for non-leaders by giving an appraisal of information received from the media (Schenk & Döbler, 2002). As Baumgarten (1975, p. 12) puts it, opinion leaders provide a "peer group legitimate" interpretation of new information. These normative functions of opinion leaders are increasingly important, as the alignment of social groups and political parties weakens and people's political loyalties provide less and less guidance (Dalton, Flanagan, & Beck, 1984).

3.4.2.3 Influencer characteristics

Having laid out people's reasons for conforming to the views of opinion leaders, we are now able to outline the characteristics that opinion leaders typically possess and that explain their persuasiveness. Social influence research distinguishes between three important sets of source characteristics. These characteristics fit well within the framework of Kelman's (1961) processes of opinion change and, by extension, Park and Lessig's (1977) Reference Group Theory. The effect of interpersonal discussions is a function of the credibility, attractiveness, and power the recipient attributes to the sender.

Kiecker and Cowles (2002) emphasize two dimensions of sender credibility, namely expertise and trustworthiness. Credibility increases with the perceived subject-specific experience and knowledge the source possesses, his expert power as Raven and French (1958) put it. At the same time, the degree to which the recipient regards the sender as trustworthy enhances the sender's credibility. Alleged trustworthiness depends on whether the source is seen as communicating objectively and without bias (Hass, 1981). According to Gatignon and Robertson (1986), source credibility also depends on the strength of the tie between discussants. The higher the emotional intensity and intimacy, the greater will be the perceived credibility. Moreover, credibility relates to prior experience with the source in terms of accuracy of past recommendations (Baron & Byrne, 1984).

Huckfeldt et al. (2000) show that trust in a person's opinions and the extent to which the person is viewed as expert are correlated with the frequency of interaction with that person. But not only do those factors influence the frequency of discussion, they also impact the persuasiveness of discussion. Studies consistently show that sources high in trustworthiness are more persuasive (Insko, 1967). Credible sources provoke more immediate opinion change than do those recognized as less credible (Hovland & Weiss, 1951). Messages from credible sources are more likely to be perceived as accurate reflections of facts and, thus, have more persuasive power (Kelley, 1967; Buda, 2003). High source credibility hinders counter-argumentation, which in turn makes the interpersonal communication more persuasive (Sternthal, Dholakia, & Leavitt, 1978). High source credibility tends to provoke attitude change through the process of internalization put forward by Kelman (1961). The information is perceived as correct and, hence, incorporated into the recipient's belief system, often causing a

permanent effect on his attitudes. Park und Lessig (1977) also highlight that an apparently credible source is one that is most willingly internalized.

Attractiveness describes how similar, familiar and likeable the source is (Shelby, 1986). This is what Raven and French (1958) call referent power, which derives from the recipient's respect and appreciation for the source. Perceived physical attractiveness, prestige, and amicability with the recipient are key elements of attractiveness (Gatignon & Robertson, 1986). Importantly, alleged attractiveness is also related to the degree to which discussants share common preferences, attitudes, and characteristics (Byrne, 1961).

The influencee is prone to pay greater attention to the information received, because he views the source as attractive (Sternthal & Craig, 1982). The influencee sympathizes with or admires the influencer and is, hence, more likely to adopt his position and goals with regards to a given issue. Along the lines of Kelman's (1961) process of identification, the influencee tends to take on the opinion and behaviour of the source in order to be associated with the source. The creation of a gratifying relationship has a positive impact on the self-image of the influencee. The attitude is adopted because of who promotes it rather than on the basis of the quality of the argument or information given to support the opinion (Hass, 1981).

Norman (1976) provides evidence for the identification mechanism at work when the source is perceived as attractive. In his experiment, the influence of expert sources depended on the number of arguments provided to support their view. The persuasiveness of sources viewed as attractive varied much less with the quantity of arguments supplied. Chaiken (1979) found attractive sources to have better communication skills, more self-esteem, and a higher education level. This led her

to conclude that attractive influencers may also be especially influential sources of information-induced opinion change.

Lastly, the persuasiveness of interpersonal communication depends on the power the source has over the recipient. This conception of power entails Raven and French's (1958) reward power and coercive power. Reward power is the ability of the influencer to remunerate conforming attitudes and behaviour. Coercive power is measured by the influencer's capacity to threaten to punish and to actually punish certain influencee behaviour. Opinion leaders often exercise social pressure and give social support to incentivize group members to adopt certain opinions (Eurich, 1976).

A source's power can moderate the influence of interpersonal discussions. Power may not augment the source's perceived credibility, but it may increase the influence of the exchanged information (Gatignon & Robertson, 1986). The influencer's ability to reward and punish tends to lead to the compliance of the influencee (Kelman, 1961). Such compliance is often not characterized by deep-rooted acceptance but by mere public conformity. Nonetheless, according to Cognitive Dissonance Theory, compliance may eventually lead to true internalization of the opinion or behaviour change. If a person's compliant behaviour goes against her convictions, the inherent conflict is likely to cause her discomfort. In order to reduce the discomfort the person may adjust her beliefs to align them with her behaviour. Through this process, the behaviour or opinion change may become internalized (Festinger, 1957; Festinger & Maccoby, 1964).

In summary, three key characteristics help to explain why people conform to the views of opinion leaders and follow their advice. When non-leaders consider opinion leaders to be credible, they tend to be influenced by the force of their

arguments and use them as a source to reduce the cost of obtaining and assessing information. When non-leaders seek to be associated with a given social group, they often adopt the views and behaviour of opinion leaders who they regard as attractive personifications of the group norm. In this case, opinion leaders have a legitimizing function. Finally, non-leaders may conform to the views of opinion leaders in order to avoid being subjected to social pressure or to attain social support from them.

3.4.2.4 Social Exchange Theory

Having established why non-leaders are susceptible to the influence of opinion leaders, I will briefly present Homans' (1958) Social Exchange Theory to demonstrate why opinion leaders may be motivated to exercise influence on others. In contrast to the above described theories which focus first and foremost on the reasons of the influencee, Homans (1958) also incorporates the motivation of the influencer.

Social Exchange Theory applies economic principles to the study of interpersonal influence and views communicative interaction as an exchange of material and non-material goods that tends towards equilibrium. People seek to maximize the rewards, such as symbols of approval or prestige, and to minimize the costs of influence exchange. Benefits include efficient access to information and feelings of social approval, whereas costs involve the time and energy invested and other benefits foregone (Thibaut & Kelley, 1959). The continuation of interpersonal influence is predicated on attaining a state of equilibrium in which both parties benefit from it to a similar extent. Blau (1964, p. 6), another prominent social exchange scholar, stresses the importance of reciprocity: "Social exchange ... is

limited to actions that are contingent on rewarding reactions from others and that cease when these expected reactions are not forthcoming”. Only if both parties perceive the exchange as beneficial, will it continue.

Based on the work of Homans (1958) and Blau (1964), Gatignon and Robertson (1986) designed the Exchange Theory Model of Interpersonal Communication, which provides further detail on the motivating and inhibiting factors the influencer is faced with as well as the costs and benefits of the influencee. As the motivation of the influencee has already been discussed at length, I will focus only on the influencer side of Gatignon and Robertson’s (1986) equation. According to Gatignon and Robertson (1986), time commitments and the risk of providing poor or unsuitable advice are among the costs of those exerting influence on others. These are more than offset, however, by several benefits that motivate the influencer, or opinion leader, to exercise his influence. By providing advice, the influencer puts himself in a superior position which is characterized by recognition and status. The influencee is likely to express gratitude and may render a service to the influencer in the future. Moreover, the influence flow provides legitimation for the influencer’s own opinion.

It has been shown that the influence of opinion leaders on the views and behaviour of others stands on solid empirical and theoretical footing. There are good reasons for opinion leaders to exert their persuasive power. At the same time, several factors motivate non-leaders to follow the guidance of opinion leaders. Whereas the role of opinion leaders in the assessment of information and opinion formation of others is generally acknowledged, they are of less importance in the transmission of information. People tend to hear about most news events directly from the media. And, in a second step, opinion leaders often

complement, legitimize, and assess that information. This relative prominence of the influence function of opinion leaders has been reflected in the research design of the present study (see section 5.1.2).

3.5 Characteristics of opinion leaders

Given the strong support for the influence function of opinion leaders, it is not surprising that opinion leaders are of great interest to political campaigners. Providing opinion leaders with one's arguments and information and motivating them to convince others of one's political position, is crucial for the success of a political campaign (Schenk & Döbler, 2002). To increase the likelihood that opinion leaders embrace and use one's arguments, the information needs to be tailored to their characteristics and transmitted via the right channels. Thus, knowledge about the attributes and sources of opinion leaders is of significant relevance to political campaigners. Before investigating these aspects of opinion leaders on the Internet, it is worth examining the existing research on offline opinion leaders. The findings about the characteristics and information sources of opinion leaders in face-to-face situations can then be used as the basis for the analysis of online opinion leaders.

I have already established that those who engage in interpersonal political communication are more likely to be male and score high on scales measuring the level of education, social gregariousness, political interest and knowledge, political extremity, and political participation (see sections 2.3 and 2.4). This section examines whether these factors are also associated with the exercise of influence in interpersonal communication, i.e. opinion leadership. On the one hand, it seems intuitively plausible that those who discuss politics more frequently

with others have similar characteristics as those who tend to influence others through discussions. On the other hand, Lazarsfeld et al. (1944) highlight that opinion leaders are found in all occupational categories and social milieus and influence others within their social group. Hence, similarity between influencer and influencee is, at least to some extent, a defining attribute of the opinion leadership concept (Schenk & Döbler, 2002). A certain similarity in terms of background, interest, and values between opinion leaders and non-leaders seems to be a prerequisite of persuasion (Weimann, 1994).

3.5.1 Socio-demographics

Most scholars agree that there is no noteworthy linear relationship between political opinion leadership and age (e.g., Carter & Clarke, 1962; Kingdon, 1970; Garrison & Andersen, 1978; Hellevik & Bjørklund, 1991). Research on the relationship between gender and political opinion leadership, however, identifies a stronger tendency for males than females to influence others. Carter and Clarke (1962) find a weak association between opinion leadership and gender. In their study, 46 percent of men but only 36 percent of women were designated as opinion leaders. Kingdon (1970) confirms that males are somewhat more likely to be opinion leaders. A telephone poll conducted by Garrison and Andersen (1978) shows that males are more disposed to being political opinion leaders than females. Hellevik and Bjørklund (1991) identified 36 percent of men but only 20 percent of women as political opinion leaders.

Troldahl and Van Dam's (1965) data revealed no correlation between social and occupational status and public affairs opinion leadership and only a weak correlation between leadership and education. Nonetheless, most studies point to a

statistically significant relationship between political opinion leadership and social status, occupation, and education. Kingdon's (1970) analysis of face-to-face interaction based on a national sample illustrates that opinion leaders are not distributed equally across formal education categories. Only 16 percent of grade school-educated persons were identified as leaders, which compares to almost 50 percent of college graduates. Moreover, 42 percent of individuals of high occupational status reported acting as opinion leaders. In contrast, only 23 percent of low-status respondents identified themselves as political opinion leaders. Carter and Clarke (1962) substantiate these findings highlighting that those with higher levels of education and income are more likely to claim opinion leadership. Similarly, Eurich's (1977) study of political opinion leaders in Germany confirms the correlation between education and opinion leadership. Hellevik and Bjørklund (1991) identify 45 percent of those with more than 12 years of education but only 20 percent of those with less than eight years of education as political opinion leaders. Similarly, Sietman (2005) finds that opinion leaders share many of the characteristics of their immediate social environment but tend to be better educated. A further indication for the relationship between opinion leadership and social status is provided by Noelle-Neumann (1983), who shows that individuals with high socio-economic status tend to score higher on the personality strength scale.

Eurich (1976) reconciles these findings with Lazarsfeld et al.'s (1944) assertion that opinion leaders are found across educational and occupational groups. Eurich (1976) explains that leaders are typically those individuals with a higher level of education and social status relative to their immediate social environment. An opinion leader's education is usually better than that of others in his social group,

but not to the degree that it separates him from the group. Despite their relatively higher standing, opinion leaders still need to be similar enough to the other group members to be able to exert influence (cf. Beba, 1988). As Schenk and Döbler (2002, p. 44) put it: “Opinion leaders ... cannot be detected by an absolute amount of education or social status; these variables are only relative.” This separation of influence from general social status, at least in part, explains the special role of the opinion leadership concept in social science.

3.5.2 Social gregariousness

Even though certain educational and occupational differences have been established between leaders and non-leaders, other factors seem to be more important (Katz, 1957). Dressler and Telle (2009) list social connectedness and subject-specific expertise as such key differences. Katz and Lazarsfeld (1955) note that people who participate frequently in social activities and organisations and cultivate large social networks are more likely to act as opinion leaders.

Early research did not support the social gregariousness thesis. Carter and Clarke (1962) find no evidence that opinion leaders get together with others more frequently to discuss politics than non-leaders. Opinion givers in Troldahl and Van Dam’s (1965) study even scored higher than leaders on five different measures of social gregariousness.

Nevertheless, more recent research supports Katz and Lazarsfeld’s (1955) findings. Weimann’s (1983) sociometric analysis of a Kibbutz community shows that opinion leaders occupy a central position within their social networks. They tend to have a larger number of social contacts and they are more active members of clubs and associations. Schenk (1982) confirms that opinion leaders are

centrally located within their communicative environment and have denser communication networks. According to Beba (1988), opinion leaders display higher frequency and higher intensity of interpersonal interaction within their social group. Schenk and Döbler (2002) assert that opinion leaders are more socially active and can reach a larger number of people in their social environment directly. Similar to political opinion leaders, people with high personality strength talk to others more frequently and cultivate larger social networks (Schenk & Rössler, 1997).

3.5.3 Political interest and knowledge

It was established in section 3.4.2 that subject-specific expertise is a vital element of a person's credibility, which is an important determinant of her influence on others. Shah and Scheufele (2006) assert that knowledge variables are crucial for understanding the social force of opinion leaders. Being familiar with and knowledgeable about a given subject increases the likelihood of being perceived as credible and of effectively influencing others. Hence, one would expect to find a significant correlation between political opinion leadership and political knowledge and interest.

A number of studies confirm that opinion leadership is associated with high levels of political interest, involvement, and knowledge. Kingdon's (1970) analysis of 1966 presidential election survey data shows that political opinion leaders are very interested in the campaign and care more about the election outcome. Based on a survey of Australian voters, O'Cass and Pecotich (2005) discovered a direct correlation between voter involvement and opinion leadership. Involvement here is understood as how central politics is to a person's life. O'Cass (2002) sees

involvement as a powerful determinant of opinion leadership in the political domain, because it serves as the motivational basis for offering advice on the subject to others. A study conducted by Gruner & Jahr in Germany in 1983 reveals a close connection between political interest and opinion leadership (as cited in Beba, 1988). Similarly, Schenk (1982, p. 211) finds opinion leaders active in citizens' initiatives in Germany to be characterized by "enormous" political interest.

Opinion leaders are not only more interested and involved in political matters, they also tend to have above-average political expertise. People often seek guidance from opinion leaders, since they view them as experts in the field (Weimann, 1994). Eurich (1976) finds political opinion leaders to be substantially more knowledgeable about political matters than non-leaders. Kingdon's (1970) analysis reveals that leaders are better informed about politics than non-leaders with the same social, educational, and occupational background. The relationship between expertise and opinion leadership holds when socio-economic factors are controlled for. Even though Shah and Scheufele (2006) did not examine opinion leadership but personality strength, their evidence provides a further indication for the connection between political knowledge and opinion leadership. They find technical, cultural, and intellectual authority to be more strongly related to personality strength than any socio-demographic characteristics.

Whereas the above literature focuses on the fact that opinion leaders, on average, have more political expertise than non-leaders, Trepte and Scherer (2005) distinguish between different types of opinion leaders depending on their level of knowledge. They do not refute the thesis that opinion leaders are better informed about politics in general, but they show that expertise is not distributed equally

among opinion leaders. Based on a survey of German university students Trepte and Scherer (2005) separate informed opinion leaders with significant current affairs knowledge from “dazzlers” who use communication skills to make up for their undistinguished level of expertise. Non-leaders are classified either as “inerts” who score low both on opinion leadership and on objective knowledge scales or as “silent experts” who are well-informed but do not influence others. Trepte and Scherer (2005) find that women are more likely to be inerts, while men are more often informed opinion leaders. It is worth mentioning, however, that the results are based on a convenience sample comprising only 139 respondents. Hence, the findings show only tendencies that need to be tested in future research.

Figure 4: Trepte and Scherer’s (2005) typology of opinion leadership

		Knowledge in a certain area of interest	
		high	low
ratings on opinion leadership scales	high	(1) informed opinion leaders	(2) dazzlers
	low	(3) silent experts	(4) inerts

Source: Trepte and Scherer (2005)

3.5.4 Political efficacy

Campbell, Gurin, and Miller (1954, p. 187) define political efficacy as “the feeling that individual political action does have, or can have, an impact upon the political process, i.e., that it is worthwhile to perform one’s civic duties”. Political efficacy has an internal as well as an external component. Whether citizens believe that they are able to comprehend and influence the political decision

making process is called internal efficacy. External efficacy measures whether people trust politicians to be responsive and to do what is in the interest of the citizens (McLeod et al., 1999). Studies that investigate both measures of political efficacy find a statistically significant positive relationship between internal efficacy and opinion leadership. Results regarding external efficacy, however, are ambiguous.

Bockman and Gayk (1977) analysed routine political issues within a community using the key informant technique. Internal efficacy was defined as one's political knowledge and one's self-designated ability to influence political events and decision makers. Opinion leaders scored significantly higher than non-leaders on an internal efficacy scale, with 77 percent of leaders and only 42 percent of non-leaders in the "high" category. External efficacy was measured by the trust in the outputs the political system produces. Bockman and Gayk (1977) found that opinion leaders are slightly more negative about the outcomes produced by the political institutions. 54 percent of them are low in trust, which compares to 40 percent of non-leaders. In contrast, O'Cass and Pecotich (2005) established a positive relationship between opinion leadership and voting satisfaction, a concept that is not dissimilar to external efficacy. Voting satisfaction is operationalized as satisfaction with politics and political parties in general as well as approval of the specific candidate and party a person has voted for.

In a study across 15 European countries, Nisbet (2005) measured internal efficacy by how hard the respondents found it to make political decisions, how complex they perceived politics to be, and if they felt able to participate actively in a political group. Across all nations, Nisbet (2005) found a meaningful positive correlation between opinion leadership and internal efficacy. In Germany, for

example, the correlation coefficient between the two variables was 0.46 (sig < 0.001). People's trust in the political leadership and institutions was assessed by two scales, differentiating between external efficacy and political trust. External efficacy assessed whether people perceived government figures to care more about the citizens' interests or about being re-elected. Political trust specifically examined people faith in institutions like the parliament, the police force, and the legal system. In only half of the countries, there was a statistically significant positive relationship between external political efficacy and opinion leadership (e.g. Germany: $r = .32$; sig < 0.001). Political trust, in contrast, was negatively associated with opinion leading in almost all countries. But this relationship was significant only in a fourth of the examined territories. In Germany, the relationship was slightly positive but non-significant. It is worth highlighting, however, that Nisbet's (2005) results are not directly comparable to those of Bockman and Gayk (1977) and O'Cass and Pecotich (2005), because Nisbet (2005) employed an approach similar to Keller and Berry's (2003) for identifying opinion leaders. In summary, there is support for a meaningful positive relationship between opinion leadership and internal efficacy. Results about the opinion leaders' trust in the political system and institutions, their external efficacy, indicate a weak and potentially negative relationship.

3.5.5 Political extremity

Some academics have examined the association between subjective perceptions of efficacy and trust and political orientations. They point out that people with robust internal efficacy as well as high levels of trust usually hold moderate political views. In contrast, those who combine healthy internal efficacy with below-

average trust in politicians and political parties tend to develop radical political opinions (e.g. Gamson, 1968). Paige (1971), for example, surveyed riot participants in New Jersey and found that those with high internal efficacy and low political trust are more likely to participate in riots than people who score low on both measures. These findings, together with the findings on efficacy and opinion leadership mentioned above, lead Bockman and Gayk (1977) to hypothesize that opinion leaders are more radical in their political dispositions than non-leaders.

The proposition is confirmed by Hellevik and Bjørklund (1991), who examined political extremism among opinion leaders in Norway based on self-placement on the traditional left-right scale. The political views of the general public are distributed almost normally on a bell curve with the majority of respondents placing themselves at or close to the centre of the scale. In comparison, the distribution of the political positions of opinion leaders is flatter. Although further studies are required to firm up the results, the data provides an indication that opinion leaders are more politically extreme than non-leaders.

To sum up, despite their similarity to those they influence, political opinion leaders diverge from the average with regards to a number of attributes. They are more likely to be male, slightly better educated than non-leaders, more gregarious, and more interested in and knowledgeable about politics. What is more, opinion leaders score higher on scales of internal efficacy and tend more towards the extremes of the political spectrum.

3.6 Sources of opinion leaders

Their interest in the subject matter and their desire to keep up-to-date with current developments motivate opinion leaders to gather information from various sources (Weimann, 1994). This active information seeking in their domain of expertise partially explains why opinion leaders are able to provide others with advice (Schenk & Döbler, 2002). In order to target opinion leaders with suitable information, political campaigners need to understand which information sources opinion leaders rely on primarily.

Carter and Clarke (1962) highlight that political opinion leaders read significantly more books and magazines, but do not watch more evening television or educational television than non-leaders. Kingdon (1970) confirms that public affairs opinion leaders read more printed news. Kingdon's (1970) empirical evidence shows that non-leaders rely more on television as a source of current news. According to the survey conducted by Trepte and Scherer (2005), opinion leaders are more likely to frequently read daily newspapers.

Recent studies suggest that the Internet may be an important source of information for political opinion leaders. Nisbet (2005) found that influentials in those European countries with the most developed Internet infrastructure go online more frequently than the general public. Kavanaugh et al. (2006, p. 80) assert that "influentials have been using the Internet, including e-mail, bulletin board systems, and web browsers from the outset to stay informed and involved in political issues that interest them at local, national and international levels". Schenk and Döbler (2002) establish that people with a strong personality rely more heavily on modern information technologies than the average citizen. Dressler and Telle (2009) point to survey data from the Allensbach Institute

showing that people with high personality strength use the Internet more than the average population. Shah and Scheufele (2006) assert that people with a strong personality tend to use the Internet to supplement traditional news sources in order to obtain context information, further detail, and additional viewpoints. It is worth noting, however, that none of the above studies analysed the relationship between Internet use and opinion leadership as defined by Lazarsfeld et al. (1944). Hence, further research is necessary to confirm the relationship between opinion leadership and the use of online sources.

According to Wiesner (2009), one would expect opinion leaders to more regularly use the Internet, because it caters efficiently to their preference for information over entertainment. This is not to say that online sources do not provide entertainment for those seeking it. But the Internet makes it easier for opinion leaders to locate and access informational content. Weimann (1994) found support for the informational preference when studying readership of various German newspapers and magazines. General public affairs magazines, like *Der Spiegel*, *Stern*, and *Die Zeit*, as well as economic magazines were among the most widely read by people with strong personalities. And, all of these are characterized by above-average informational and editorial quality.

Richmond (1977) suggests that opinion leaders differ not only in their exposure to the media but also in the way they process the information received from different sources. She points out that mere exposure does not necessarily lead to absorption of the transmitted information. Richmond (1977) shows that opinion leaders absorb more information than non-leaders when exposed to the same mediated communication. Noelle-Neumann (2002) asserts that those with high personality strength tend to have higher powers of comprehension and store more

information. Richmond's (1977) data suggests that this is also true for opinion leaders (cf. Beba, 1988).

Research shows that opinion leaders are not only more likely to use several media sources than non-leaders but also more prone to rely on personal sources. The early studies of opinion leadership already suggested that opinion leaders seek out facts, arguments, and advice from others. The Decatur Study as well as the Elmira Study provide indications for the opinion leaders' reliance on personal sources. Wright and Cantor (1967) found substantial overlap between those who seek and those who give opinions and information about public affairs. Trohdahl and van Dam (1965) also stress the reciprocal nature of interpersonal influence and information exchange in the field of politics. Opinion leaders do not just provide information and advice, they also search for both guidance and information from others. The latter is what Feick, Price, and Higie's (1986) have famously termed "opinion seeking".

Several other investigations provide evidence for the relationship between political opinion leadership and opinion seeking. Garrison and Andersen (1978) show that opinion leaders obtain more information about political candidates from personal sources than non-leaders. Weimann (1994) asserts that political opinion leaders are more prone to seek others' advice. Roch's (2005) socio-metric examination of opinion leadership in the area of children education reveals that, other things being equal, opinion leaders regard friends and acquaintances as more valuable information sources than non-leaders.

4 Computer-mediated communication

Having carefully defined key concepts and outlined in detail why the questions raised at the outset of this thesis merit investigating, I will now turn to their theoretical and empirical assessment. It has been illustrated that interpersonal political communication is beneficial for our democratic culture and that an increase in the discussion participation of the inactive would be desirable. This section seeks to establish whether the Internet indeed creates this positive effect. Moreover, I have elaborated on the various reasons non-leaders have for conforming to the views of opinion leaders in order to explain the opinion leaders' influence. Given their impact on individual political opinion formation, political campaigners have long been interested in obtaining information about opinion leaders. While opinion leadership in face-to-face situations has been researched thoroughly for decades, less is known about opinion leadership on the Internet. The present study contributes to filling this gap by examining the characteristics and sources of online opinion leaders. Lastly, I will analyse the perceived persuasive force of online discussion activity with a view to establishing the relative importance of online interaction compared to offline communication.

4.1 Computer-mediated interpersonal communication

Before delving into the empirical analysis, two theoretical concepts will be employed to derive opposing hypotheses with regards to a potential equalisation of discussion participation on the Internet. Neither of the theories originates from the realm of political communication research. But both offer insights that are of relevance when comparing interpersonal political communication online and

offline. Social Presence Theory was developed following research on organisational group discussions via video-conferencing. According to Social Presence Theory, computer-mediated communication provides protection from social anxiety for shy individuals and enables previously inactive persons to participate more easily in interpersonal communication. Social Network Theory, on the other hand, is based on studies which investigate non-political interaction online. Social Network Theory postulates that the Internet is an additional communication tool which is utilized within existing discussion networks rather than encourages new kinds of discussion relationships.

4.1.1 Social Presence Theory

In 1976, the Communication Studies Group at the University of London carried out a research programme that is widely regarded as one of the most important in the field of mediated communication. With funding from the British Post Office, Short, Williams, and Christie (1976) developed Social Presence Theory based on a comparison of face-to-face and mediated communication in small group problem-solving discussions. As per Short et al. (1976), social presence is a core characteristic of a communication medium. The extent to which a medium is personal, warm and sociable determines the way in which individuals interact using the medium (Rice, 1984). Social presence includes both the salience of the conversation partner and of the interpersonal relationship (Walther, 1993). Or as Kumar and Benbasat (2002, p. 6) put it, “social presence has traditionally been used to measure the extent to which a communication media allows a user to establish a personal connection with other users.”

Even though the work by Short et al. (1976) examined only certain types of mediated communication – namely telephone, audio, and video conferencing – it has frequently been applied to assessments of computer interaction (Spears & Lea, 1992). Probably the most extensive research adopting Social Presence Theory to computer-mediated communication was conducted by the Committee on Social Science Research in Computing at Carnegie-Mellon University (e.g., Kiesler, Siegel, & McGuire, 1984; Kiesler, 1986; Siegel, Dubrovsky, Kiesler, & McGuire, 1986; Sproull & Kiesler, 1986). These studies emphasize the limited ability of computer-mediated communication compared to face-to-face interaction to convey social cues. Some prefer this so-called Reduced Social Cues Approach to Social Presence Theory for the purpose of analysing computer-mediated interaction, but the majority of scholars use both terms interchangeably. Both theories are focused on the fact that computer-mediated communication lacks social context indicators – such as posture, mimic, and clothing – social status cues, and vocal cues (Birnie & Horvath, 2002). The fewer of these indicators a medium offers to a conversation pair, the less the pair will feel that it is involved in a joint interpersonal communicative activity. According to Walther (1992, pp. 52-53), “the most common theoretical explanations for the difference between computer-mediated communication and face-to-face communication hold that electronic mail and computer-based conferencing systems eliminate nonverbal codes that are generally rich in relational information”. Both the perception and the interpretation of the message are affected by the social qualities of the communication medium.

The reduced ability of computer-mediated communication to convey social presence and relational cues impacts communication in various ways. The

phenomenon of disinhibition is among the most prominent effects. Disinhibition occurs when a person's conduct is less affected by self awareness, social anxiety, and concerns about public evaluation than it would be in face-to-face situations (Joinson, 1998). On the Internet, worries about self-presentation and the judgements of others are typically reduced. The most comprehensive account of the drivers of disinhibition is presented by Suler (2004), who combines previously established factors with psychoanalytic findings: There is often no direct link between the offline and the online world, which gives users a sense of *anonymity*. People, at times, believe that their online behaviour is not actually attributable to them. The perceived *invisibility* that computer-mediated communication provides makes people try things and advance into areas they would not dare to in real life. The *asynchronicity* of the Internet means that users don't have to deal with other users' feedback, at least not immediately. This decreases self awareness. As people can exit the unreal world of computer-mediated interaction by switching off the computer (*dissociative imagination*) and interpret textual messages more freely than face-to-face messages (*solipsistic introjection*), they feel less responsibility for their behaviour online than offline. Suler (2004) concludes that a person probably has no single "online self" but rather different selves communicating in different online environments. Based on this interpretation, people not only act differently online than offline but are also able to assume entirely different roles in the two environments.

Studies of computer-mediated language learning confirm the disinhibition thesis. Bradley and Lomicka (2000) find that computer-mediated communication offers a feeling of protection against the pressure of the interaction in class. Yuen and Lavin (2004, p. 382) view computer-mediated communication as a "safe haven"

that relieves students from social discomforts. Shy students prefer computer-mediated over face-to-face interaction. The phenomenon of disinhibition does not seem to be limited to distant learning environments, however, as Höflich and Gebhardt's (2001) explorative study of German online chat rooms illustrates. Many chat room members report that the lack of awareness about each other's social status and appearance enables them to approach others less anxiously.

A concept related to that of disinhibition is deindividuation. Like disinhibition, deindividuation is caused by the low social presence and increased anonymity of computer-mediated communication. When communicating via computers, people find it harder to convey impressions about their temper and personality. Computer-mediated interaction makes it trickier to express one's own individuality as well as to detect the other person's individuality (Kiesler, 1986). As this definition shows, deindividuation entails reduced awareness of oneself and of the conversation partner. While disinhibition is primarily concerned with a person's perception of how others judge her, deindividuation adds the element of empathy with others. Computer-mediated communication patterns make it more difficult to acquire an understanding of the conversation partner's convictions, attitudes, and aims (Berger, Gardner, Parks, Schulman, & Miller, 1976). According to Sander (1998), computers facilitate interaction without any regard for the counterparty's social status and normative and ideological convictions. Hence, comparisons with others and judgements of others play a lesser role (Siegel et al., 1986; Joinson, 2007).

Matheson and Zanna (1988), who conducted a study of small discussion groups, claim that deindividuation is inconsistent with their empirical findings. In their survey, 55 discussants reported higher levels of private self-awareness online

compared to offline. It is worth, however, to take a closer look at the survey questions. Subjects were asked whether they had generally been very aware of themselves and their perspectives and attitudes. This type of questioning cannot assess the degree of anxiety and the level of social pressure experienced by the participants. Thus, Matheson and Zanna (1988) cannot refute the aspects of deindividuation that are most crucial for the purposes of this study. What is critical to the concepts of both disinhibition and deindividuation is that people show less concern for the perception and judgement of others and for their joint relationship.

It is for these reasons that people seem to be more comfortable to contribute in computer-mediated compared to face-to-face interaction (McKenna & Bargh, 2000). A person who may be too shy to speak up in a real world situation may be more prone to do so online. The resulting equalisation effect on discussion participation has been coined the Participation and Acceptance Theory: “Technology that limits access to interpersonal information and social feedback compromise social processes. This leads to equalized conversational participation patterns.” (Whittaker, 2003, p. 269)

Empirical evidence confirms the supposed differences between the online and offline worlds. In multi-person face-to-face discussions, it is often an assertive or hierarchically superior person who dominates the conversation by disseminating a high proportion of messages (Bales, Strodtbeck, Mills, & Roseborough, 1951; Walther, 1996; Whittaker, 2003). According to Sproull and Kiesler (1991), a small group of people takes up so much air time that 50 percent of the discussants speak just 10 to 20 percent of the time. Reputation and social standing are key determinants of in-person discussion participation.

Computer-mediated group interaction produces different communication relationships with a larger portion of individuals actively participating (Döring, 1999). Hiltz, Johnson, and Turoff (1986) found that computer-mediated discussion partners contribute more equally than they do face-to-face. Sproull and Kiesler (1991) confirm these findings and rationalize them based on the Reduced Social Cues Approach. High-ranked individuals do not dictate computer-mediated discussion groups in the same way as they do face-to-face, because they are unable to properly communicate social cues. Along the same lines, Johansen, Vallee, and Spangler (1979) explain the equalisation in computer-mediated communication by an increased forthrightness of opinions and flexibility of roles. Their conclusions are based on a review of a number of relevant studies. Bieber (1999) also points to the potential for role switching in computer-mediated communication. Haythornthwaite and Nielsen (2007) highlight the importance of reduced relational cues in computer-mediated compared to face-to-face interaction in bringing about more egalitarian behaviour. Text-based communication does not allow conversation partners to judge each other based on considerations of status in the same way that face-to-face situations do. Dubrovsky, Kiesler, and Sethna (1991) find proof of this equalisation phenomenon across a range of sources and confirm that remarks are distributed more equally in electronic discussions. Nunamaker, Dennis, Valacich, Vogel, and George (1991) believe that the perceived anonymity plays an important role in bringing about increased participation in computer-mediated discussion groups of those who remain inactive face-to-face. Following a quantitative summary of experimental literature, McLeod (1992) finds that group support systems enhance participation

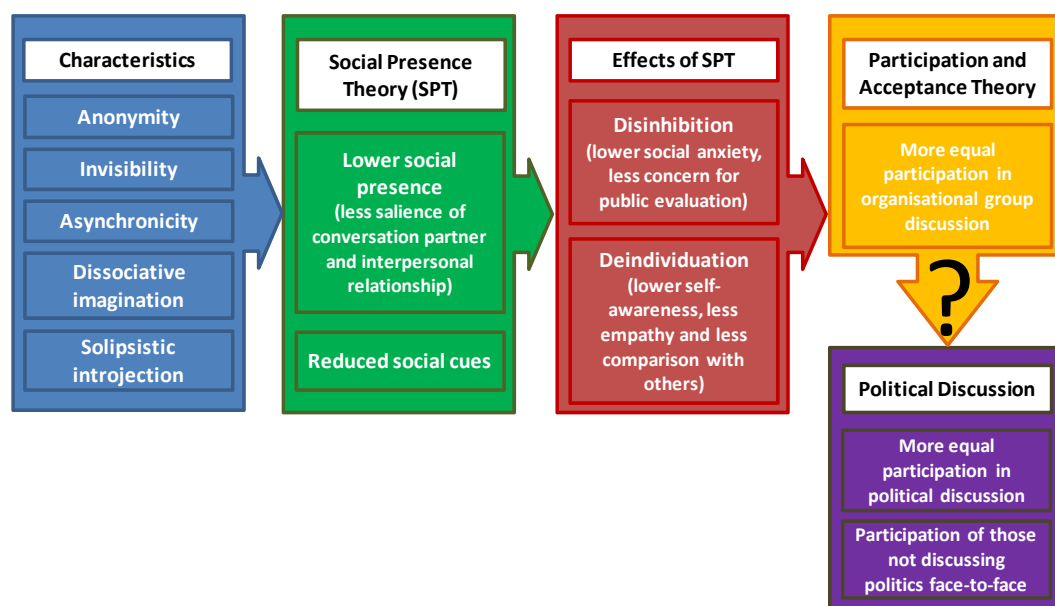
equality and reduce the importance of single individuals. In summary, there is strong support for the Participation and Acceptance Theory.

It is important to bear in mind that the evidence presented is based on electronically supported discussions within an organisational setting. Some studies, however, have tested Social Presence Theory in other fields of computer-mediated communication. Whittaker's (2003) work on email interaction, for example, reveals that contributions are more equal in electronic conversations than in face-to-face situations. Fietkau, Trénel, and Prokop (2005) compared face-to-face and online groups tasked with agreeing on a solution to a German public planning problem. Whereas a fifth of the discussants contributed $\frac{3}{4}$ of the input in the face-to-face groups, participation in the online group was more equal, with more than a third of the discussants contributing $\frac{3}{4}$ of the input. Joinson (2004) suggests that shy individuals participate in computer-mediated dating more actively than in face-to-face dating. Papacharissi and Rubin (2000) find that people who feel less respected and content in face-to-face situations rely more strongly on online communication. Other research has identified the Internet as an opportunity to test one's social skills and to overcome anxiety experienced in face-to-face conversations (Birnie & Horvath, 2002).

None of the mentioned research, however, specifically addresses casual political discussions online. Stromer-Galley's (2002) secondary analysis on survey data from the Electronic Dialogue Project, a year-long study of political discussions, constitutes a notable exception. She concludes her assessment in stating that there are people who talk about politics online but not face-to-face and that those individuals are relatively less politically knowledgeable and less efficacious. Along the lines of Social Presence Theory, Stromer-Galley (2002) asserts that

certain individuals prefer voicing their opinions only via computers for fear of being challenged or seeming uninformed in face-to-face encounters. In my view, however, Stromer-Galley's (2002) conclusions are highly questionable. In the survey, people were asked whether they had talked about politics online during the past year as well as whether they had had face-to-face political discussions during the past week. Thus, the 15 percent that reported having had online discussions during the prior year but not having had face-to-face discussions during the past week may simply have talked about politics face-to-face a few weeks ago.

Figure 5: Elements of Social Presence Theory applied to political discussion



We can see that a number of the questions which Social Presence Theory as well as Participation and Acceptance Theory raise regarding political discussion and opinion formation remain inconclusively answered to date (for an overview see Figure 5). Before designing the hypotheses to be tested in this study, it is worth

evaluating the counterarguments to Social Presence Theory. Given that Participation and Acceptance Theory is derived from Social Presence Theory, the counterarguments apply analogously to both theories.

4.1.2 Criticism of Social Presence Theory

As early as 1988, Johansen, Vallee, and Spangler questioned the view of Short et al. (1976) that a particular level of social presence is a fixed feature of a given communication medium. Johansen et al. (1988) believe that social presence can be developed among discussants. Shortly thereafter, Hiltz, Turoff, & Johnson (1989) raised the question whether experimental time restrictions could be a factor contributing to participant equality in computer-mediated communication. In 1992, Walther compared the more prevalent single-instance interaction studies of group discussions with longitudinal designs. He found that one-shot studies confirmed Social Presence Theory but that longitudinal studies exhibited a different picture. Over time, discussants in computer-mediated environments developed a way of conveying social status. Walther (1992) concludes that, given enough time, computer-mediated conversation partners should be able to signal social cues in much the same way as people talking face-to-face. Walther's (1992) findings cast doubt on the applicability of Social Presence Theory for computer-mediated communication relationships. Similarly, Baym (2002) suggests that people can develop close interpersonal ties in online environments that resemble offline connections. Not only are people able to establish rules of conduct and rituals online, but also do they develop roles similar to those in offline situations. What is crucial for social presence to come into being online is the expectation that there will be a long-term relationship between the discussants (Walther,

1996). It is this expectation that gives conversation partners an incentive to disclose and seek out more personal information. Whittaker (2003) makes a similar point asserting that differences between computer-mediated and face-to-face situations are negligible and that inequality re-establishes itself when given unlimited time.

A second line of criticism against the application of Social Presence Theory to the comparison of computer-mediated and face-to-face interaction was put forward by Spears and Lea (1992). They claim that, by focussing on individual situations of information exchange, Social Presence Theory overlooks the “pre-existing social categories, norms, and identifications which position communicators and define their relations to each other” (p. 44). The historical perspective, however, is an important element of the interpersonal relationship independent of whether the interaction happens online or offline. Communication may be very similar whether computer-mediated or personal, because people have a common history that guides their behaviour. What is more, people cultivate their social identity in new ways in a computer-mediated environment, due to the very reason that computer-mediated communication lacks the traditional relational cues of face-to-face interaction (Myers, 1987). Email headers and signatures, for example, are used to convey category cues about sex, geographic location, and profession (Spears & Lea, 1992). Birnie and Horvath (2002) point to the fact that social online communities have become livelier than online networks without a social focus. This is interpreted as a falsification of the assumption that social signals cannot be transmitted via computers. They also highlight that sociable, casual and dominant ways of communicating are associated with intensified computer-mediated interaction. Spears and Lea (1992) conclude that, ironically, computer-

mediated communication may actually be more social than face-to-face interaction.

Both types of criticism are directed at the technological determinism inherent in Social Presence Theory and Participation and Acceptance Theory. The academics mentioned above reject the notion that technology shapes communication patterns. Computer-mediated interaction does not necessarily create more equal participation and communication that is less social. Given enough time and taking alternative social cues into account, computer-mediated and face-to-face interaction have very similar properties. According to this view, online and offline interpersonal communication styles, relationships, and outcomes do not differ categorically. The view contrasts not only with proponents of Social Presence Theory, but also with recent work by technological determinists whose approach is best summarized by Herring (2004, p. 26): “Now, the question is no longer: does technology shape human communication, but rather, under what circumstances, in what way, and to what extent.”

4.1.3 Social Network Theory

Social Network Theory provides an alternative approach to Social Presence Theory and the technological determinism described in the previous section. Similar to the critics of Social Presence Theory, Social Network Theory discards Herring’s (2004) idea that technology shapes communication. It takes a somewhat different approach to both Spears and Lea (1992) and Walther (1992), though. Rather than asserting that computer-mediated and face-to-face interaction share comparable social and participatory properties which lead to comparable communication patterns, Social Network Theory postulates that computer-

mediated communication supports offline social processes. The Internet *supplements and extends* offline behaviour. Social Network Theory does not view online and offline as separate spheres, but assumes that they are integrated with each other.

Unlike proponents of Participation and Acceptance Theory, Social Network theorists do not believe that computers make introverted and subordinate individuals communicate more actively and even enables previously inactive persons to participate. According to Social Network Theory, computer-mediated interaction does not change the nature of communicative relationships; it primarily supports existing relationships. Social Network Theory views the computer as an additional medium that is used, first and foremost, by people who are already well connected. The closer people are socially linked, the more they will use the different communication media at their disposal (Birnie & Horvath, 2002). Computer-mediated interaction is regarded as an additional element of the communication mix, not as a new arena for communication. Like earlier technological inventions, computers enable members of social networks to connect more seamlessly (Wellman, Haase, Witte, & Hampton, 2001).

A closer look at the research focus of each theory helps to explain the differences between the conclusions reached when applying Social Presence Theory and Social Network Theory to the comparison between face-to-face and computer-mediated communication. While Social Presence Theory research examines organisational groups, Social Network Theory analyses pairs of conversation partners. Social Presence Theory usually looks at how organisational groups interact in a single communication situation. Studies typically consider only one technology and one context at a time. It is implicitly assumed that what happens

in a given computer-mediated situation is sufficient to understanding the communication situation and relationship. This approach leads to an isolation of the communication technology from the wider pattern of interaction. In fact, the relational history of the people interacting is artificially excluded from the assessment. Social Presence theorists considered online interaction to be separated from everyday life (Haythornthwaite & Wellman, 2002). Almost inevitably, the communication technology becomes the determining factor, as discussants are not free to choose the communication technology according to their aims and relationship. Social Network Theory's integrative method extends the research subject to the communicative relationship in its entirety including the whole range of communication tools available (Haythornthwaite & Nielsen, 2007). Computer-mediated interaction is just one part of the communication infrastructure, albeit an important one that is embedded in all aspects of life (Bruce & Hogan, 1998; Star, 1999). In certain situations, conversation partners intentionally choose computer-mediated means of communication believing that they are best suited to fit their communicative goals (Joinson, 2007).

In Social Network Theory, the strength of the social connection between a conversation pair plays an important role in determining the use of communication media. The concept of tie strength originates from Granovetter's (1973) renowned article *The Strength of Weak Ties*. For Granovetter (1973, p. 1361), the strength of a relationship is a function of "the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services" which characterize the tie. According to Social Network Theory, these factors influence which of the available communication media are used by two persons (Haythornthwaite, 2001). The closer a person's contact with another individual,

the more likely they are to complement face-to-face interaction with asynchronous types of media, such as email. The “multiplexity” of the relationship increases (Haythornthwaite, 2005). What is more, the use of a given communication medium will differ depending on the tie strength. People employ communication media differently across the diverse relationships they have (Haythornthwaite & Nielsen, 2007).

Numerous studies support Social Network Theory. Haythornthwaite and Wellman (1998) examined types of media used for different kinds of information exchange in a university research group and found proof of the multiplexity phenomenon: Pairs who communicated more regularly used a larger number of media. Email did not substitute face-to-face interaction. In fact, face-to-face and email were employed in much the same way and were correlated positively with each other. These results are in accord with those of Rice (1994) who analysed pairs in a research and development group. Individuals who used email to communicate were more closely tied than those relying solely on face-to-face and telephone contact. Rice (1994) also found a positive relationship between the sending of emails and the perceived rate of interaction.

Birnie and Horvath (2002) studied the relationship of online social behaviour and traditional social behaviour on an electronic university campus. Online social interaction was correlated with sociability as well as with offline social communication. Moreover, the exchange and disclosure of personal information online, i.e. online intimacy, was correlated with the intimacy of social behaviour in the real world. Birnie and Horvath’s (2002) findings provide support for Social Network Theory, because computer-mediated communication complemented and extended offline social interaction. None of the evidence suggested that shy

people compensate a lack of offline communication by talking online. Gackenbach and Von Stackelberg (2007) also did not discover any evidence that introverted persons try to learn social exchanges online. And, Yang and Lester (2003) found that extroverted individuals communicated online more frequently (as cited in Gackenbach and Von Stackelberg, 2007).

The thesis that computer-mediated communication complements traditional social behaviour is also supported by Koku, Nazer, and Wellman (2001) who examined a network of scholars. The more two persons interacted with each other, the more modes of communication did they use. Again, there was a positive correlation between computer-mediated and face-to-face communication. Pairs of academics chose their communication media based on what is “necessary or is handy” (p. 1759). Computer-mediated communication, for example, was used to stay in touch between face-to-face encounters or to connect with geographically distant colleagues. Flanagin and Metzger (2001) also confirm that computer-mediated interaction is used in much the same way as more established technologies.

Döring’s (1999) review of a number of German studies comes to a similar conclusion as the above researchers. According to Döring (1999), computer-mediated communication simplifies, accelerates, and multiplies social exchange. The frequency of interaction within existing communication relationships increases with the use of computer-mediated forms without any reduction in face-to-face interaction. In fact, those who use computers to interact also engage more frequently in face-to-face communication than those who refrain from computer-mediated exchange.

Wellman et al. (2001) conducted a survey of visitors to the National Geographic Society’s website. As in the other studies mentioned, visitors supplemented face-

to-face with computer-mediated communication. Visitors integrated computer-mediated communication into their daily routines without it impacting the frequency of face-to-face interaction. As early as 2004, in a study for the Pew Institute, 88 percent of Americans who were active online claimed that the Internet was part of their everyday lives (Fallows, 2004). Katz and Rice (2002) stress that the incorporation of online communication into our everyday routines is a general phenomenon that stretches across most areas of life.

The relevant elements of both Social Presence Theory and Social Network Theory have been described in detail. It has become clear that the two theories rely on different assumptions, are derived from different contexts, and consequently draw opposing conclusions when applied to the comparison of face-to-face and computer-mediated communication. The question at the heart of this difference is whether technology influences the communication relationship and behaviour, or if the relationship determines media use.

Despite the fundamental nature of the disagreement, one might be able to reconcile the two views. Warschauer (2003), for example, believes that feedback effects between communication technology and communication relationship need to be taken into account. While people choose a given medium for a particular purpose, the medium has an impact on the conversation pair. Likewise, Joinson (2004, p. 477) suggests that “the users’ personality, motives, and expectations lead to media choice, and that actual use of the media leads to changes in both psychological states and actual behavior.” Interpreting the relationship between medium and communication behaviour as reciprocal seems like a sensible approach. But at the same time, it means that we cannot provide unambiguous theoretical answers to the questions about online political discussion.

Hence, the data of the present survey will be analysed with a view to establishing whether Social Presence Theory or Social Network Theory is better suited to explain political communication online. More specifically, I will test the two building blocks of the Participation and Acceptance Theory, which springs from Social Presence Theory. Firstly, I seek to establish whether discussion participation is more equal online than face-to-face. Unfortunately, the VZ survey neither determined the respondents' level of social anxiety or self-esteem nor is there a hierarchical order among VZ users. Hence, whether or not someone has an influence on the political opinions of others, i.e. is an opinion leader, will be used to approximate dominance. Along the lines of Social Presence Theory, one would expect non-leaders to participate more actively in discussion on the Internet, leading to an equalisation of participation between opinion leaders and non-leaders.

Separately, I will assess if there is a meaningful group of individuals who converse about politics online but not face-to-face. Based on this analysis, I will compare the characteristics of the different groups of discussants and non-discussants, as another test of the equalisation hypothesis. Research shows that women as well as less educated, less gregarious, and less politically interested citizens are less likely to participate in discussions about politics (see section 2.3). Moreover, Social Presence Theory suggests that people with low self-esteem are prone to discuss politics on the Internet. Since we cannot test this variable directly based on our data, two proxies will be used for the purpose of analysis: The concept of personality strength includes measures of self-assurance and self-assertiveness. And, internal efficacy, one's confidence in comprehending and influencing the political process, may be regarded as a person's political self-

confidence. Hence, I will assess whether those who discuss politics online score lower on the above five variables than those who converse face-to-face. Any such finding could be seen as confirmation for the applicability of Social Presence Theory.

Hypothesis 1.a: Political opinion leaders and non-leaders participate more equally, in terms of frequency, in political discussions online compared to offline.

Hypothesis 1.b: There is a significant group of individuals who discuss politics online but refrain from doing so offline.

Hypothesis 1.c: People who discuss politics online are more likely to be female and have lower education, social gregariousness, political interest, personality strength, and internal efficacy than people who discuss politics offline.

4.2 Computer-mediated opinion leadership

To date, little empirical work has been conducted on political opinion leadership online as it is defined in the current study. There are a number of studies, however, which provide some relevant insights, despite not focussing specifically on political opinion leadership on the Internet. These studies in related domains provide some indications that online opinion leaders and offline opinion leaders have similar characteristics. They also suggest that online opinion leaders rely heavily on the Internet as a source of information. But before going into these

questions, Social Network Theory and Social Presence Theory will be compared once more.

4.2.1 Domains of influence of opinion leaders

In analogy to the above discussion of interpersonal discussion on the Internet, the comparison between Social Network Theory and Social Presence Theory raises the question whether there is a group of opinion leaders whose influence is confined to the online realm. Social Network Theory suggests that computer-mediated interaction supports existing communication relationships rather than changes their nature. Thus, one would not expect to find offline non-leaders exerting influence on the Internet. In contrast, Social Presence Theory holds that computer-mediated interaction can have an impact on communication patterns and create more equal exchange. Like Suler's (2004) concept of different online selves, Social Presence Theory suggests that people are able to assume different roles online and offline. Thus, certain individuals are likely to exert influence only online.

No research to date has juxtaposed online and offline opinion leaders in the realm of politics in order to examine this issue. Burson-Marsteller's (2001a) work on e-fluentials focuses on individuals who exert influence online as well as face-to-face, but does not investigate whether there is a third category of opinion leaders who act only online. Similarly, the poli-fluentials identified by Darr and Graf (2007) exercise influence both online and offline. No separate analysis is carried out of those persons who act as opinion leaders only in the online world. Graf and Darr (2004) did look at online political citizens who are not at the same time offline influentials. But the concepts of online political citizens and of influentials

differ markedly from the definition of opinion leadership employed in this study (see section 3.2). Kavanaugh et al. (2006) isolated blog users who were not identified as offline opinion leaders. But since they did not single out political blog users from commercial blog users, no inference about the existence of online-only political opinion leaders can be drawn from their results.

Some scholars in domains other than politics claim to have found evidence for the applicability of Social Presence Theory to opinion leadership. Sun et al. (2006), for example, maintain that reduced concern for the judgement of others and lower social unease have a positive effect on the assertiveness and confidence of opinion seekers. Due to the anonymous nature of computer-mediated communication the line between opinion leaders and opinion seekers is much more difficult to draw online. Sun et al. (2006) ground their conclusion on the correlation they find between music-related opinion seeking and opinion leading on the Internet. This, however, seems like rather weak evidence in support of their claim. The correlation could equally well be explained by the fact that opinion leaders are prone to seek opinions online. In my view, Sun et al. (2006) fall short of showing that computer-mediated communication makes offline opinion seekers turn into opinion leaders. Certainly, Sun et al.'s (2006) findings do not allow us to conclude that on the Internet opinion seekers are "able to exert influence on other people as opinion leaders do", as Wiesner (2009, p. 56) so boldly asserts.

In their recent book on opinion leadership, Dressler and Telle (2009) suggest that opinion seekers might communicate more actively online due to the anonymity the Internet affords. People who act as opinion seekers in real life may be more prone to exerting influence themselves in an online environment. But Dressler and

Telle (2009) conclude that further research needs to be carried out to confirm these assertions. Thus, I hypothesize:

Hypothesis 2: There is a meaningful group of opinion leaders whose influence is confined solely to the Internet.

4.2.2 Characteristics of opinion leaders in different domains

Prior research illustrates that offline opinion leaders are more likely than non-leaders to be male and tend to be better educated, more gregarious, and more politically interested. They have higher internal efficacy and are located more towards the extremes of the political spectrum (see section 3.5). In line with Social Presence Theory one may expect offline non-leaders to be more active on the Internet. As a result, the differences in characteristics between opinion leaders and non-leaders should be less pronounced on the Internet than offline. What is more, online opinion leaders should score lower than offline opinion leaders on scales measuring personality strength and internal efficacy, the two proxies for self-confidence used in the present study.

Given that few studies analyse the characteristics of online opinion leaders in the political domain, it is worth examining the literature on online opinion leadership in the realm of marketing. These studies provide a starting point for a more thorough investigation of the attributes of political online opinion leaders – an analysis that provides crucial information for those engaged in political campaigning. Regrettably, none of the research directly compares the attributes of offline and online opinion leaders. But, interestingly, several studies find online

opinion leaders to score higher on scales measuring the above characteristics than non-leaders, suggesting a certain similarity between online and offline opinion leaders.

Smith, Coyle, Lightfoot, and Scott's (2007) survey of visitors to a commercial website provides evidence that online and offline opinion leaders have comparable attributes. The data reveals a significant relationship between self-reported online opinion leadership and the size of a person's social network, a factor that is also associated with offline opinion leadership (see section 3.5). Similarly, Sun et al. (2006) show that the number of social ties online is connected to measures of music-related online opinion leadership.

Another crucial study on marketing opinion leaders on the Internet is Burson-Marsteller's (2001a) work on "e-fluentials". A person is an e-fluentials if she achieves a high score on Keller and Berry's (2003) scale of offline civic participation (see section 3.3.4) and, at the same time, exerts product or company-related influence online. Given their function as marketing opinion leaders, e-fluentials give advice to others about twice as often as the average citizen. Burson-Marsteller's (2001a) concept combines offline as well as online measures. Hence, it is not surprising that e-fluentials typically spread their experience with a company via both mediated and face-to-face channels. Moreover, it is far from astonishing that e-fluentials share several characteristics of offline opinion leaders. They tend to be slightly better educated than average and have high confidence in their opinions (Cakim, Kaushansky, Lytel, & Fay, 2006; Mittal, Holbrook, Beatty, Raghurir, & Woodside, 2008).

One of the few exceptions that study online opinion leadership in a context other than marketing is the work examining political interests and opinions, political

discussions, and Internet usage of the citizens of Blacksburg County. The county is particularly interesting for studying online political interaction, because Internet penetration among the population reached the saturation point as early as 2001. Moreover, Blacksburg has an active community computer network that supports citizen participation. The network equips citizens with detailed information about community activities and provides a panel for discussion and a point of contact with public and civic organisations. It is worth highlighting, though, that Blacksburg presents anything but a representative sample. 85 percent of inhabitants are faculty members, other employees or students of the resident state university.

Kavanaugh, Carroll, Rosson, Reese, and Zin (2005) examine civic Internet use, a concept related to our subject of investigation, in Blacksburg. Civic Internet use measures whether a person gets news online, answers questions on the Internet, posts information and expresses his opinion online, and takes part in interest groups via the Internet. Civic Internet use could be described as civic opinion leadership online, which is similar to but not the same as political opinion leadership online.

Although the activities assessed by Kavanaugh et al. (2005) are not equivalent to political opinion leadership online, the findings provide a further indication that online opinion leaders have similar attributes as offline opinion leaders. Kavanaugh et al. (2005) establish a positive relationship between a person's civic conversational and information Internet use and how informed she is about current news. The Blacksburg data also shows that Internet users for civic purposes are better educated and earned higher incomes than the average (Carroll

et al., 2005). This result is in line with Burson-Marsteller's (2001a) discovery that e-fluentials are characterized by a relatively high socio-economic status.

Kavanaugh et al. (2006) investigated the extent to which Blackburg's citizens write, comment in, and read online blogs. Kavanaugh et al. (2006) used a scale similar to that of Keller and Berry (2003) to identify individuals who engage in offline political participation within the community. These two scales allowed Kavanaugh et al. (2006) to single out those offline political activists who are active in online blogs as well as those individuals who do not participate politically offline but engage in blogging. Those who are active in blogs and who also engaged in offline political participation were found to be part of a larger number of local organisations than those who blog but do not participate offline. They also have higher socio-economic status and are more likely to believe that the local community is able to solve problems.

This evidence could be taken to show differences in characteristics between online and offline opinion leaders, if blogging as measured by Kavanaugh et al. (2006) is a suitable proxy for political opinion leadership online. Recent research indicates that bloggers have several characteristics traditionally associated with opinion leadership (Lenhart & Fox, 2006; Nisbet & Kotcher, 2009). Nonetheless, blogging activity in the Blackburg study cannot be used as an estimate of political opinion leadership online, because the analysis did not differentiate between political and private blogs. Blogging experience is not confined to reading, commenting on, and writing about political issues, but includes a wealth of communication about private and commercial matters. Hence, at best, blogging experience could be used to assess opinion leadership across online domains.

Another study that comes close to assessing the similarity of online and offline opinion leaders in the realm of politics is that conducted by Graf and Darr (2004). Based on a Nielsen Internet survey as well as a confirmatory U.S. nationwide telephone survey of a representative sample, Graf and Darr (2004) identified “online political citizens”. Online political citizens are individuals who, in the three months prior to the 2004 presidential election, have visited a political candidate or party website and engaged in at least two political activities online. Political activities online include making a political contribution, receiving political emails, sending or forwarding such emails, visiting or commenting on a political blog, contributing to political chats, and visiting websites to get political news.

Graf and Darr (2004) compared those categorized as online political citizens with respondents identified as influentials using Keller and Berry’s (2003) scale (see section 3.3.4). The evidence supports the supposition that online and offline opinion leadership is correlated to a significant degree. In fact, close to 70 percent of online political citizens were identified as influentials. This compares to an average of 10 percent of influentials among the general population. Moreover, influentials were found to engage more actively than the average citizen in activities that can be regarded as immediate behavioural consequences of online opinion leadership. For example, 31 percent of influentials sent or forwarded a political email in the three months prior to the 2004 presidential election, compared to 7 percent of the general public.

It is worth emphasizing, however, that the concepts of influentials and online political citizens are different from the concepts of online and offline opinion leadership used in this study (see sections 3.2 and 3.3.4). Whether someone is an

influential depends on his level of political and civic participation, while offline opinion leadership as defined in this study measures people's active and passive influence on the political opinions of others. The conception of online political citizens combines measures of information searching behaviour, political participation, and being exposed to others' influence with certain behavioural consequences of online opinion leadership – namely forwarding, blogging, and chatting. Again, this approach differs from the present study which defines online opinion leadership as the act of trying to convince others of one's political opinions and of being asked for political advice online.

Although Graf and Darr (2004) use a different definition of opinion leadership, their findings regarding the characteristics of online political citizens provide an additional data point related to the present subject of investigation. Whereas females and males comprise equal portions of the general public and of Internet users, two thirds of online political citizens are men. Online political citizens are younger than the general public but older than the average Internet user. What is more, online political citizens are better educated and earn higher wages than the general public and the average Internet user. Online political citizens also have stronger community ties, participating more actively in local organisations than the other citizens. Notwithstanding definitional differences, Graf and Darr's (2004) analysis suggests certain similarities between online and offline opinion leaders.

It is Schmidt, Paetzolt, and Wilbers's (2006) investigation of political bloggers in Germany that provides the most relevant data points on political online opinion leaders as defined in the present study. Schmidt et al. (2006) show that those who write about politics in their own blogs are more likely than the general public to

voice their political opinions in discussions with others. 83 percent of political bloggers voice their political opinions face-to-face, which compares to 72 percent among a representative German sample. If we accept political blogging as a proxy for online opinion leadership and voicing of one's opinion in face-to-face situations as an adequate measure offline opinion leadership, Schmidt et al.'s (2006) evidence illustrates that the two concepts are related. Further comfort can be taken from Schmidt et al.'s (2006) finding that political bloggers, alike political opinion leaders, are better-educated and more likely to be male than the general population (cf. Abold, 2005).

The above studies provide some indications that online and offline opinion leaders share similar attributes. At the same time, Social Presence Theory suggests that the differences between the general public and offline opinion leaders may be more pronounced than those between online opinion leaders and the population overall. As no research to date specifically examines political online opinion leadership as defined in this study, I hypothesize:

Hypothesis 3.a: Both online opinion leaders and offline opinion leaders are characterized by an above-average male/female ratio and above-average levels of education, social gregariousness, political interest, personality strength, internal efficacy, and political extremity.

Hypothesis 3.b: Online opinion leaders are more likely than offline opinion leaders to be female and are characterized by lower levels of education, social gregariousness, political interest, personality strength, internal efficacy, and political extremity as compared to offline opinion leaders.

4.2.3 Sources of opinion leaders in different domains

Now that the equalisation hypothesis suggested by Social Presence Theory and the attributes of online opinion leaders more generally have been examined in detail, I will turn to a question of considerable interest to political campaigners. In order to convey their message to opinion leaders in an effective fashion, those running a political campaign need to know which sources of political information opinion leaders rely on.

As discussed earlier (see section 3.6), several studies find evidence that both influentials and those with a strong personality use the Internet more frequently to gather political information than the general public. Further research is necessary to connect these findings to offline opinion leadership as defined in this study by showing that it is also associated with a high level of political Internet use. But it seems likely that such a relationship exists. Websites are particularly attractive for opinion leaders, because they supply information in an efficient and flexible way (Wiesner, 2009). Information is available on demand and in a timely fashion. What is more, online content can be customized to fit the opinion leaders' needs (Shah et al., 2005).

As with offline opinion leadership, few academics to date have examined the relationship between the use of electronic sources of political information and online opinion leadership. The studies on marketing opinion leaders mentioned above, again, give helpful indications. Sun et al. (2006) find a significant association between music-related opinion leadership online and Internet use, for example to access subject-specific newsgroups. Burson-Marsteller (2001a, 2001b) illustrates that e-fluentials use the Internet more extensively than others. They frequent opinion sites and company websites more regularly, they tend to confirm

company information with the help of additional online sources, and they participate habitually in discussion forums and news groups. Sohn's (2005) analysis of members of Korean online digital camera communities finds no evidence that online opinion leaders visit company websites and social communities more frequently to gather information. But he establishes that online marketing opinion leaders rely more heavily on online newsletters, newsgroups, and forums.

In contrast to the above marketing-oriented studies, Shah et al. (2005) as well as Hardy and Scheufele (2005) examined the relationship between online exchange about civic and political matters and electronic information gathering. Shah et al. (2005) show that the correlation with civic messaging is stronger for online information seeking than for newspaper and television news use. Online information seeking includes receiving information online and visiting news, government, social group, or politician websites. Civic messaging is somewhat of a mixed measure including both political discussion via email and activities like recruiting volunteers online. Hardy and Scheufele (2005) also test the single-item variable political online chat and illustrate that chatting about politics is related to Internet news use.

Neither of the listed researchers has investigated the relationship between political opinion leadership online and the use of the Internet for obtaining political information. What is more, further evidence is required regarding the relationship between Internet use for campaign information and offline opinion leadership as defined in this study.

Thus, I hypothesize:

Hypothesis 4.a: Online opinion leaders are more likely to use the Internet as the main source of campaign information than non-leaders.

Hypothesis 4.b: Online opinion leaders use online sources of campaign information more frequently than non-leaders.

Hypothesis 4.c: Offline opinion leaders are more likely to use the Internet as the main source of campaign information than non-leaders.

Hypothesis 4.d: Offline opinion leaders use online sources of campaign information more frequently than non-leaders.

4.3 Perceived strength of computer-mediated influence

So far, different theories and their implications for political discussion and opinion leadership online have been discussed. The overarching issue has been whether face-to-face and computer-mediated communication differ in the way people talk about politics and in how individuals seek to influence one another. A related question is how people perceive the relative influence of different modes of communication on their political opinions. If the Internet changes how people discuss politics and influence each other, it is worth investigating how people judge the impact of online discussions on their political opinions relative to other sources of influence.

4.3.1 Influence relative to other sources

Traditionally, researchers have focused on comparing the impact of the mass media and personal face-to-face discussions on political opinions (see section

3.4.2). Much less research has been conducted on the relative influence of computer-mediated and face-to-face communication. This is surprising, as the importance of persons who act as multipliers online is steadily increasing (Gülden-zopf & Hennewig, 2010) and since social interaction is regarded as the most important Internet use, particularly among younger age groups (Cummings, Butler, & Kraut, 2002). In 2007, 75 percent of German 14 to 19 year-olds spent at least half their online time communicating with others via email, chat, and other Internet technologies. For 20 to 29 year-olds online communication constitutes 40 percent of the time spent online (De Sombre, 2010). Given these figures, an analysis of the relative persuasive strength of online and offline interaction may yield interesting results.

Social Presence theorists argue that it is more difficult to exert influence via media with low social presence and that, consequently, face-to-face communication is perceived as having a higher impact on people's opinion formation than computer-mediated exchange (Spears & Lea, 1992). Fish, Kraut, Root, and Rice (1992) suggest that this phenomenon may be particularly relevant for intricate normative matters, such as politics. They find that people see electronic communication as less suitable for complex and socially controversial subjects because of its low social presence.

As described earlier, Walther (1992) is among those criticising the conclusions drawn from Social Presence Theory (see 4.1.2). In more recent work, Walther (1996, 1997) goes beyond his earlier claim that computer-mediated and face-to-face situations are similar in terms of social presence. He uses the concept of „hyperpersonal“ social interaction to describe online behaviour. Because of the asynchronicity and anonymity of computer-mediated communication, individuals

are prone to revealing personal information. Users have more control over what and how they disclose information, which increases their willingness to do so (Joinson, 2007). Discussants expose more information about their mind-set, personality, and opinions and receive more such information about the person they are conversing with (Walther & Tidwell, 1995). Joinson (2004) confirms Walther's (1996) thesis of hyperpersonal interaction and finds meaningfully more self-disclosure online than offline.

According to Walther (1996, p. 28), computer-mediated communication facilitates "forms of interaction that exceed what we may accomplish face-to-face, in terms of our impression-generating and relational goals." This statement could be read as claiming that computer-mediated relationships are closer and more influential than face-to-face ones. But I think that such an interpretation misses Walther's (1996) point. On the one hand, Walther (1996) qualifies his assertion by saying that it holds only "in some cases". Computer-mediated communication is not generally more personal or social than face-to-face conversations. On the other hand, increased self-disclosure is not necessarily associated with a perceived increase in influence. Hence, Walther's (1996) thesis about hyperpersonal social interaction does not provide any guidance as to the relative influence of online and offline communication.

As empirical research on the subject is limited, it is worth reviewing the available data on non-political word-of-mouth despite the unique characteristics of political opinion formation. Studies comparing the "social richness" of the two modes of communication, that some believe to be behind potential differences in persuasive strength, show mixed results. Foulger (1990) who asked experienced computer users to rank different media in terms of social richness found email to perform at

least as well or better than face-to-face interaction. In contrast, Schmitz and Fulk's (1991) study of a network of scholars shows face-to-face communication to be perceived as more socially rich than email. Similarly, Liebig and Schütze's (2001) work reveals that organisational project teams prefer face-to-face communication for complex tasks, because of the richness of in-person interaction.

In one of the first studies directly comparing the value of offline and online word-of-mouth, Steffes and Burgee (2009) examined how students choose their university professors. Students more frequently used electronic forums than they spoke to friends to get advice on the quality of professors. Steffes and Burgee (2009) interpret this as proof of the fact that online word-of-mouth is perceived as more influential than face-to-face conversations. I believe that this is a false generalization. Given the large number of professors, most friends will have no experience with a certain lecturer. Since it would not make sense to consult a friend on a professor he does not know, people may turn to online forums as the second best option. In my point of view, no inference can be made about the relative influential strength of online and offline interpersonal communication.

In an analysis of commercial word-of-mouth, Subramani and Rajagopalan (2003) suggest that online communication is more powerful than face-to-face interaction. The ability to influence a large number of people simultaneously online and the diverse set of electronic communication media that are available enable flexible and efficient communication. While Subramani and Rajagopalan (2003) state that online influence is more potent, they do not provide evidence to support their claim. Furthermore, Sun et al. (2006) quote Phelps, Lewis, Mobilio, Perry, and Raman (2004) as saying that online word-of-mouth is more persuasive than face-

to-face communication due to the Internet's pace, expediency, and ability to reach a large number of people. I believe that Sun et al. (2006) misinterpret Phelps et al. (2004). Phelps et al. (2004) simply highlight differences between the two modes of influence without making a statement as to which is more powerful.

It turns out that it is difficult to find a conclusive theoretical or empirical foundation for one's intuition that personal discussions have more sway than electronic conversations. Hence, it seems worth comparing people's perception of the influential force of face-to-face interaction and computer-mediated communication. In line with Social Presence Theory, I hypothesize:

Hypothesis 5: People perceive face-to-face communication to have a higher impact on their political opinions than online communication.

4.3.2 Differences between perceived and actual influence

Before turning to the empirical analysis of the research hypotheses, I will highlight potential discrepancies between perceived and actual influence. The studies mentioned in the previous section as well as our empirical investigation examine people's perception of the strength of influence of different sources rather than actual influence effects. While perceived influence can certainly be considered a worthy subject of investigation, a number of studies show that people's perception of influence can differ from real influence processes (O'Keefe, 2002).

Research on mental contamination shows that our judgement and behaviour is sometimes influenced by unconscious mental processes. For example, people are

typically unaware that the extent to which they view others as adventurous depends on having previously memorized words related to adventurousness (Wilson & Brekke, 1994). Research on the perception of subliminal messaging illustrates that people sometimes cannot report the existence of a stimulus that led them to change their behaviour (Dixon, 1971). Storms and Nisbett's (1970) and Zimbardo, Cohen, Weisenberg, Dworkin, and Firestone's (1969) studies find no association between the degree of verbal report change and the degree of behaviour change among the examined groups (Nisbett & DeCamp Wilson, 1977). In a study conducted by Collins, Taylor, Wood, and Thomson (1988), subjects generally judged vivid news stories to be more persuasive. Actual attitude change, however, was not found to depend on vividness. As Wilson and Brekke (1994) point out, people have only limited access to their mental processes. Collins et al. (1988) conclude that people assess influence not based on recollection but on interest and attention.

Cohen's (2003) work on group influence shows that people are often blind to the impact their social environment has on their behaviour. As Cohen (2003) points out, people tend to believe that their opinions are the result of objective evaluation of information and arguments. The diversity of labels different academics have assigned to this tendency speaks for its robustness. Ross and Ward's (1996) "naive realism" denotes people's disposition to take their experience of things, persons, and events to be a true reflection of reality. Pronin, Lin, and Ross's (2002) "bias blind spot" account widens the scope of the concept to include judgements of arguments and of causal mechanisms. Pronin et al. (2002) claim that people generally view themselves as unbiased. Their studies show that people are able to identify motivational and cognitive biases in others, but underestimate

the influence biases have on themselves. This leads to the paradoxical result that people are more likely to identify the factors that influence others than those that influence themselves. Subjects often even consider their self-image to be correct, after being made aware of potential biases. Epley and Dunning (2000) conducted experiments that confirmed these findings.

Wilson, Dunn, Kraft, and Lisle (1989) identified a tendency to quote rational reasons related to the issue in question rather than contextual or emotional factors as source of influence. Davison (1983) coined the term “third-person effect” to describe the phenomenon that people regard themselves as less impacted by persuasive communication and negative media reports than others. At the same time, people consider personal experience to play a larger role in their own opinion formation than in others’.

The above described phenomena are examples of the human disposition to overestimate one’s own objectivity, which leads people to misperceive the influences they are exposed to. People’s preference to see themselves as impartial and uninfluenced by potentially manipulative sources causes what is generally referred to as a self-enhancement bias (Brown, 1986a). Only when people consider it acceptable to be affected, are they likely to recognize and report the influence (Duck, Terry, & Hogg, 1995).

The, often unconscious, urge for a positive self-image is not the only reason behind the frequently found gap between perceived and actual influence, however. There is evidence that people sometimes have limited knowledge of the origins of their preferences and behaviour independent of any self-enhancing motivations. At times, the influencee is unable to identify the source of influence or names

irrelevant factors as highly influential. In other cases, he does not even realize that his opinion has changed (Nisbett & DeCamp Wilson, 1977).

Respondents in an experiment carried out by Markus (1986) gladly gave explanations for perceived changes in their own attitudes, even when the reported opinion transformation ran directly opposite to the actual change. Only 5 to 10 percent of respondents who supplied directionally false observations of their own opinion change refrained from providing some kind of rationalization. Respondents not only altered their views, but they also unconsciously invented rationalizations for their new positions. Goethals and Reckman (1973) also found participants in a study to be unaware of the opinion change they had undergone. Wixon and Laird (1976) discovered that subjects adjusted their histories of opinion formation to make sense of attitude transformations.

Findings like these led Bem and McConnell (1970) to formulate the Self-Perception Theory, which holds that people derive explanations for their attitudes from observation of their own behaviour. And when their behaviour reveals only cues that are feeble and unclear, people's ability to explain their opinions is similar to that of onlookers. Similarly, Markus (1986, p. 22) concludes "that we may legitimately question whether individuals are any more privy to their own attitudes or the processes culminating in those attitudes than are external observers".

Nisbett and DeCamp Wilson (1977) conducted experiments on people's aptitude to correctly report the effects of a stimulus on their behaviour. They found that participants were "virtually never" correct in their perceptions about the impact of a stimulus (p. 242). In my opinion, these results have to be put into perspective, though. In describing their methodology, Nisbett and DeCamp Wilson (1977)

declare that the settings studied were constructed so that the subjects would not be able to identify the stimulus. It seems that the experimental design predetermined the results. Hence, the conclusion that people are practically never able to correctly perceive influences on their behaviour and opinions is not justified.

Nonetheless, Nisbett and DeCamp Wilson (1977) provide interesting insights into the processes that may lead people to misperceive influence, when such misperception is present. They suggest that people draw on a set of general causal theories about typical processes of influence. General truisms derived from folk psychology rather than true introspection form the basis of their explanations. When asked to rationalize their behaviour, people search society's collection of widely accepted principles that are habitually used to elucidate behaviour of the same kind.

Moreover, Nisbett and DeCamp Wilson (1977) discuss the conditions under which self-reports are more likely to match reality. Most importantly, they highlight the importance of the time span between the occurrence of influence and the report. The larger the gap between the two, the less accurate the report tends to be. Another crucial factor is the type of memory people refer to when giving explanations for their behaviour. People are better at identifying stimuli stored in their verbal memory than in their emotional or vivid memory. The degree to which the causes of the response are plausible also determines the correctness of people's reports. Unsurprisingly, people need to conceive the stimulus as a reasonable driver of their behaviour to be able to report on it. Hence, people should be more likely to understand and describe processes of informational than normative influence.

The above research discusses general reasons for discrepancies between actual and perceived influence processes. When comparing the perceived persuasive force of interpersonal communication and the media, one needs to be aware of another, more specific limitation. Research on direct cognitive media effects, such as agenda-setting and framing, has shown that the influence exerted by the media is often of a different nature than the influence of interpersonal discussions (cf. section 3.1). The media has a powerful impact on what topics are regarded as important by the citizens, while interpersonal discussions are the primary driver of citizens' opinion on these topics. Since it is probably more difficult to identify indirect cognitive effects, like agenda-setting, people are likely to underestimate the influence of the media.

Already in 1920, Lippmann suggested that the media is particularly powerful not at directly influencing opinions on particular topics but at setting the agenda of public discussion. Interestingly, Lazarsfeld (1948) also highlighted that the media, while not good at promoting a specific stand on an issue, has the ability to emphasize certain elements of the social world. The media influences which topics people discuss, whereas interpersonal discussions shape people's opinions on these topics. Cohen (1963, p. 13) famously asserted that "the press may not be successful much of the time in telling people *what to think*, but it is stunningly successful in telling its readers *what to think about*".

The first empirical study of Agenda-Setting Theory was conducted by McCombs and Shaw (1972) who surveyed 100 undecided voters in Chapel Hill, North Carolina. The investigation of the respondents' opinion formation process revealed a correlation between the perceived importance of an issue and the intensity of media coverage of that issue (Rogers, 2004). Since McCombs and

Shaw's (1972) initial research, a number of studies have confirmed the agenda-setting function of the media. The media has a direct influence on what people view as important. The amount of time and space the media allocates to a given story, the order in which news are presented, and sometimes a complete lack of coverage can have a substantial impact on people's perception of a topic's importance (Eichhorn, 2005; Sietman, 2005). More recent studies confirm the applicability of agenda-setting in online environments. Roberts, Wanta, and Dzwo (2002), for example, find evidence for agenda-setting effects of online news on electronic bulletin boards.

Priming is an extension of Agenda-Setting Theory that explicitly includes the impact on political opinion formation (Meffert, 1999). By priming certain political issues, i.e. giving more attention to them, the media has substantial influence on the standards citizens use to evaluate politicians (Iyengar & Kinder, 1997). This can be explained by the fact that people do not use all stored pieces of media information but rely primarily on the most prominent ones, when forming their views of political candidates (Peter, 2002). Like agenda-setting, the more specific priming concept is supported by numerous experimental and survey studies (Roskos-Ewoldsen, Roskos-Ewoldsen, & Carpentier, 2002).

Another important related concept regarding cognitive media effects is media framing. While agenda-setting and priming deal with which topics are reported with what frequency and prominence, framing is concerned with how a news item is presented (Sietman, 2005). The extent to which news reports are positive or negative and whether any individuals or institutions are credited with positive events or blamed for negative occurrences tend to influence people's political views (Price & Tewksbury, 1997). People often attribute responsibility for

political events to specific individuals featured in the media. Through its framing function the media has an influence on these attributions (Iyengar, 1991).

As has been shown, perceived and actual influence processes may diverge for a number of reasons. But even if they diverge, perceived influence is anything but a fruitless subject of investigation. Attribution Theory holds that people seek to uncover the origins of their own and others' responses to influence. While these explanations may not always be accurate, they have a significant impact on people's future behaviour. People's acceptance of opinions is determined in part by their causal explanations of how they came to have them (Nisbett & DeCamp Wilson, 1977). Hence, despite the discrepancies between perceived and actual influence, it is worth examining the perceived relative strength of different sources.

5 Empirical analysis

5.1 Method

Now, that the research hypotheses have been derived from a number of theoretical concepts, they will be tested using evidence from a survey conducted on the largest online social network in Germany at the time of the 2009 federal election. Before analysing the empirical results in detail, I will briefly describe the social network, the survey sample as well as the survey design. Moreover, a summary of the most important measures and scales used in the survey will be presented. This summary also illustrates the reliability and convergent validity of the collected data.

5.1.1 Survey

The survey was carried out on StudiVZ and MeinVZ, two interconnected German social networking websites that I will refer to as the VZ networks. According to Comscore, the VZ networks were the largest online social network in Germany with 15.9 million unique users per month as of February 2010. The closest competitors were Facebook with 13.3 million and Wer-kennt-wen with 8.1 million unique users (GFM-Nachrichten, 2010). StudiVZ was founded in 2005 and is accessible only to university students. MeinVZ was founded in 2008 as a connected platform with the same functionality. Contrary to StudiVZ, however, MeinVZ is not restricted to those attending university. Registered members of either of the two communities can access the content published on both networks and communicate with the members of both platforms.

The VZ networks enable their members to cultivate a group of friends and to interact with them electronically. Alike other social networking websites, the VZ networks provide social support as well as the opportunity to exchange information (Ridings & Gefen, 2004). Each user has a personalized profile disclosing personal information either to all other members of the community or to a select group of friends. On their profile, users may choose to reveal information about their age, gender, religion, origin, contact details, education, profession, and interests. The profile also contains a picture and a list of the member's friends within the VZ networks. Members can invite other members to become their friends, giving them access to their profile and their collection of photos. Once they have become friends in the community, they can exchange written messages and chat electronically. Users can also play games on the website and invite non-members to join the network. Moreover, users of the VZ networks are able to join groups that have been created by other members and that cover a range of different fields of interest.

One such group is "Meine Stimme zählt!" ("My vote counts!"). It was started prior to the 2009 German federal election targeting politically interested individuals willing to publically support voter participation. Membership in the group is independent of political orientation and party affiliation. A logo showing the message "My vote counts!" was automatically displayed on the personalized profile of everyone who joined the group prior to the federal election. In addition, those who have signed up for the group are allowed to read and contribute to the political discussions on the group's bulletin board. Hence, the group is an ideal location for examining the characteristics and behaviour of politically interested

social network members and to assess correlations between different political variables and concepts.

On October 13, sixteen days after the federal election on September 27, the description on the main page of “My vote counts!” was altered to advertise the survey which provides the empirical foundation of this thesis. The amended text on the group page explained that the survey was being conducted by a PhD student at the University of Bamberg. It also highlighted that all those who successfully completed the questionnaire had a chance to win an iPod. Via a link in the text group members were able to access the online questionnaire. At the same time, all 218,000 group members received a community-internal email indicating that a new message had been posted on the group page. On October 19, the link to the survey was posted on five other political groups on the VZ networks with between 600 and 5,500 members each. On November 9, a community-internal reminder email was sent to all group members, again indicating a new post on the group page. The link to the online questionnaire was active until December 2, when the survey was closed.

Of the 4,310 individuals who started the questionnaire 1,606 respondents completed it at least until the antepenultimate question on age and gender. Following a quality check of the data, 90 respondents were deleted from the sample leaving a total of 1,516 cases. The quality check adjustment sought to identify and erase those respondents who had only “clicked through” the questionnaire, for example to take part in the iPod raffle. To ensure that only diligent respondents are included in the sample, the average answer time was calculated for each individual question. Respondents who, across all questions,

were on average 60 percent or more below the average time to answer a question were excluded from the sample.

The low response rate of less than 1 percent can partially be explained by the fact that most group members probably never became aware of the existence of the survey. Given the main purpose of the group – namely expressing support for voter participation – it is unlikely that many members visited the group page proactively after the federal election. Moreover, the notification email sent to all group members indicated only the fact that a new message had been posted on the group page, but did not make explicit reference to the survey. In addition to these specific issues, there are more general reasons why online surveys may not achieve response rates similar to those of traditional collection methods. As Couper (2000) points out, technical problems may hinder respondents from starting or completing an online survey, while confidentiality concerns may dampen people's willingness to participate.

Since the survey was only advertised to members of six selected political groups on the VZ networks, the sample makes no pretension to being representative of either the German general public or of German Internet users. As with other convenience samples collected via political websites, the results can be expected to be biased with regards to political interest, education, age, and gender (Faas & Schoen, 2009). Furthermore, the sample is unlikely to correctly reflect the average characteristics of members of political groups on the VZ networks. The low response rate probably creates substantial non-response bias and, thus, increases the likelihood that those who are more politically interested and more politically active participate in the survey (Umbach, 2004).

Yet, it is not possible to adjust the sample according to the average characteristics of the group members. Applying a weighting in any meaningful fashion would require knowledge of key variables, such as political interest, for all group members. This data, however, is not available. Consequently, the descriptive statistics below should be seen primarily as a source of information about the characteristics of politically interested individuals who are active in online social networks. Apart from the specific descriptive information, the data set provides insights into relationships among different political measures. Evidently, the validity of these results stretches beyond the VZ sample.

5.1.2 Measures

The most central measures for the purpose of this study include scales of opinion leadership, political discussion, and personality strength. Respondents were also questioned about different political attributes, most notably political interest and efficacy. In addition, variables measuring socio-demographic characteristics and media usage were included in the survey.

Table 2: Opinion leadership scale

To what extent do you agree with the following statements?

1 = "do not agree at all", 2 = "tend not to agree", 3 = "neutral", 4 = "tend to agree", 5 = "fully agree"

a. In personal discussions/on the Internet, I am asked for advice on political questions.

b. In personal discussions/on the Internet, I try to convince others of my political opinions.

Alike all measures used in this study, opinion leadership is assessed on the basis of people's self-reports. Similar to Lazarsfeld et al. (1944), I use a two-item scale to measure opinion leadership as a behavioural variable (see Table 2). Respondents were asked to what extent others seek their advice on political topics and to what extent they try to convince others of their political views. The first

item measures passive opinion leadership, the second assesses active opinion leadership. Cross-correlation analysis shows that the two types of opinion leadership are closely related ($r = .54$ offline, $r = .67$ online; sig. < 0.001).

A 5-point scale was used to capture each answer, allowing for an analysis of opinion leadership both as a continuous and as a dichotomous leader/non-leader variable. When applying a dichotomous distinction, respondents who chose “tend to agree” or “fully agree” for at least one of the two questions are classified as opinion leaders. At the same time, respondents can be located on a continuous scale ranging from 2 to 10 based on the sum of the scores for the two questions. This methodology was used to measure two concepts of opinion leadership. First, the two questions were asked with regards to “personal discussions” to measure offline opinion leadership. Then, they were rephrased to gather people’s behaviour “on the Internet”, online opinion leadership.

It is worth highlighting that analyses relying on opinion leadership as a continuous measure may yield different results than those using a dichotomous operationalization of opinion leadership. As will be shown in the following sections, only 18 percent of respondents qualify as opinion leaders “on the Internet”. Hence, the discriminatory power of the distinction between online opinion leaders and non-leaders may be more limited than that of a scale that puts respondents into 9 categories of online opinion leadership. On this scale, no category comprises more than 32 percent of respondents. “In personal discussions” 54 percent of people qualify as opinion leaders, whereas no more than 19 percent of respondents fall into a single category on the 9-point scale of offline opinion leadership.

Alike Lazarsfeld et al.'s (1944), the research design used in this study does not explicitly differentiate between the two functions of opinion leaders, (i) relaying information to others and (ii) influencing the evaluation of information and political opinion formation of others. At the same time, our measure of opinion leadership is clearly biased towards the second function, as reflected in the words "convince" and "advice". This research design seeks to accommodate two facts about opinion leadership established in the above. While the significance of opinion leaders in the opinion formation of others is widely accepted, they play only a secondary role in the dissemination of information (section 3.4). Opinion leaders add to the information others receive from the media. But, more importantly, they validate, interpret, and evaluate media messages. Moreover, it is often difficult to separate the influence function from the information function, because the two tend to be intertwined. Hence, the present study relies on a measure of opinion leadership that reflects both the interdependence of the two functions and the prominence of the influence function.

As a test of the validity of the opinion leadership scales, respondents were asked to provide data on the frequency with which they engage in four specific types of online behaviour – namely (i) sending political emails, (ii) contributing to political blogs or bulletin boards, (iii) twittering political content, and (iv) publishing own political commentary and analysis online. These activities can be seen as direct behavioural consequences of online opinion leadership. Hence, a strong relationship between online opinion leadership and these variables would provide comfort on the validity of the scale of online opinion leadership used in the present study. Indeed, the survey data confirms the strong expected connection between online opinion leadership and the four different measures of its

behavioural consequences. Correlations between each of the four activities and a dichotomous measure of online opinion leadership ($r_1 = .39$, $r_2 = .50$, $r_3 = .44$, $r_4 = .25$; sig < 0.001) as well as between each of the four activities and a continuous measure of online opinion leadership ($r_1 = .46$, $r_2 = .55$, $r_3 = .52$, $r_4 = .29$; sig < 0.001) are robust and significant.

Political discussion activity and opinion seeking are assessed using a similar scale as the above one for opinion leadership. Respondents who “tend to agree” or “fully agree” that they talk to others about political questions are classified as political discussants. Those who “tend to agree” or “fully agree” that they seek others’ advice on political questions are categorized as opinion seekers, when using the two concepts as a dichotomous variable. Again, the 5-point scale also permits a continuous classification. As with opinion leadership, political discussion activity and opinion seeking were assessed separately “in personal discussions” and “on the Internet”.

Table 3: Political discussion and opinion seeking scales

To what extent do you agree with the following statements?

1 = "do not agree at all", 2 = "tend not to agree", 3= "neutral", 4 = "tend to agree", 5 = "fully agree"

a. In personal discussions/on the Internet, I seek others' advice on political questions.

b. I talk to others face-to-face/on the Internet about political questions.

A number of variables test the general characteristics of the respondents. Apart from the socio-demographic attributes of age, gender, and education, the survey assesses social gregariousness. Based on their number of friends in the VZ networks, respondents are classified into four categories of social gregariousness. This measure differs from traditional ways of estimating social gregariousness and, hence, may better be described as online social gregariousness.

Table 4: Reliability of the personality strength scale

Cronbach's Alpha = 0.82	Corrected item-total correlation	Cronbach's Alpha if item deleted
1. I usually rely on being successful in everything I do.	0.46	0.80
2. I am rarely unsure about how I should behave.	0.47	0.80
3. I like to assume responsibility.	0.52	0.80
4. I like to take the lead when a group does things together.	0.55	0.79
5. I enjoy convincing others of my opinions.	0.48	0.80
6. I often notice that I serve as a role model for others.	0.60	0.79
7. I am good at getting what I want.	0.58	0.79
8. I am often a step ahead of others.	0.53	0.80
9. I have many things others envy me for.	0.39	0.81
10. I often give others advice and suggestions.	0.41	0.81

The most important general characteristic investigated in the survey is the respondents' personality strength. In order to ensure comparability with a recent representative poll, I used the version of Noelle-Neumann's (1983) personality strength scale currently employed by the Allensbach Institute. A test of the scale's internal consistency produced a Cronbach's Alpha of 0.82, well above the conventional reliability threshold of 0.7. As Table 4 shows, the scale could not be improved by deleting any of the items. Moreover, it can be considered unidimensional, because all items correlate well with the total.

Moreover, people were queried about a number of political attributes. As shown in Table 5, the survey assessed people's political interest, satisfaction with democracy, and strength of party identification, each on a 5-point scale. People were also asked to place themselves on an 11-point left/right scale according to their political orientation (1 = left, 11 = right). In addition, respondents specified their level of party identification and indicated whether they are a member of a political party. Particularly these latter three political characteristics are closely related, as cross-correlation analysis illustrates. Members of the CDU/CSU place themselves further to the right of the political spectrum (arithmetic mean = 7.6)

than those who are a member of the SPD (4.2) or Die Linke (2.0). Unsurprisingly, party membership and party identification are correlated ($r = .32$; sig. < 0.001). And, strength of party identification is associated with extremity on the left/right scale, albeit less strongly ($r = .11$ online; sig. < 0.001).

Table 5: Scales measuring political attributes

In general, how would you describe your level of interest in politics?
 1 = "not at all interested", 2 = "less interested", 3 = "moderately interested", 4 = "fairly interested"
 5 = "very strongly interested"

How satisfied are you, overall, with democracy as it exists today in German?
 1 = "very dissatisfied", 2 = "fairly dissatisfied", 3 = "neutral", 4 = "fairly satisfied", 5 = "very satisfied"

In politics, people often speak of "left" and "right". Where would you place yourself on the below scale?
 1 = "left", 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 = "right"

Many people in Germany consistently identify themselves with a particular political party, even though they might from time to time vote for a different party. Do you generally identify with a specific party?
 1 = "CDU", 2 = "CSU", 3 = "SPD", 4 = "FDP", 5 = "Bündnis 90/Die Grünen", 6 = "Die Linke",
 7 = "another party", 8 = "none", 9 = "do not know"

How strong or weak is your identification with that party?
 1 = "very weak", 2 = "fairly weak", 3 = "neither weak nor strong", 4 = "fairly strong", 5 = "very strong"

Are you a member of a political party?
 1 = "CDU", 2 = "CSU", 3 = "SPD", 4 = "FDP", 5 = "Bündnis 90/Die Grünen", 6 = "Die Linke",
 7 = "another party", 8 = "none"

Political efficacy is traditionally broken down into an external and an internal component. Finkel (1985, p. 893) defines external efficacy as “the belief that the authorities or regime is responsive to attempted influence” and internal efficacy as “the individual’s sense of political self-competence”. Balch (1974, p. 24) refers to a person’s “perceived probability of success at influencing public officials, or, alternatively, the political responsiveness of officials” and to the person’s “confidence in his own abilities, regardless of the political circumstances”. In the present study, each form of efficacy was measured by two items reflecting the above definitions. With regards to internal efficacy, people were asked if they are confident to assume a leading role in a group dealing with political matters and if they consider politics to be particularly complicated (see Table 6). The external

scale gauges people's views on whether politicians care about the public's interests (see Table 7). Cross-correlation analysis confirmed the convergent validity of both scales. Due to the close similarity of the two statements measuring the external variable, the external efficacy correlation was higher than that of internal efficacy ($r = .55$ and $r = .35$, respectively; $\text{sig.} < 0.001$).

Table 6: Internal efficacy scale

To what extent do you agree with the following statements?
 1 = "do not agree at all", 2 = "tend not to agree", 3 = "neutral", 4 = "tend to agree", 5 = "fully agree"

a. I am confident to take on a leading role in a group dealing with politics.

To what extent do you agree with the following statements?
 1 = "fully agree", 2 = "tend to agree", 3 = "neutral", 4 = "tend not to agree", 5 = "do not agree at all"

b. Politics is so complicated that someone like me does not always understand what's going on.

Table 7: External efficacy scale

To what extent do you agree with the following statements?
 1 = "do not agree at all", 2 = "tend not to agree", 3 = "neutral", 4 = "tend to agree", 5 = "fully agree"

a. Politicians generally try to represent the public's interests.

To what extent do you agree with the following statements?
 1 = "fully agree", 2 = "tend to agree", 3 = "neutral", 4 = "tend not to agree", 5 = "do not agree at all"

b. Political parties are solely interested in winning votes, not in the public's opinion.

Furthermore, respondents indicated what they considered to be Germany's most pressing political problem (open question) and which party was best-qualified to solve it. As an additional test of convergent validity, the answers were compared to the respondents' reports about their voting choices in the 2009 federal election. The two measures were significantly correlated (Cramer's $V = .70$; $\text{sig.} < 0.001$). The questionnaire also assessed the strength of influence of different sources on the respondent's opinion regarding the political problem cited in the previous question (see Table 8). By making reference to a specific problem, I sought to make it easier for the respondents to rank the sources of influence.

Table 8: Scales measuring the parties' problem-solving competence and the influence of different sources

In your view, what is currently the most significant political problem in Germany? (open question)

And, which political party is, in your view, most qualified to solve this problem?

1 = "CDU", 2 = "CSU", 3 = "SPD", 4 = "FDP", 5 = "Bündnis 90/Die Grünen", 6 = "Die Linke",

7 = "another party", 8 = "all equally", 9 = "none"

To what extent has each of the below factors influenced your opinion on the above topic?

1 = "not at all", 2 = "fairly weakly", 3 = "moderately", 4 = "fairly strongly", 5 = "very strongly"

a. Face-to-face discussions with friends, family or colleagues

b. Independent mass media content, e.g. newspaper articles, TV, magazines

c. Online communication with friends, family or colleagues, e.g. on social networks, via email

Additionally, the survey included questions regarding the evaluation of the two main candidates, Angela Merkel and Frank-Walter Steinmeier, and about the media use and online activity of the respondents. Besides overall leisure time use of different mass media, people were asked to indicate their main source of campaign information as well as the frequency of use of various online sources of political information.

5.2 Results and discussion

As the description of the VZ sample illustrates, the data set gathered in the survey can be utilized for two different purposes. On the one hand, it enables us to gain a better understanding of the attributes of people who are politically active in online social networks. On the other hand, the empirical evidence allows us to test the hypotheses regarding the second and third-level differences between communication online and offline.

To attain the first of these two ends, the VZ respondents will be compared with a representative sample. Among the representative group, I will differentiate between Internet users and non-users and will separate out those individuals who use the Internet to gather political information. A comparison between these so-called political Internet users and the VZ respondents shows a meaningful degree

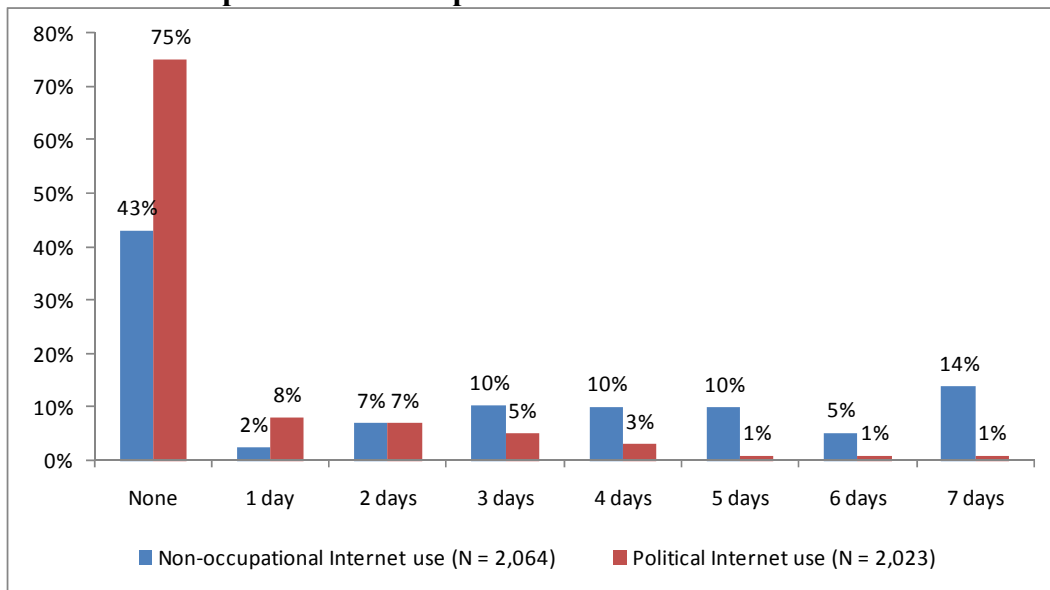
of similarity in terms of political attributes, despite large age and education differences. In conjunction with data from another representative sample, these findings suggest that those who use the Internet to get political information are characterized by high personality strength.

5.2.1 Comparison to representative samples

It has already been pointed out that the current sample is neither representative of the German population overall nor of German Internet users. It is, however, the most recent extensive data set about politically interested persons active on online social networks. Hence, one contribution of this study to the academic debate about political activity on the Internet is the descriptive comparison with the results of representative surveys. In the following, I will contrast the VZ sample with post-election data from the German Longitudinal Election Study (GLES).

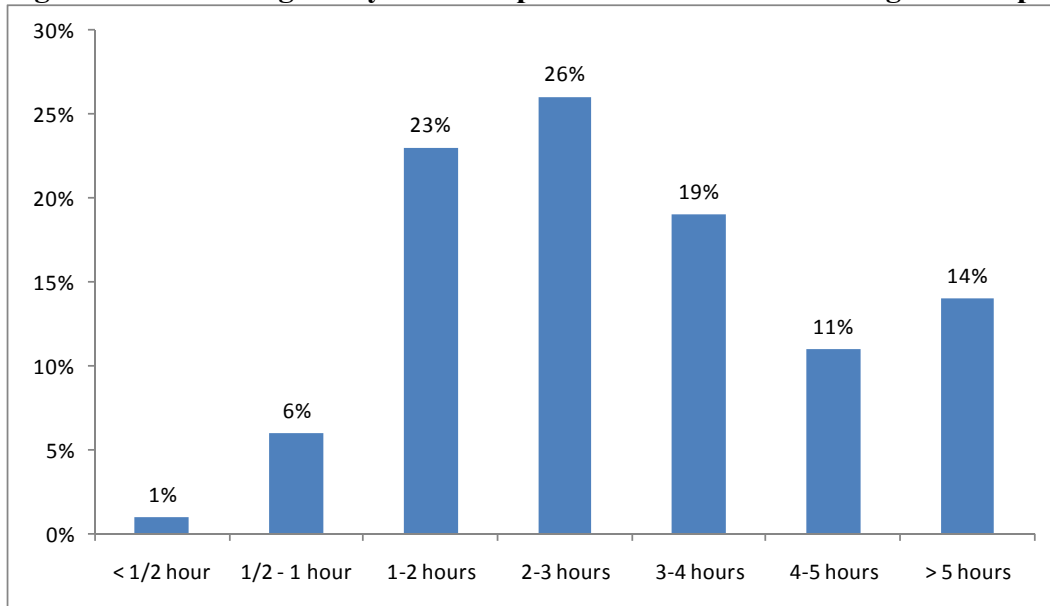
The post-election GLES survey was conducted in face-to-face interviews between September 28 and November 23, 2009. Using random sampling, 2,117 individuals were selected to participate in the survey. The general population out of which the respondents were chosen includes all those who are at least 16 years old, who are eligible to vote, and who live in private households in Germany. The GLES sample was weighted using iterative proportional fitting to reflect the distribution of age, gender, and education among the general population. As the VZ sample includes only respondents above the age of 17, 16 and 17 year-olds were excluded from the GLES sample for the purpose of comparing the GLES and the VZ data, resulting in a reduction of the GLES sample to 2,083 individuals.

Figure 6: Non-occupational Internet use and political Internet use among representative sample



In order to get a sense of the characteristics of German Internet users, I will also analyse a sub-group of GLES respondents who report to have used the Internet in their leisure time during the previous week (“Internet users”). As Figure 6 shows, 57 percent of GLES respondents are Internet users based on this definition. 43 percent used the Internet between 1 and 6 days during the previous week, while 14 percent went online on a daily basis. As the GLES question regarding Internet use makes reference only to the previous week, the classification into Internet users most probably understates the proportion of Internet users among the German population. A TNS Infratest survey conducted between February and May 2010 among the German population over 13, for example, illustrates that 72 percent of all Germans use the Internet (Initiative D21, 2010).

Figure 7: Average daily non-occupational Internet use among VZ sample



Note: N = 1,505

While the measure of leisure time Internet use employed in the VZ survey is not entirely comparable to the above evidence, it gives an indication of the high relative Internet usage among VZ respondents. VZ respondents were asked how much leisure time they spend on average per day using the Internet. Only 7 percent use the Internet less than an hour per day. As much as 14 percent use the Internet more than 5 hours per day in their spare time (see Figure 7).

Another sub-group of GLES respondents that is analysed in the below is the group of “political Internet users”. Political Internet users are individuals who report having used the Internet during the previous week to obtain information about the campaign or about a political party. 25 percent among the GLES sample are categorized as political Internet users. Most of them used the Internet between 1 and 6 days during the week, with only 1 percent of respondents reporting to use the Internet daily to get political information (see Figure 6).

Table 9: Socio-demographic and political characteristics: Representative sample in comparison to VZ sample

	GLES			VZ survey
	All respondents	Internet users	Political Internet users	All respondents
Male	48%	54%	60%	56%
Age	49	41	41	25
High school degree ¹	25%	38%	50%	74%
Political interest	0.44	0.48	0.56	0.68
Democracy satisfaction	0.55	0.55	0.59	0.57
Internal efficacy ²	0.52	0.58	0.66	0.58
External efficacy ³	0.35	0.39	0.44	0.44
Identify with a political party	66%	68%	80%	84%
Strength of party identification	0.65	0.67	0.70	0.71
Left-right scale ⁴	-0.09	-0.11	-0.13	-0.14
Extreme political attitude ⁵	0.30	0.30	0.33	0.35
Party membership	5.1%	5.9%	8.9%	12.3%

Note: Arithmetic means or percentages; scales rebased to 0 - 1; VZ survey minimum N = 1,449, except for strength of party identification (PID) N = 1,132. GLES minimum N = 1,830, except strength of PID N = 1,257. GLES "Internet users" minimum N = 1,076, except strength of PID N = 743. GLES "political Internet users" minimum N = 485, except strength of PID N = 388.

¹ Abitur

² VZ survey: "Politics is so complicated that someone like me does not always understand what's going on." GLES: "I often find it hard to understand political topics." Five categories each: 0 = "fully agree", 1 = "do not agree at all".

³ "Political parties are solely interested in winning votes, not in the public's opinion."; five categories: 0 = "fully agree", 0.5 = "do not agree at all"

⁴ Eleven categories: -1 = at the left, 0 = at the center, 1 = at the right of the political spectrum

⁵ Six categories: 0 = at the center, 1 = at the left or right of the political spectrum

Having defined the terms Internet users and political Internet users, we can turn to Table 9. It juxtaposes various socio-demographic and political characteristics of the VZ respondents with the attributes of the three groups of GLES respondents. While the VZ sample is similar to GLES Internet users in terms of gender distribution, average age and education level differ substantially. The mean age of VZ respondents is about half that of the representative sample and a full 16 years below the average among GLES Internet users. The percentage of individuals holding a high school degree among VZ respondents is three times that of the representative sample. Neither of these findings is particularly surprising, given

that the VZ networks originally were a social networking website exclusive to university students.

In terms of political variables, the average levels of political interest and party membership among the VZ sample are well above those of both the GLES sample overall and the GLES Internet users. A total of 12 percent of VZ respondents are a member of a political party, compared to 5 percent among the representative sample and 6 percent of GLES Internet users. These figures are especially noteworthy, because party membership typically is related to age. Despite the significantly lower average age of VZ respondents, they are substantially more likely to be a party member.

Given the high level of political interest, one would expect VZ respondents to report higher levels of internal efficacy. Even though the internal efficacy average among the VZ sample is above that of the representative group, it is in line with the internal efficacy indicated by GLES Internet users. This unexpected finding may be explained by differences in the phrasing of the survey questions. While the GLES survey asked if political issues are “often difficult to comprehend” for someone, the VZ questionnaire tested whether the respondents “not always understand” politics. Obviously, there is a difference between believing that it is sometimes hard to follow politics and stating that this is often the case.

Although VZ respondents and the representative group are similarly happy with the functioning of democracy in Germany, the external efficacy variable shows that VZ respondents have more faith in politicians to pursue what is in the public’s interest. In line with the data on party membership, VZ respondents are characterized by a stronger average identification with a political party. Finally,

VZ respondents are located slightly more towards the left of the political spectrum and have somewhat more extreme political views.

The VZ data, despite its specific nature, may be taken to support the continuing social divide, an important element of the often-cited digital divide among the population. According to research on the social divide, different age groups, men and women, and people with different educational backgrounds do not use the Internet to an equal extent (Norris, 2001). As Table 9 shows, Internet users are younger, more likely to be male and better-educated than the general public. Not all these discrepancies may be equally persistent, though. As disparities between the sexes in terms of Internet use have already disappeared in the U.S., one would expect the gender gap in Germany to close over time. But whether age and education-related differences will vanish with time is less clear (Mossberger, Tolbert, & McNeal, 2008). Proponents of the stratification model of the diffusion of Internet use believe that some social strata may never attain a 90 percent Internet access rate (Van Dijk, 2006).

In order to take a closer look at the significance of the differences between the political Internet users among the GLES sample and the VZ respondents, Table 10 juxtaposes the 95 percent confidence intervals around a range of characteristics for the two groups. Interestingly, the proportion of males is higher among the political Internet users than in the VZ sample. It is worth noting, however, that the confidence intervals around the means of the two groups overlap. The same is true for the confidence intervals around party membership and party identification averages. Despite this lack of statistical significance, the fact that VZ respondents are more likely to be a member of a political party is impressive when considering the traditional association between age and party membership.

Table 10: Socio-demographic and political characteristics: Political Internet users among representative sample in comparison to VZ sample

	GLES - Pol. Internet users			VZ survey		
	95% confidence interval			95% confidence interval		
Male	60%	56%	65%	56%	53%	59%
Age	41	40	43	25	24	25
High school degree ¹	50%	45%	54%	74%	72%	77%
Political interest	0.56	0.54	0.58	0.68	0.66	0.69
Democracy satisfaction	0.59	0.57	0.61	0.57	0.56	0.58
Internal efficacy ²	0.66	0.63	0.68	0.58	0.56	0.59
External efficacy ³	0.44	0.41	0.46	0.44	0.43	0.46
Identify with a political party	80%	77%	84%	84%	82%	86%
Strength of party identification	0.70	0.68	0.72	0.71	0.69	0.72
Left-right scale ⁴	-0.13	-0.17	-0.10	-0.14	-0.16	-0.12
Extreme political attitude ⁵	0.33	0.31	0.35	0.35	0.33	0.36
Party membership	8.9%	6.5%	11.4%	12.3%	10.6%	13.9%

Note: Arithmetic means or percentages; scales rebased to 0 - 1; VZ survey minimum N = 1,449, except for strength of party identification N = 1,132. GLES "political internet users" minimum N = 485, except strength of strength of party identification N = 388.

¹ Abitur

² VZ survey: "Politics is so complicated that someone like me does not always understand what's going on." GLES: "I often find it hard to understand political topics." Five categories each: 0 = "fully agree", 1 = "do not agree at all".

³ "Political parties are solely interested in winning votes, not in the public's opinion."; five categories: 0 = "fully agree", 0.5 = "do not agree at all"

⁴ Eleven categories: -1 = at the left, 0 = at the center, 1 = at the right of the political spectrum

⁵ Six categories: 0 = at the center, 1 = at the left or right of the political spectrum

The two groups are similar in terms of the related measures of democracy satisfaction and external efficacy. As highlighted above, the counter-intuitive inverse relationship between the discrepancies in political interest and internal efficacy can probably be explained by difference in the questionnaire. Finally, VZ respondents and political Internet users are similar in terms of the two variables measured on the left/right scale. Both groups tend towards the left of the political spectrum and their political orientations are almost equally extreme. Overall, despite the age and educational disparities in the target population there is little

difference between the GLES political Internet users and the VZ respondents in terms of political characteristics other than political interest.

Table 11: Confidence intervals around socio-demographic and political characteristics: Representative sample in comparison to VZ sample

	GLES			VZ survey		
	95% confidence interval			95% confidence interval		
Male	48%	46%	50%	56%	53%	59%
Age	49	48	50	25	24	25
High school degree ¹	25%	23%	27%	74%	72%	77%
Political interest	0.44	0.43	0.45	0.68	0.66	0.69
Democracy satisfaction	0.55	0.54	0.56	0.57	0.56	0.58
Internal efficacy ²	0.52	0.50	0.53	0.58	0.56	0.59
External efficacy ³	0.35	0.34	0.36	0.44	0.43	0.46
Identify with a political party	66%	64%	68%	84%	82%	86%
Strength of party identification	0.65	0.64	0.67	0.71	0.69	0.72
Left-right scale ⁴	-0.09	-0.11	-0.08	-0.14	-0.16	-0.12
Extreme political attitude ⁵	0.30	0.28	0.31	0.35	0.33	0.36
Party membership	5.1%	4.1%	6.0%	12.3%	10.6%	13.9%

Note: Arithmetic means or percentages; scales rebased to 0 - 1; VZ survey minimum N = 1,449, except for strength of party identification N = 1,132. GLES minimum N = 1,830, except strength of party identification N = 1,257

¹ Abitur

² VZ survey: "Politics is so complicated that someone like me does not always understand what's going on." GLES: "I often find it hard to understand political topics." Five categories each: 0 = "fully agree", 1 = "do not agree at all".

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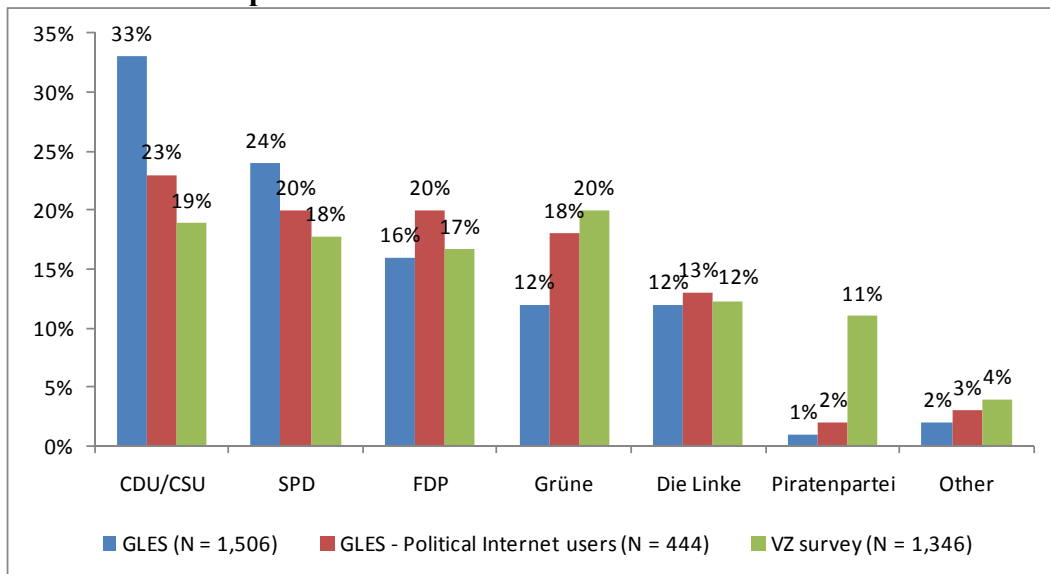
⁵ Six categories: 0 = at the center, 1 = at the left or right of the political spectrum

When these results are seen in conjunction with Table 11, an interesting picture emerges. The table shows that there are statistically significant differences between VZ respondents and the general population for all variables. At the same time, the VZ sample and GLES political Internet users are similar in terms of six out of the seven examined political variables (excluding internal efficacy for lack of comparability). Notwithstanding significant age and educational discrepancies,

VZ respondents closely mirror many of the political characteristics of political Internet users within a representative sample.

The resemblance of GLES political Internet users and the VZ sample is also backed by the comparison of second votes cast (see Figure 8). The distribution of votes among the representative sample is almost identical to the actual election outcome. The voting profile of political Internet users and VZ respondents is quite different from the official result, though. The second votes of both groups are distributed more equally across parties with significantly less support for the major parties, CDU/CSU and SPD. Whereas the vote percentage for Die Linke is similar to the representative sample, it is slightly higher for the FDP and significantly higher for the green party. The only noteworthy difference in voting between the GLES political Internet users and VZ respondents is the very strong support for the recently established Internet-focused Piratenpartei among the VZ sample. The data suggests that the Piratenpartei has a disproportionately large following on the VZ networks, a finding that is supported by the fact that just before the 2009 general election almost three times as many people were registered as fans of the Piratenpartei on the VZ networks than of any other political party.

Figure 8: Second vote: Representative sample in comparison to VZ sample



Note: Second vote as % of those who voted and who disclosed their vote in the respective survey. VZ survey: % of nonvoters not available.

In spite of the similarity between GLES political Internet users and VZ respondents in terms of political characteristics, given the age gap between the two groups one would expect to find discrepancies in political media use. A study by the Allensbach Institute conducted in 2010 illustrates that people under 30 are 45 percent more likely than the general public to use the Internet to gather information about political topics (De Sombre, 2010). What is more, the use of the Internet for private communication is significantly associated with age. 67 percent of 18 to 29-year-olds communicate with others online at least several times per week, compared to 36 percent of 45 to 59-year-olds.

Figure 9: Main source of campaign information: Representative sample in comparison to VZ sample

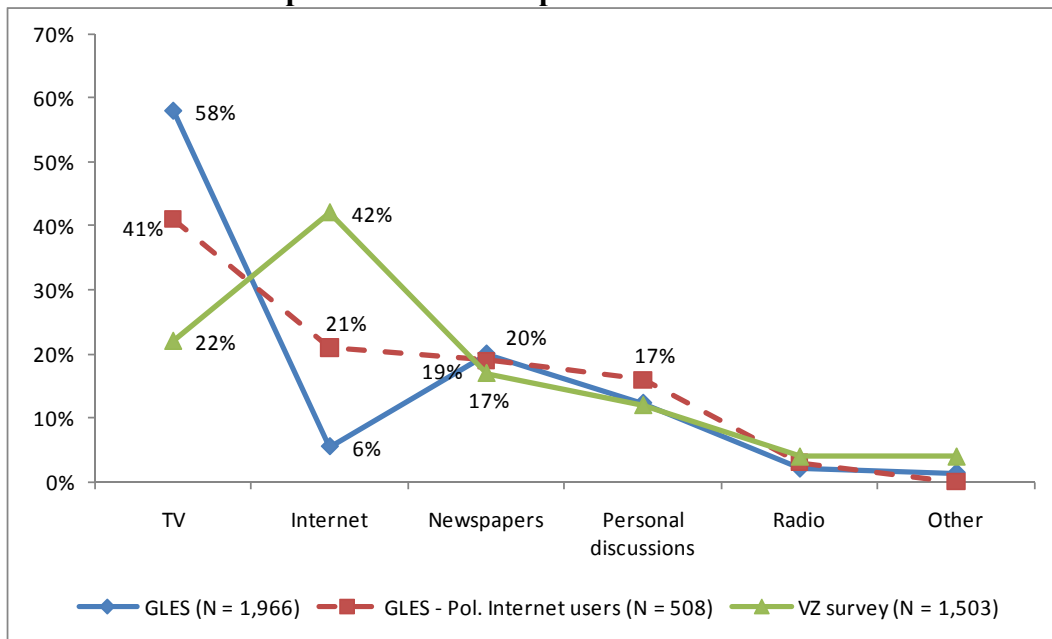
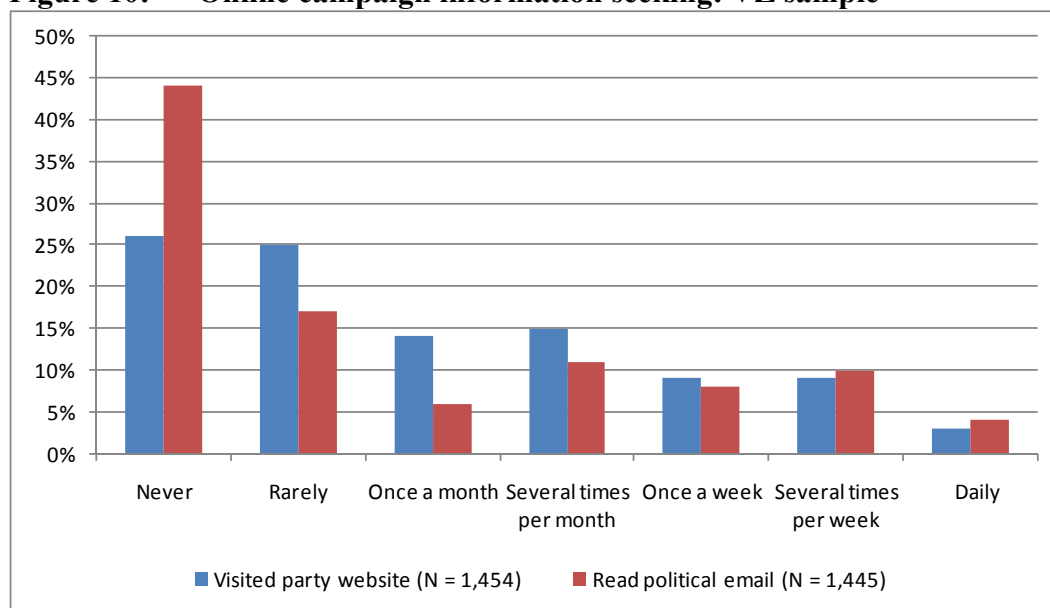


Figure 9 confirms the expected difference in patterns of political media usage. The proportion of people who consider newspapers, the radio, and personal discussions to be their main source of campaign information is fairly similar. But Internet and television use differs substantially among the three groups. Political Internet users are almost twice as likely as VZ respondents to name television as their most important source. At the same time, twice as many VZ respondents rely first and foremost on the Internet to obtain campaign information. As expected, the differences are still more pronounced when comparing the representative sample with the VZ respondents. Television is the main source for the vast majority among the representative sample. But only 6 percent among the general public considers the Internet to be the key resource for campaign information.

Figure 10: Online campaign information seeking: VZ sample

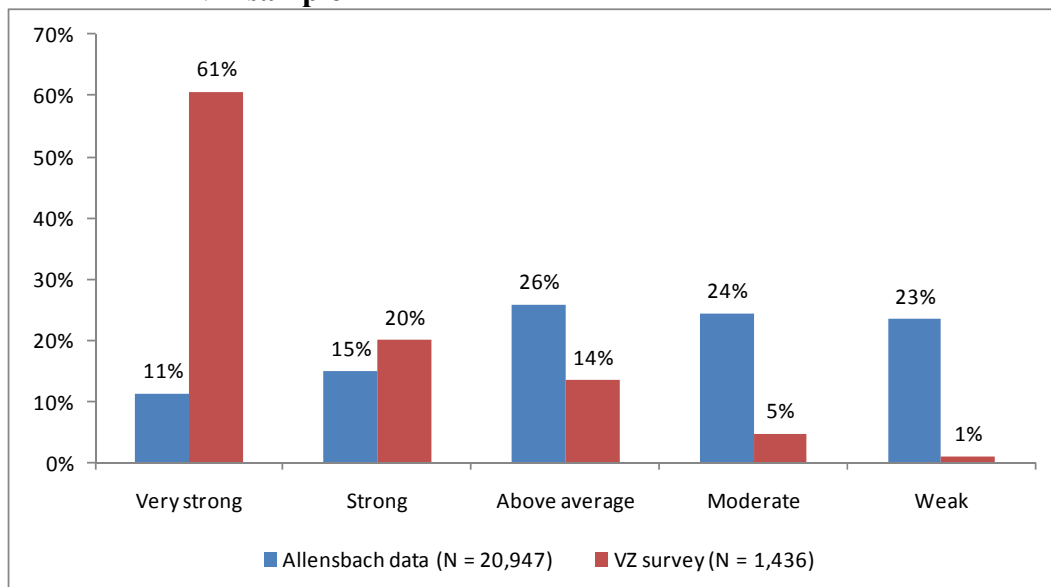


Note: Blue bars show visits to party websites only and do not reflect individuals who visited a candidate but not a party website.

More specific evidence on political information consumption online reveals a picture similar to the statistics on main sources (Figure 10). Only 12 percent among the general public visited a candidate or party website during the 2009 campaign. This compares to 51 percent of political Internet users and as many as 76 percent of VZ respondents. As little as 4 percent among the representative sample received an email or text message from a political party during the campaign. Among political Internet users the figure was 2 ½ times larger at 10 percent. At the same time, the VZ survey shows that 56 percent of respondents read a political email during the campaign. One has to bear in mind, though, that this second statistic is not entirely comparable. VZ respondents were asked whether they had read a political email, whereas the GLES survey sought to establish if a person had received an email or text message from a political party. Unfortunately, the GLES data does not include any information about the personality strength of the respondents. Hence, I use a study carried out by the

Allensbach Institute in 2008 to compare the personality strength of VZ respondents to a representative sample of the German population. The “Allensbacher Markt- und Werbeträger-Analyse” study is conducted annually to assess the characteristics of consumers of different kinds of German media. In 2008, more than twenty-thousand individuals were selected based on quota sampling and were interviewed in person. Using iterative factorial fitting the interview results were weighted to mirror the German general public in terms of gender, age, and household size. A disproportionate weight was ascribed to the population between 14 and 60 years of age, due to their particular relevance for the analysis of media use.

Figure 11: Personality strength: Representative sample in comparison to VZ sample



The difference in personality strength between the representative sample and the VZ respondents is rather striking (see Figure 11). VZ respondents are almost six times more likely to have a very strong personality than the general public. Almost the entire VZ sample is characterized by above average personality

strength. The Allensbach Institute classifies those with strong and very strong personality as opinion leaders. Based on this definition, more than 4 of 5 VZ respondents but only 1 of 4 average Germans are classified as opinion leaders. For the purpose of comparison to a representative sample we operationalize opinion leadership in terms of personality strength, because there is no recent representative German sample measuring opinion leadership as defined elsewhere in this study (see Table 2).

It has already been established that the VZ data set is neither representative of the German population overall nor of German Internet users or political Internet users. As we have seen, however, the VZ respondents are similar to political Internet users among the representative sample in terms of most political characteristics. Hence, there is reason to believe that individuals who use the Internet to obtain political information are substantially more likely to act as opinion leaders in interpersonal discussions. It is worth emphasizing, though, that at this stage the link between opinion leadership and Internet usage for obtaining political information is suggestive rather than conclusive.

5.2.2 Computer-mediated interpersonal communication

Before looking at the relationship between informational Internet use and opinion leadership in more detail, I will focus on the comparison of interpersonal political discussion online and face-to-face. More specifically, I will analyse the VZ data in order to answer three questions raised in the theoretical discussion. Does the Internet equalize patterns of discussion participation by affecting the relative level of discussion among opinion leaders and non-leaders? Is there a significant group

of people who are engaged in political discussions online but not face-to-face? If so, how does this group compare to those who discuss politics face-to-face?

Applying Social Presence Theory to online communication suggests that the Internet equalizes discussion participation. Communication roles are more flexible when people discuss online, because shy and introverted individuals express themselves with an increased forthrightness (Vallee & Spangler, 1979). This equalisation hypothesis, however, contradicts the view of Social Network theorists that online behaviour is an extension of existing offline communication relationships. Those who feel compelled to converse with others about politics face-to-face are the same kind of people who discuss political issues online. The medium does not change the propensity to communicate of those less active in face-to-face situations.

As a first test of the merits of the equalisation assumption, I will compare the degree to which opinion leaders and non-leaders discuss politics. The VZ survey data does not allow us to test how frequently opinion leaders and non-leaders speak up in individual discussion situations. It does, however, illustrate how much opinion leaders and non-leaders discuss politics overall. If the equalisation assumption is applicable to online discussions about politics, one would expect online non-leaders to participate more in online discussions than offline non-leaders participate in face-to-face discussions (hypothesis 1.a).

Based on Table 12, we can reject this hypothesis. In fact, discussion participation of opinion leaders and non-leaders is significantly more unequal online than offline. The online discussion activity of online opinion leaders is similar to the face-to-face discussion level of offline opinion leaders. But online non-leaders are substantially less active in discussing politics online than offline non-leaders are

in discussing face-to-face. The mean difference between discussion levels of online opinion leaders and non-leaders is almost twice as high as the mean difference between the discussion activity of offline leaders and non-leaders. Controlling for Internet usage does not alter the findings in a meaningful way. Even if we only include those 25 percent of respondents who use the Internet for more than four hours per day, discussion activity of opinion leaders and non-leaders is much more similar face-to-face than on the Internet.

Table 12: Political discussion activity of opinion leaders and non-leaders offline and online

	All respondents		Heavy Internet users ¹	
	Offline	Online	Offline	Online
Opinion leaders	0.80	0.78	0.80	0.79
Non-leaders	0.56	0.32	0.53	0.39
<i>N</i>	1,464	1,464	364	364
<i>Mean difference</i>	<i>0.24</i>	<i>0.46</i>	<i>0.27</i>	<i>0.40</i>
<i>95% confidence interval</i>	<i>0.21 0.26</i>	<i>0.43 0.50</i>	<i>0.21 0.32</i>	<i>0.34 0.47</i>

¹ More than 4 hours of leisure time Internet usage per day (top 25% of respondents)

For further evidence related to the supposed equalisation phenomenon, it is worth examining the data on hypothesis 1.b. If Social Presence Theory can be applied to political discussion about politics, we would expect to find a sizeable group of people who do not discuss politics face-to-face but only online. Sun et al. (2006) expect these individuals to be more assertive and confident on the Internet, because they are less concerned about others' judgements than they would be face-to-face. Along the same lines, Stromer-Galley (2002) suggests that there is a group of people who engage in political discussions only online for fear of being challenged or seeming uninformed in face-to-face situations. Like Sun et al. (2006), Stromer-Galley (2002) does not supply sufficient proof for her conclusion, though.

Table 13: Domains of political discussion

	N	
Discussants offline and online	358	24.3%
Offline-only discussants	559	37.9%
Online-only discussants	42	2.8%
Discussants	959	65.1%
Non-discussants	515	34.9%
Total	1,474	

Table 13 illustrates that the group of people who discuss politics only on the Internet is very small, constituting just 2.8% of respondents. It is worth reminding ourselves that the VZ sample is comprised of individuals who are highly Internet-savvy and particularly prone to communicating online. If only 2.8% percent of VZ respondents talk about politics solely online, the conclusion that very few among the general public fit the online-only profile is especially convincing.

Table 14: Characteristics of offline discussants and online discussants

	Offline discussants			Online discussants		
	95% confidence interval			95% confidence interval		
Male	60%	57%	63%	66%	61%	71%
High school degree	81%	78%	83%	76%	72%	81%
Political interest	0.77	0.76	0.78	0.81	0.79	0.83
Internal efficacy	0.65	0.64	0.66	0.68	0.66	0.70
Personality strength	0.76	0.74	0.77	0.78	0.76	0.80

Note: Arithmetic means or percentages; offline discussants minimum N = 880; online discussants minimum N = 379

Table 14 could be seen as the final blow to the notion that discussion participation is more equal on the Internet. Those who discuss politics online are significantly more politically interested than those who converse about political matters face-to-face. They also score higher on the personality strength scale and in terms of internal efficacy. It seems that the bar for engaging in political discussions is not lowered but raised on the Internet.

This conclusion is particularly powerful, because it is congruent with the findings regarding the first two hypotheses. The analysis of hypothesis 1.a suggests that the Internet amplifies the patterns of communication participation found in face-to-face situations. While opinion leaders discuss politics to a similar degree online and offline, non-leaders are significantly more passive on the Internet than they are face-to-face. Those less likely to talk about politics offline, at the same time, show disproportionately less willingness to engage in political discussions online. The examination of hypothesis 1.b reveals that the online environment motivates only a small number of previously passive individuals to engage in interaction.

Before we conclude that the Internet simply extends offline behaviour and has no impact on the nature of discussion relationships, however, let us take a closer look at the characteristics of those who discuss politics solely online. One may object that this group of just 42 individuals, or 2.8 percent of the sample, is too small to be subjected to meaningful statistical analysis. But, in my view, it is worth the while to include online-only discussants in the comparison.

The comparison of Table 14 and Table 15 reveals an interesting picture. It is true that online discussants, taken as a single group, are characterized by higher values of the examined variables. But we can now see that the difference is driven by the fact that most people who discuss politics online also do so face-to-face. It is those offline discussants who are most interested in politics and have the highest values of efficacy and the strongest personalities who converse about politics on the Internet. This phenomenon masks another crucial finding: Those who discuss politics solely online score lower on all these variables than those who talk about political matters face-to-face. Or, to put it differently, the kinds of people that are associated with limited discussion participation offline are more likely to talk

about politics solely on the Internet. And, despite the small number of online-only discussants, the differences in terms of political interest and internal efficacy to the offline-only group are of statistical significance.

Table 15: Characteristics of discussants and non-discussants

	Non-discussants			Online-only discussants		
	95% confidence interval			95% confidence interval		
Male	49%	45%	53%	54%	39%	69%
High school degree	66%	62%	70%	56%	41%	71%
Political interest	0.52	0.50	0.54	0.63	0.57	0.69
Internal efficacy	0.44	0.42	0.46	0.52	0.44	0.59
Personality strength	0.67	0.65	0.69	0.70	0.63	0.78
	Offline-only discussants			Discussants offline & online		
	95% confidence interval			95% confidence interval		
Male	56%	52%	60%	67%	62%	72%
High school degree	82%	78%	85%	79%	74%	83%
Political interest	0.73	0.72	0.75	0.83	0.81	0.85
Internal efficacy	0.62	0.60	0.64	0.70	0.68	0.72
Personality strength	0.74	0.73	0.76	0.79	0.76	0.81

Note: Arithmetic means or percentages; non-discussants minimum N = 493; online-only discussants minimum N = 40; offline-only discussants minimum N = 532; discussants offline & online minimum N = 338

Overall, neither Social Presence Theory nor Social Network Theory alone can explain interpersonal communication participation on the Internet. In aggregate, online communication extends or even amplifies the patterns of discussion found in face-to-face situations. 90 percent of those who discuss politics online also do so offline. What is more, it is those offline discussants who are more politically interested and efficacious and have stronger personalities who also converse with others on the Internet. At the same time, however, the data reveals an opposing effect, which is less powerful but no less interesting. The small group of people who discuss politics solely online comprises a disproportionate number of women and of less-educated, less politically interested and less efficacious individuals, when compared to offline-only discussants. The Internet is indeed able to

motivate some of those who refrain from talking about political matters face-to-face – potentially due to a lack of efficacy and personality strength – to participate in political discussions.

5.2.3 Computer-mediated opinion leadership

Having examined the applicability of Social Presence Theory and Social Network Theory to online political discussions, I now turn to the analysis of online opinion leadership. First, a few hypotheses about online opinion leadership derived from the two above theories will be tested. In a second step, the characteristics and sources of information of opinion leaders will be assessed.

5.2.3.1 Domains of influence

In analogy to the above considerations related to online discussion, Social Presence Theory implies that there is a group of opinion leaders whose influence is confined solely to the online realm. Dressler and Telle (2009) suggest that people who do not exert influence face-to-face may be more prone to influence others on the Internet due to the anonymity of the online space. While Dressler and Telle (2009) are careful to point out that further research is required to confirm their proposition, Wiesner (2009) puts forward a bolder assertion. Making reference to a study conducted by Sun et al. (2006), she concludes that offline non-leaders are as likely as offline opinion leaders to influence others on the Internet.

Based on the evidence in Table 16, one can confidently reject Wiesner's (2009) claim. While a third of offline opinion leaders can also be classified as opinion leaders on the Internet, a mere 4 percent of offline non-leaders can be described as online opinion leaders. Hence, offline opinion leaders are substantially more

likely than offline non-leaders to be online opinion leaders. What is more, the group of online-only opinion leaders is insignificant. Among this sample of Internet-savvy individuals, the group of people who exercise influence solely online makes up just 2 percent of the total. Thus, we can discard hypothesis 2. Social Network Theory seems correct in that computer-mediated interaction supports existing communication relationships rather than changes their nature.

Table 16: Domains of political opinion leadership

	N	
Opinion leaders offline and online	238	16.2%
Offline-only opinion leaders	533	36.3%
Online-only opinion leaders	29	2.0%
Opinion leaders	800	54.5%
Non-leaders	669	45.5%
Total	1,469	

5.2.3.2 Characteristics

Another test of the applicability of Social Presence Theory is hypothesis 3.b, which suggests that online opinion leaders score lower on a number of variables than offline opinion leaders. At the same time, studies of marketing opinion leadership and of concepts related to political opinion leadership indicate a certain similarity between online and offline opinion leaders. The discussion of hypothesis 2 has shown that offline opinion leaders are significantly more likely than offline non-leaders to act as opinion leaders on the Internet. In fact, the correlation between online and offline opinion leadership is $r = .35$ ($\text{sig} < 0.001$). Hence, one would expect online opinion leaders to differ from the general public in a similar, albeit less prominent fashion as offline opinion leaders (hypothesis 3.a).

For the purpose of the analysis, I will differentiate between three separate groups: non-leaders, offline-only opinion leaders, online opinion leaders. The later includes both those who exercise influence solely online as well as those who influence others both face-to-face and on the Internet. And, one needs to bear in mind that those who talk offline as well as online make up close to 90 percent of the group.

Table 17: General characteristics of opinion leaders and non-leaders

	Non-leaders	Opinion leaders		Overall	<i>Cramer's V</i>	<i>Sig.</i>
		Offline-only	Online			
Male	47%	60%	73%	56%	0.20	0.000
Level of education ¹	0.43	0.48	0.46	0.46	0.06	0.047
Below high school degree	29%	21%	24%	26%		
High school degree	57%	61%	60%	58%		
University degree	15%	18%	16%	16%		
Social gregariousness ²	0.47	0.57	0.54	0.52	0.09	0.001
	Non-leaders	Opinion leaders		Overall	<i>Eta</i>	<i>Sig.</i>
		Offline-only	Online			
Personality strength	0.65	0.77	0.82	0.73	0.30	0.000

Note: Arithmetic means or percentages; scales 0-1; Non-leader minimum N = 620, offline-only opinion leaders minimum N = 508, online opinion leaders minimum N = 247

¹ Three categories: 0 = "below high school degree", 0.5 = "high school degree" (Abitur), 1 = "university degree"

² Measured by the number of friends on the VZ network; four categories: 0 = "0-49 friends", 0.33 = "50-99 friends", 0.66 = "100-149 friends", 1 = "150+ friends"

³ Average daily non-occupational internet use; seven categories: 0 => 1/2 hour, 1 => 5 hours

The comparison of the general characteristics in Table 17 provides support for the similarity between offline and online opinion leaders when compared to the non-leaders. Both offline-only opinion leaders and online opinion leaders are characterized by an above-average level of social gregariousness. These findings are in line with Smith et al.'s (2007) work which shows marketing opinion leaders to be more socially gregarious than the average. It is worth mentioning, however, that the present study measures social gregariousness by the number of friends in

the VZ networks. Hence, the term online social gregariousness may be more appropriate (see section 5.1.2).

The Blacksburg studies indicate that online opinion leaders have a higher average level of education (Carroll et al., 2005). And, the VZ survey data confirms that offline-only opinion leaders as well as online opinion leaders are better educated than non-leaders. The difference, however, is fairly small and the relationship between the variables is barely statistically significant. There are two potential explanations for the subtlety of the difference found. It could be that the socio-economic similarity between opinion leaders and non-leaders is a pre-requisite for the exercise of influence (Schenk & Döbler, 2002). Thus, opinion leaders are only somewhat but not substantially better educated. Another possible reason may be the low variance in terms of education among the sample. Users of the VZ networks have a very high average education level. Hence, the correlation between education and other variables may be lower among the VZ sample than among the general public (cf. Schoen, 2004).

Like online opinion leaders, Graf and Darr's (2004) "online political citizens" are better educated than the average. What is more, two thirds of them are male. An even stronger relationship is found among VZ respondents. As per Table 17, almost three quarters of online opinion leaders on the VZ networks are men. This compares to 60 percent males among offline-only opinion leaders. The data on personality strength paints a similar picture. Given that personality strength is an important antecedent of opinion leadership, it is far from surprising that both online opinion leaders and offline-only opinion leaders are characterized by particularly high levels of personality strength.

Whereas there is strong support for hypothesis 3.a, the results do not confirm the applicability of Social Presence Theory. Online opinion leaders are slightly less educated than offline-only opinion leaders. But the difference is almost negligible. Online opinion leaders are also less gregarious than offline-only leaders, yet the difference is anything but striking. More importantly, personality strength levels and the gender distribution among the three groups clearly contradict the equalisation hypothesis. Similar to the analysis of discussion participation, we find that those who are active online are characterized by stronger personalities. And, men make up a much higher proportion of online opinion leaders than of offline opinion leaders, a discrepancy that may be related to the digital divide discussed in section 5.2.1.

Table 18: Political characteristics of opinion leaders and non-leaders

	Non-leaders	Opinion leaders		Overall	<i>Eta</i>
		Offline-only	Online		
Political interest	0.55	0.77	0.83	0.68	0.51
Internal efficacy	0.46	0.65	0.72	0.58	0.45
Strength of party identification	0.65	0.72	0.80	0.71	0.29
Identify with a political party	77%	90%	88%	84%	0.17
Democracy satisfaction	0.54	0.63	0.53	0.57	0.17
External efficacy	0.42	0.50	0.49	0.46	0.16
Extreme political attitude ¹	0.31	0.34	0.44	0.35	0.16

Note: Arithmetic means or percentages; scales 0-1; for all etas: sig < 0.001; Non-leaders minimum N = 626, except for strength of party identification N = 444; offline-only opinion leaders minimum N = 523, except for strength of party identification N = 444; online opinion leaders minimum N = 260, except for strength of party identification N = 218

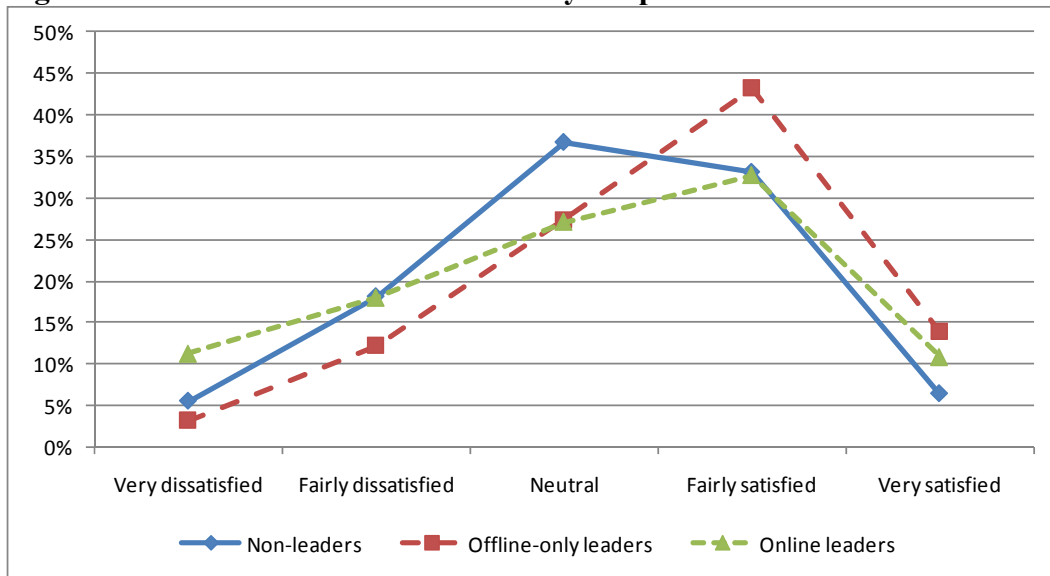
¹ Six categories: 0 = at the center, 1 = at the left or right of the political spectrum

A similar picture emerges with regards to political interest, internal efficacy, and strength of party identification. Both offline-only opinion leaders and online opinion leaders are significantly more interested in politics, have a stronger sense of internal efficacy, and identify more closely with a political party than non-leaders. What is more, online opinion leaders score higher on all these variables

than offline-only opinion leaders. Again, we find that the Internet not simply replicates but amplifies the differences present in face-to-face communication (cf. section 5.2.2).

The relationship is strongest for political interest ($\text{Eta} = 0.51$), supporting the importance of political interest as the motivational basis for offering advice to others on political matters (O’Cass, 2002). Opinion leaders are likely to believe in their ability to comprehend and influence the political process. Thus, the relationship between internal efficacy and the categories of opinion leadership is almost as strong as with political interest.

Figure 12: Satisfaction with democracy of opinion leaders and non-leaders



Note: Non-leaders N = 667; offline-only leaders N = 532; online leaders N = 266

The association between opinion leadership and variables measuring contentment with politicians and with the political system is more complex. Both offline-only opinion leaders and online opinion leaders trust politicians more than non-leaders to be responsive and to do what is in the interest of the citizens (external efficacy). But while offline-only opinion leaders are more satisfied with German democracy

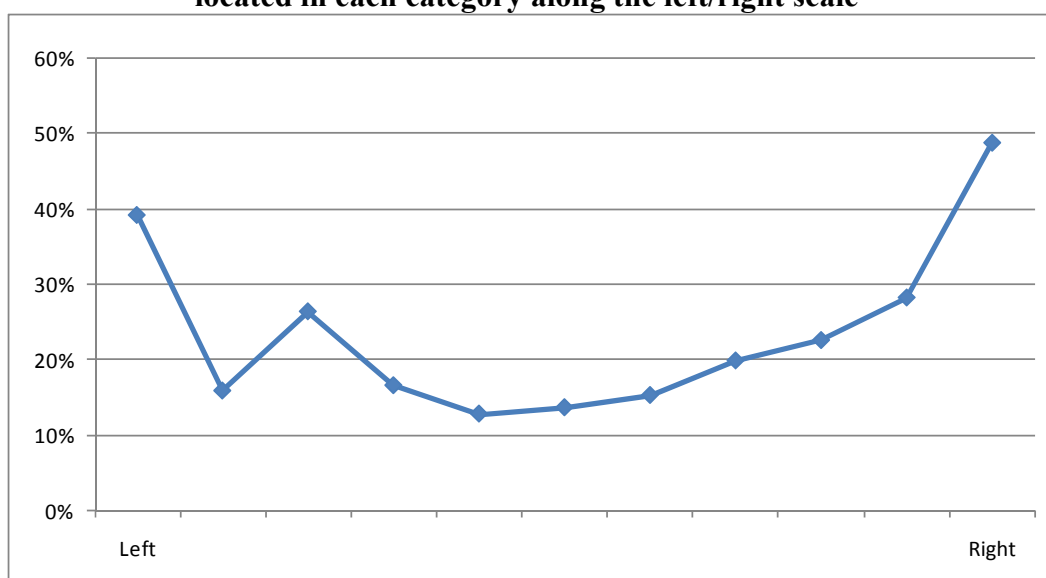
than non-leaders, online opinion leaders are no more content with democracy than non-leaders (see Figure 12). These findings are somewhat contradictory, as one would expect contentment with the political system to go hand in hand with trust in the politicians running the political system.

Interestingly, a similarly ambiguous relationship is found in studies investigating external efficacy and political trust of offline opinion leaders. Nisbet's (2005) cross-national analysis shows that external efficacy and influentialness tended to be associated positively, but that trust in the political system was typically negatively associated with opinion leadership. In only a few countries the established correlations were statistically significant, though. Bockman and Gayk's (1977) empirical evidence also reveals a slightly negative relationship between opinion leadership and attitudes towards the outcomes of the political system. O'Cass and Pecotich (2005), however, find voting satisfaction to be positively related to opinion leadership. Overall, it seems that there is no clear-cut relationship between different categories of opinion leadership and variables measuring contentment with politicians and the political system.

Notwithstanding the ambiguity of the above results, the low level of democracy satisfaction of online opinion leaders compared to offline-only opinion leaders may account for the disparity in terms of the extremity of their political positions. Online opinion leaders are positioned more towards the extremes of the political spectrum than offline-only opinion leaders and non-leaders (see Table 18). As in Hellevik and Bjørklund's (1991) study, the distribution of the proportion of online opinion leaders in each category along the left/right scale is U-shaped. 18 percent of VZ respondents are classified as online opinion leaders. But online opinion leaders make up more than a third of those at the extreme left and close to half of

those at the extreme right (see Figure 13). These results are in line with the claim put forward by some scholars that high levels of internal efficacy combined with low levels of contentment with the political system create more extreme political views (Bockman & Gayk, 1977).

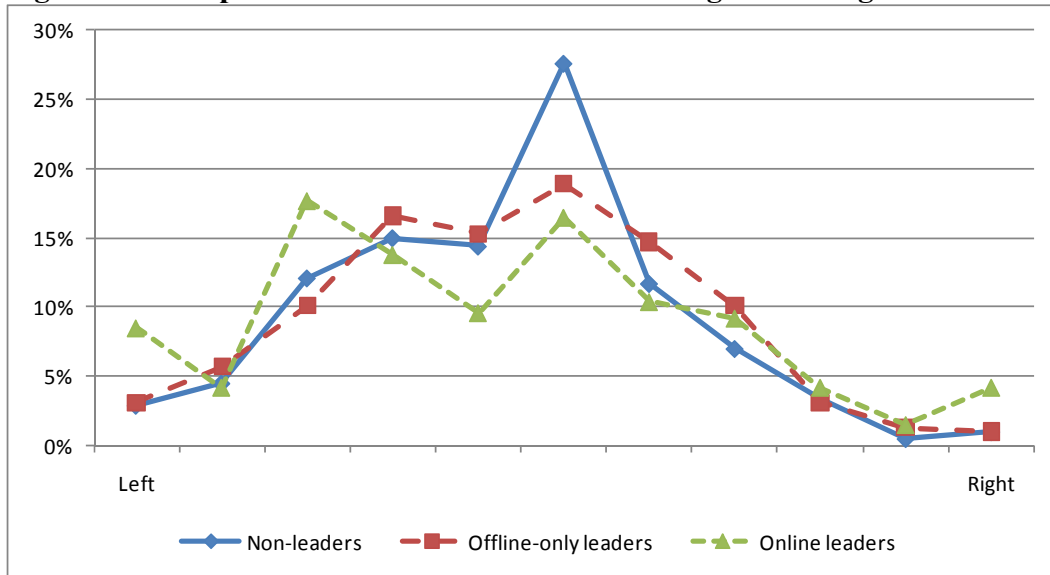
Figure 13: Online opinion leaders as a proportion of all respondents located in each category along the left/right scale



Note: N = 260

It is worth highlighting, however, that the political positions of online opinion leaders are not extreme by any means (see Figure 14). Less than 20 percent of online opinion leaders place themselves in the four categories at the far right and far left of the political spectrum. 60 percent of online opinion leaders are located with the five moderate categories. Online opinion leaders are not politically extreme. Their political views are simply less moderate than those of non-leaders and offline-only opinion leaders. And, when the political positions of online opinion leaders diverge from the moderate middle, more often than not they diverge towards the left of the political spectrum.

Figure 14: Opinion leaders and non-leaders along the left/right scale



Note: Non-leaders N = 626; offline-only leaders N = 523; online leaders N = 260

To sum up, the VZ data confirms hypothesis 3.a with the exception of political extremity. Both online opinion leaders and offline-only opinion leaders are characterized by an above-average male-female ratio and above-average levels of education, social gregariousness, political interest, personality strength, and internal efficacy. The same is true for strength of party identification as well as external efficacy. At the same time, we can reject the notion that opinion leadership is more equal online than offline in terms of general and political attributes. With regards to gender, personality strength, political interest, internal efficacy, strength of party identification, and political extremity the differences present in face-to-face communication are amplified on the Internet. Online opinion leaders score higher on each of these scales than offline-only opinion leaders.

In conjunction with the correlation between online and offline opinion leadership established at the beginning of this chapter, these findings raise an important

question: Is the relationship between online opinion leadership and the above socio-demographic and political characteristics a direct or an indirect one via offline opinion leadership? Theoretically, it seems plausible that certain socio-economic and political characteristics drive one's propensity to act as an opinion leader in real life and that this propensity increases one's inclination to also influence the political views of others via the Internet. This causal chain is particularly convincing, since the Internet is a relatively new and less prevalent form of communication. At the very least, this causal connection seems much more likely than one that flows in the opposite direction.

In order to arrive at an answer, regression analysis of opinion leadership and the socio-demographic and political characteristics will be conducted. It is worth highlighting that, in contrast to the mean comparisons above, the regression variable offline opinion leadership includes both offline-only opinion leaders and those offline opinion leaders who are also active online. Only in this way are we able to test the role of offline opinion leadership in explaining online opinion leadership.

Throughout the analysis logistic and linear regression will be juxtaposed, which has the added benefit of being able to assess the discriminatory power of the dichotomous definition of opinion leadership used in the mean comparison. While logistic regression, like the mean comparison, operationalizes opinion leadership as a dichotomous variable, linear regression relies on a continuous measure of opinion leadership. One might expect that the continuous measure of online opinion leadership may be more suitable for the purpose of regression analysis, because under the dichotomous definition only 18 percent of respondents qualify

as online opinion leaders, whereas on the 9-point scale of online opinion leadership no more than 32 percent of respondents fall into any single category.

Table 19: Determinants of online opinion leadership

	Binary logistic regression	OLS regression
Political interest	2.82** (0.57)	0.29** (0.04)
Strength of party identification	2.16** (0.52)	0.18** (0.04)
Democracy satisfaction	-1.35** (0.39)	-0.14** (0.03)
Internal efficacy	1.47** (0.52)	0.15** (0.04)
Personality strength	1.17* (0.48)	0.14** (0.03)
Gender	0.50* (0.20)	0.02 (0.02)
Level of education	-0.39 (0.30)	-0.08** (0.02)
External efficacy	0.21 (0.48)	0.05 (0.04)
Social gregariousness	0.03 (0.24)	-0.00 (0.02)
(Constant)	-6.51** (0.59)	-0.17** (0.04)
Adjusted r^2		0.23
Nagelkerke's r^2	0.26	
-2LL	810.5	
Chi ²	174.8**	
N	1,002	1,002

Note: Unstandardized coefficient with standard error in brackets; ** sig < 0.01, * sig < 0.05, all other variables are not significant; independent variables on scales of 0-1

The above table illustrates, however, that the switch from a dichotomous to a continuous variable does not affect the results in a meaningful way. Both analyses, alike the mean comparison, show political interest to be most closely associated with online opinion leadership. Strength of party identification, internal efficacy, and personality strength also share a significant positive relationship with online opinion leadership. As those who engage in opinion leadership on the Internet are on average less satisfied with democracy, the negative relationship between the two variables is not unexpected. The associations between both external efficacy and social gregariousness and online opinion leadership are not significant when the other variables are taken into account. And, the level of

education and gender differences are either insignificant or contribute only marginally to explaining the variation in online opinion leadership.

Table 20: Determinants of online opinion leadership including offline opinion leadership as a control variable

	Binary logistic regression	OLS regression
Offline opinion leadership	4.63** (0.58)	0.51** (0.04)
Democracy satisfaction	-1.43** (0.41)	-0.14** (0.03)
Strength of party identification	1.54** (0.56)	0.10* (0.04)
Gender	0.47* (0.21)	0.02 (0.01)
Political interest	0.95 (0.64)	0.07 (0.04)
Internal efficacy	0.75 (0.55)	0.06 (0.04)
Personality strength	0.07 (0.51)	0.03 (0.03)
Level of education	-0.31 (0.31)	-0.07** (0.02)
External efficacy	0.09 (0.51)	0.03 (0.04)
Social gregariousness	-0.11 (0.25)	-0.02 (0.02)
(Constant)	-6.12** (0.62)	-0.08 (0.04)
Adjusted r^2		0.35
Nagelkerke's r^2	0.35	
-2LL	732.3	
Chi ²	247.5**	
N	997	997

Note: Unstandardized coefficient with standard error in brackets; ** sig < 0.01, * sig < 0.05, all other variables are not significant; independent variables on scales of 0-1

As a next step, offline opinion leadership is included in the regression analysis as a control variable. Consequently, the relationships between political interest, personality strength, and internal efficacy and online opinion leadership are no longer significant. Even though the variable strength of party identification retains a significant relationship with online opinion leadership when offline opinion leadership is taken into account, its explanatory power is reduced substantially. The negative relationship between the level of education and online opinion leadership is unlikely to be meaningful given the very high level of education across the entire VZ sample. Together with Table 21 these results indicate that the relationship between online opinion leadership and the most important political

characteristics is indirect in nature. Offline opinion leadership is associated with political interest, personality strength, internal efficacy, and strength of party identification. And, online opinion leadership is first and foremost related to offline opinion leadership. In many regards, those who influence others on the Internet are akin to those who exert influence offline. From a campaigning perspective, this suggests that the information tailored to the personal and political attributes of offline opinion leaders is suitable also for people who exercise their influence on the Internet.

Table 21: Determinants of offline opinion leadership

	Binary logistic regression	OLS regression
Political interest	4.08** (0.47)	0.44** (0.03)
Personality strength	2.03** (0.36)	0.23** (0.03)
Internal efficacy	1.54** (0.43)	0.19** (0.03)
Strength of party identification	1.33** (0.45)	0.17** (0.03)
Social gregariousness	0.40 (0.21)	0.03 (0.02)
Gender	0.23 (0.16)	0.02 (0.01)
Level of education	-0.16 (0.26)	-0.03 (0.02)
External efficacy	0.35 (0.43)	0.04 (0.03)
Democracy satisfaction	0.31 (0.36)	-0.01 (0.03)
(Constant)	-6.41** (0.51)	-0.18** (0.03)
Adjusted r^2		0.47
Nagelkerke's r^2	0.40	
-2LL	1,013.8	
Chi ²	356.8**	
N	1,008	1,008

Note: Unstandardized coefficient with standard error in brackets; ** sig < 0.01, * sig < 0.05, all other variables are not significant; independent variables on scales of 0-1

Finally, let us take a brief look at the small number of online-only opinion leaders to see whether the data confirms the interesting pattern found in discussion participation on the Internet (see section 5.2.2). Indeed, Table 22 shows that online-only opinion leaders differ markedly from those who influence others solely face-to-face. Whereas 60 percent of offline-only opinion leaders are male,

women make up a stunning 63 percent of those who exert political influence solely on the Internet. Moreover, online-only opinion leaders are on average less well-educated, less politically interested and less efficacious and they have weaker personalities than their offline-only counterparts. As with political discussions, the Internet facilitates the participation of a small number of individuals possessing attributes traditionally associated with low levels of activity. And, this effect works against the general amplification of differences that we find in online communication.

Table 22: Characteristics of opinion leaders and non-leaders

	Non-leaders			Online-only opinion leaders		
	95% confidence interval			95% confidence interval		
Male	47%	43%	51%	37%	18%	56%
High school degree	71%	68%	75%	62%	44%	80%
Political interest	0.55	0.53	0.57	0.64	0.56	0.72
Internal efficacy	0.46	0.44	0.48	0.48	0.39	0.56
Personality strength	0.65	0.64	0.67	0.69	0.60	0.77
	Offline-only opinion leaders			Offline & online leaders		
	95% confidence interval			95% confidence interval		
Male	60%	56%	64%	77%	72%	82%
High school degree	79%	75%	82%	77%	72%	83%
Political interest	0.77	0.75	0.78	0.85	0.83	0.87
Internal efficacy	0.65	0.63	0.66	0.75	0.72	0.77
Personality strength	0.77	0.75	0.79	0.84	0.81	0.86

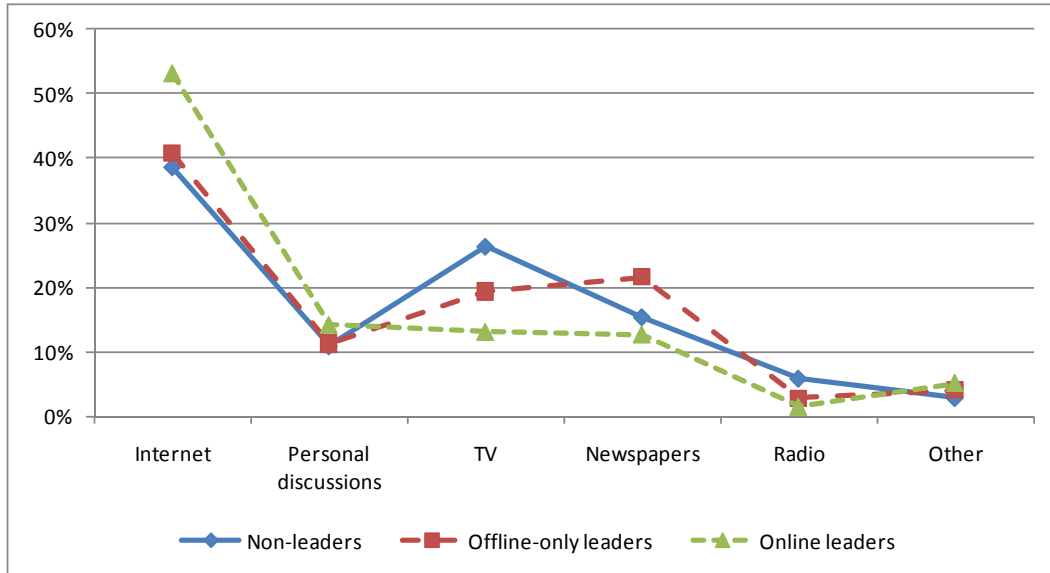
Note: Arithmetic means or percentages; non-leaders minimum N = 636; online-only opinion leaders minimum N = 27; offline-only opinion leaders minimum N = 512; offline & online opinion leaders minimum N = 224

5.2.3.3 Sources

The above examination of the characteristics of opinion leaders active on the Internet may be of some relevance for the field of political campaigning. But those running a political campaign are typically even more interested in an analysis of the political information sources of those who influence the political opinions of others. Thus, I will compare the online opinion leaders' use of the

Internet for obtaining campaign information with that of non-leaders and offline-only opinion leaders.

Figure 15: Main source of campaign information of opinion leaders and non-leaders



Note: Non-leaders N = 661; offline-only leaders N = 532; online leaders N = 267

As Figure 15 shows, the vast majority of online opinion leaders use the Internet as their main source of campaign information. In fact, more than half of the online opinion leaders rely chiefly on the Internet for campaign information. None of the other media is quoted as key source by more than 15 percent of online opinion leaders. These findings are in line with Shah et al.'s (2005) results regarding civic messaging, a measure that could also be described as civic opinion leadership online. According to Shah et al. (2005), the correlation between online civic messaging and online information seeking is stronger than the relationship between online civic messaging and either newspaper or television news use.

What is more, online opinion leaders are significantly more likely to use each of eight different kinds of electronic sources of campaign information (see Table 23). More than 80 percent of online opinion leaders read a political email in the

run-up to the general election, for example. This compares to 63 percent of offline-only opinion leaders and 40 percent of non-leaders. Thus, there is strong support for both hypothesis 4.a and 4.b.

Table 23: Sources of campaign information of opinion leaders and non-leaders

	Non-leaders	Opinion leaders		Overall	<i>Eta</i>
		Offline-only	Online		
Internet as main source	39%	41%	53%	42%	<i>0.11</i>
Read political email	40%	63%	81%	56%	<i>0.43</i>
Frequency of use: ¹					
News media websites	0.47	0.64	0.72	0.58	<i>0.28</i>
Indep. political groups in social netw.	0.27	0.37	0.54	0.35	<i>0.31</i>
Political party websites	0.23	0.35	0.53	0.33	<i>0.38</i>
Candidate profiles in social networks	0.19	0.29	0.45	0.27	<i>0.34</i>
Government websites	0.18	0.25	0.36	0.24	<i>0.26</i>
Politician websites	0.13	0.24	0.37	0.21	<i>0.35</i>
Supporter networks	0.08	0.14	0.27	0.14	<i>0.30</i>
Overall frequency of use ²	0.26	0.36	0.48	0.33	<i>0.42</i>

Note: Arithmetic means or percentages; for all etas: sig < 0.001; Non-leader minimum N = 629, offline-only opinion leaders minimum N = 512, online opinion leaders minimum N = 256

¹ Seven categories: 0 = "never", 1 = "daily"

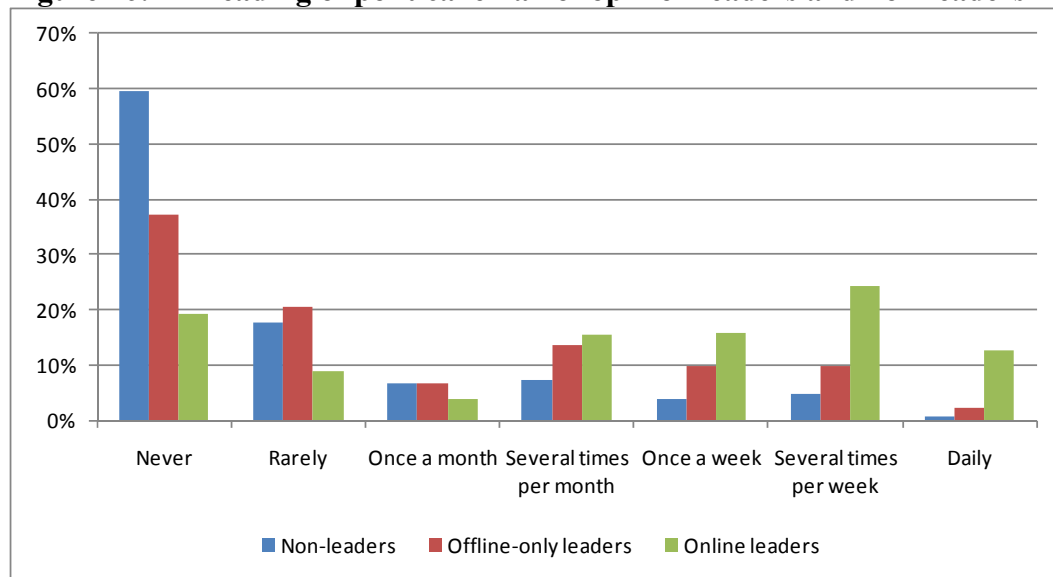
² Sum of the 7 measures listed above; rebased to 0-1

The comparison between the VZ respondents and the representative sample in section 5.2.1 suggests a close relationship between political Internet use and personality strength. Almost the whole VZ sample, a group of politically active online individuals, is characterized by above-average personality strength. Thus, it is likely that not only online opinion leaders but also offline opinion leaders rely on the Internet for obtaining political information to a disproportionate extent. And, one may expect offline opinion leaders to name the Internet as their central political information source more often than non-leaders.

But, as Figure 15 shows, offline-only opinion leaders among the VZ sample do not quote the Internet as their main source of information significantly more frequently than non-leaders do. While 53 percent of online opinion leaders rely first and foremost on the Internet for obtaining campaign information, around 40 percent of both non-leaders and offline-only opinion leaders do so. This result may be explained by the fact that the VZ sample is biased towards individuals who make disproportionate use of the Internet. 39 percent of non-leaders among the VZ respondents quote the Internet as their main source. In comparison, only 21 percent of political Internet users among the representative sample use the Internet as the main source of campaign information (see Figure 9).

Given these results, it is necessary to analyse the online information gathering of offline-only opinion leaders in more detail. Contrary to hypothesis 4.c, there is hardly any meaningful difference between offline-only opinion leaders and non-leaders in terms of their reliance on the Internet as the main source of campaign information. But, as suggested by hypothesis 4.d, offline-only opinion leaders make significantly more use of every online source of political information than non-leaders (see Table 23). 63 percent of offline-only opinion leaders, for example, read a political email during the 2009 campaign. This compares to 40 percent of non-leaders. Whereas 22 percent of offline-only opinion leaders read a political email at least once a week, only 9 percent of non-leaders read emails about politics on a weekly basis (see Figure 16). In summary, offline-only opinion leaders make disproportionate use of the Internet for obtaining political information, but they are not more likely than non-leaders to use the Internet as their main source.

Figure 16: Reading of political email of opinion leaders and non-leaders



Note: Non-leaders N = 638; offline-only leaders N = 513; online leaders N = 260

Linear regression will be utilized to provide an alternative perspective on the relationship between opinion leadership – both online and offline – and Internet use for obtaining campaign information. For the purpose of the analysis, Internet use for obtaining campaign information is operationalized as an index combining the frequency of use of seven different kinds of political websites (see Table 23 for details). Offline and online opinion leadership are measured as dichotomous variables. Taken together, the two dichotomous measures of opinion leadership account for 18 percent of the variance in Internet use for obtaining campaign information. Those who are neither online opinion leaders nor offline opinion leaders have an average score of 14 on the scale of Internet campaign information use ranging from 1 to 50. The average score of offline opinion leaders is 5 points higher, whereas the average score of opinion leaders who are active online is 7 points higher than the reference group. While the connection is stronger for online opinion leadership, both offline and online opinion leadership are linked to Internet use for campaign information. It seems that the Internet is a useful tool

for reaching not only those who influence others online but also the much larger group of individuals who influence the political views of others in face-to-face situations.

5.2.4 Perceived strength of computer-mediated influence

Ever since Lazarsfeld et al.'s (1944) famous work, researchers have examined the perceived persuasive force of interpersonal communication and the mass media. Like the majority of studies to date, the VZ data confirms that people generally consider face-to-face discussions to have a stronger impact on their political opinions than mass media sources. As Table 24 shows, VZ respondents overall regard interpersonal discussions as more impactful. But the mean scores of face-to-face conversations and of mass media on a scale from 0 to 1 diverge by only 0.03 points and the difference does not pass the 95 percent significance threshold. Among those who use the Internet most actively, the perceived difference between offline discussion and mass media is twice as large in absolute terms (mean difference of 0.06).

But the aim of this thesis is not to compare the well-researched effects of face-to-face communication and the mass media. Instead, I will focus on the persuasive force of interpersonal interaction on the Internet. As hypothesized, people perceive face-to-face interaction to have a significantly higher impact on their political views than communication online (hypothesis 5). As Table 24 shows, the absolute difference between offline and online discussions about politics is 0.21 on a scale ranging from 0 to 1.

Table 24: Perceived strength of influence

	Arithmetic mean	95% confidence interval	
All respondents			
Offline discussion	0.641	0.625	0.656
Mass media online and offline	0.611	0.595	0.627
Online discussion	0.428	0.410	0.446
Heavy Internet user¹			
Offline discussion	0.637	0.603	0.670
Mass media online and offline	0.578	0.542	0.614
Online discussion	0.508	0.471	0.545
Online talk > offline talk²			
Offline discussion	0.628	0.557	0.700
Mass media online and offline	0.582	0.512	0.652
Online discussion	0.602	0.529	0.675

Note: Scales 0-1; five categories: 0 = "not at all influenced by...", 1 = "very strongly influenced by..."; N = 1,298

¹ More than 4 hours of leisure time Internet usage per day (top 25% of respondents, N = 320)

² Respondents who more frequently talk about politics online than offline (N = 76)

Part of the discrepancy may be explained by the fact that many people do not use the Internet with high frequency, since irregular Internet use is bound to impact the perception of online communication. This connection between Internet use and the perceived relative influence of online discussions is supported by the evidence on heavy Internet users. Among this group of people, who use the Internet most actively, the gap between the influence of online discussions and offline conversations is substantially smaller. Nonetheless, even heavy Internet users view online discussions about political issues are significantly less relevant for their political opinion formation than face-to-face interaction.

As even those who use the Internet most frequently more often talk about politics face-to-face than on the Internet, it is worth examining the effect of the relative frequency of discussion on perceived influence. Hence, I will look at the small group of respondents who report to discuss politics more frequently online than offline. As this group comprises only 76 individuals, the results obtained do not

pass any tests of significance. Nonetheless, they provide an indicative answer to the question whether differences in the frequency of discussion might be able to explain the gap in perceived influence between offline and online discussions. Interestingly, even individuals who converse more often about politics online than offline perceive face-to-face interaction to have a larger impact on their political opinions than discussion on the Internet (arithmetic means of 0.628 and 0.602). It seems that factors other than frequency affect people's perception of relative influence on their political views.

6 Conclusion

One could argue that the Internet has had a greater impact on politics than any technological invention since the invention of the printing press nearly six hundred years ago.

Olson and Nelson (2010, p. 50)

This thesis began with an account of how interpersonal political discussions contribute to the health of our democratic system. Conversations about politics facilitate the dissemination of knowledge within the electorate and contribute to the citizens' understanding of political issues. They widen the range of arguments people take into account when forming their opinions. And, they enhance people's comprehension of different viewpoints and lead people to reflect on their own opinions. When people discuss politics with others, the clarity, consistency, and ideological coherence of their opinions tend to increase. Opinion expression makes it easier to organize one's views and to incorporate new information into one's existing knowledge. This increase in the quality of people's political opinions can be expected to have a beneficial impact on the output of the democratic system. Moreover, political discussion activity is closely associated with civic and political participation, both of which are generally believed to strengthen the citizens' self-government.

And, while not everyone may agree with Olson and Nelson's (2010) above assertion, many share the view that the Internet is altering the way people talk about politics. The Internet allows us to respond to political news by instantaneously sharing and discussing it with others around the globe at virtually

no cost. What is more, the exchange with like-minded others or with those holding divergent political viewpoints takes place in an environment that is often more anonymous and where social pressure tends to be lower than face-to-face. Several academics believe that these unique characteristics of online communication have a positive effect. As the Internet makes it easier for people to participate in political discussions and to share their personal views, those who refrain from discussing politics in-person are motivated to interact with others online. Lowered social anxiety and reduced inhibition lead to an equalisation of discussion participation on the Internet. Certain individuals simply feel more comfortable speaking up online than in face-to-face situations.

Since an empirical confirmation of such beneficial effects is still outstanding, the current study sought to provide clarity by addressing the subject from several angles. Firstly, the level of discussion activity of opinion leaders was compared to that of non-leaders. If discussion participation was more equal, one would expect online non-leaders to engage more frequently in discussions than offline non-leaders. Moreover, the VZ data was examined to assess whether there is a meaningful group of individuals who discuss politics solely online. If a significant number of people chose to discuss politics only on the Internet, this could be regarded as strong evidence for the equalisation hypothesis.

But the analysis of the VZ data illustrates that, in aggregate, the equalisation hypothesis is not applicable to interpersonal political discussions. Online discussion activity is not more equal than face-to-face conversation participation, when opinion leaders and non-leaders are compared. Non-leaders are not more active on the Internet than they are offline. Moreover, the power of the Internet to motivate those to discuss politics who are inactive face-to-face is very limited.

Less than 3 percent of respondents belong to the group of online-only discussants. As the VZ sample is comprised of individuals who are particularly prone to communicating online, the conclusion that very few among the general public discuss politics only online is particularly convincing. Thus, we can conclude in line with Social Network Theory that the Internet supports rather than changes the patterns of discussion existent in face-to-face situations.

What is more, we find that the differences present in face-to-face interaction are amplified when people communicate online. Discussion participation of opinion leaders and non-leaders is substantially more unequal online than offline. Even among frequent Internet users, online non-leaders are significantly less active in discussing politics online than offline non-leaders are in talking about politics face-to-face. Particularly those who are less active political discussants seem to regard the Internet as a rather unpolitical medium. People who discuss politics on the Internet are more interested in politics and more efficacious and have stronger personalities than those who discuss political matters face-to-face. Apparently, the threshold for participation is higher on the Internet than offline.

The analysis of opinion leadership activity produces similar results. Just 2 percent of respondents report to influence others solely online. And, those who act as opinion leaders face-to-face are significantly more likely to influence others on the Internet. Around a third of offline opinion leaders but only 4 percent of offline non-leaders are classified as online opinion leaders. In my view, these findings are especially noteworthy for two reasons. On the one hand, they refute the claim put forward by some scholars that offline non-leaders are likely to act as opinion leaders on the Internet. On the other hand, this is the first empirical evidence showing that online-only opinion leadership is a rare phenomenon.

Moreover, the differences between online opinion leaders and non-leaders are more pronounced than the differences between offline-only opinion leaders and non-leaders. Online opinion leaders are characterized by higher levels of personality strength, political interest, internal efficacy, and party identification than offline-only opinion leaders. On the left/right scale, the political views of online opinion leaders are less moderate than those of non-leaders and of offline-only opinion leaders. Overall, the results match the findings on political discussions showing that the Internet raises the bar for participation.

I have argued that the above conclusions are especially robust, because VZ respondents are particularly prone to communicating online. If among this group that is so familiar with the Internet hardly anyone talks or influences solely online, the percentage of online-only discussants and influencers is probably even lower among the general population. But, one could equally argue that the amplification of differences found online can partially be explained by the distinctive nature of the sample. VZ respondents are prone to using social networks when they communicate about politics on the Internet. And, interaction on social networks is characterized by relatively high social presence, because it is less anonymous than many other forms of online communication. In fact, one could make the case that the social presence of online social networks exceeds that of casual face-to-face conversations. When VZ users discuss politics in groups like “My vote counts!”, they may be recognized by a larger number of people they know than in many face-to-face situations. When one is exposed to such a large number of friends at the same time, one may be much more aware of one-self and of the counterparties than in offline conversations about politics. I am not overly concerned about this objection, however, because VZ respondents will use many other forms of

electronic communication to discuss politics, for example email and chat. But since the survey does not allow us to compare the frequency of use of the various modes of online communication, empirical evidence not collected on a social networking site is needed to provide further comfort.

Despite the disheartening overall conclusions concerning the equalisation hypothesis, a look at the small group of online-only discussants provides a glimmer of hope for Internet enthusiasts. While online discussants, taken as a single group, are characterized by especially high values of those attributes associated with face-to-face political talk, online-only discussants are rather different. Those 10 percent of online discussants who do not converse about politics face-to-face comprise a disproportionate number of women and of less educated, less politically interested and less internally efficacious people. In other words, those individuals associated with limited discussion participation offline are more likely to talk about politics solely on the Internet. Interestingly, the differences between these online-only discussants and those who talk about politics face-to-face in terms of internal efficacy and political interest are particularly significant.

Again, the analysis of online-only opinion leaders yields similar results. 63 percent of those who influence others solely online are female, which compares to 40 percent among offline-only opinion leaders. People whose influence is confined to the online realm are also less politically interested and score lower on scales measuring internal efficacy and personality strength. Both analyses suggest that the Internet may, after all, provide a space for political interaction for some of those who are less confident in political matters. While the bar for participation

for most people is higher online, some people seem to feel less inhibited on the Internet.

In my view, these findings constitute a significant contribution to the academic debate about the Internet's impact on political life. The results may help to reconcile not only Social Presence Theory and Social Network Theory but also the reinforcement hypothesis and the mobilisation hypothesis of political participation online. The idea that the Internet has the ability to inform, activate, and organize previously passive individuals is typically referred to as the mobilisation hypothesis. Others are convinced that the Internet amplifies existing disparities in political engagement by strengthening those who are already advantaged (Norris, 2000). The VZ sample suggests that aggregate data pointing to a reinforcement of differences online may be insufficient for rejecting the mobilisation view. The present study has focused on participation in political discussions and opinion leadership. But, in light of the evidence, a reassessment of the Internet's impact on political participation more generally may yield interesting results.

Having analysed the equalisation hypothesis, it is worth reviewing the data on the characteristics of online opinion leaders from another perspective. As we have seen, the characteristics of online opinion leaders, in aggregate, are more pronounced than those of offline-only opinion leaders. In conjunction with the observed strong correlation between offline and online opinion leadership, this finding raises the question whether the relationship between online opinion leadership and the above political characteristics is direct or indirect in nature. Either the above listed characteristics directly predict a person's propensity to act as an opinion leader on the Internet. Or, alternatively, these characteristics

determine a person's tendency to influence others face-to-face, which, in turn, drives the person's propensity to act as an online opinion leader. Such an indirect connection seems theoretically plausible, as the Internet is a comparatively new communication medium.

The results suggest that personality strength, political interest, and internal efficacy are only indirectly linked to online opinion leadership. When offline opinion leadership is included as a control variable, these three antecedents lose their explanatory power with regards to online opinion leadership. Of the political variables included in the analysis only democracy satisfaction and strength of party identification maintain a statistically significant connection to online opinion leadership. Those offline opinion leaders less satisfied with our democratic system and those who identify closely with a political party are more likely to also act as opinion leaders on the web. It seems that certain personal characteristics drive offline opinion leadership and that online opinion leadership is primarily a consequence of offline opinion leadership. Nevertheless, longitudinal studies are required to substantiate this view.

Overall, those who exert influence online are similar to those who influence others face-to-face in many important respects. Their levels of education, personality strength, political interest, strength of party identification, and internal efficacy are quite comparable. These results are of practical relevance to those running political campaigns, because the above attributes are crucial inputs for political campaigners designing messages to mobilize opinion leaders. The data illustrates that the information fitted to the characteristics of those who exert influence face-to-face is probably also appropriate for opinion leaders on the Internet.

While it is important to understand the characteristics of opinion leaders, having detailed information on their sources of political information is even more crucial for campaigners. It is through these sources that opinion leaders can be mobilized and provided with arguments to spread among the general public. The problem with traditional media, such as television, is that opinion leaders constitute only a minority of the audience. Hence, using traditional media to spread information that is tailored to the political knowledge and information requirements of opinion leaders is impractical and inefficient. Information tailored to opinion leaders would likely be too sophisticated and, hence, unsuitable for the majority of the audience, the non-leaders.

The data from the present study suggests that the Internet may be a more efficient channel for providing opinion leaders with campaign information. The VZ sample shows that both online opinion leaders and offline-only opinion leaders rely on the Internet for obtaining political information significantly more than non-leaders do. Moreover, the comparison between the VZ respondents and a representative sample suggests a close relationship between political Internet use and personality strength, a key antecedent of opinion leadership. Among the VZ sample, a group of individuals who rely heavily on the Internet for obtaining political information, more than 80 percent are classified as opinion leaders by the Allensbach personality strength scale. This compares to just 26 percent among the general public. It would be premature to conclude that opinion leaders make up the majority of political Internet users, however, not least because of the likely non-response bias in the sample. A representative study of political Internet users would be required to draw such a conclusion. But, we can safely say that the Internet constitutes a channel that allows campaigners to address a

disproportionate number of individuals that act as opinion leaders both face-to-face and online.

The data suggests that Lazarsfeld et al.'s (1944) Two-Step Flow Model may have a noticeable role to play not just in individual political opinion formation but also in the dissemination of online campaign information. A central proposition of the model is that opinion leaders are more exposed to the media than non-leaders and that the relatively high level of media use enables opinion leaders to act as bridges between the media and non-leaders. It has been established that opinion leaders are more exposed to campaign information on the Internet than non-leaders. Moreover, opinion leaders probably draw on the political information they have gathered online when they influence the views of others. Thus, it seems likely that a noteworthy part of the campaign information available online reaches the general public via opinion leaders. In their study, Norris and Curtice (2007, p. 9) come to a similar conclusion: "If party websites and related online resources reach opinion leaders and if, in turn, opinion leaders are among those most keen on initiating discussions about politics with fellow citizens and on engaging in persuasion, then what appears on the Internet may reach the wider public via a two step process." Norris and Curtice (2007) also point out that this two-step process becomes increasingly important as newspaper and television news audiences continue to decline. It is worth highlighting, though, that the two-step flow is likely to reach only some of the non-leaders. Many will receive the information directly from the Internet and others will not receive the information at all. Further research is required to examine how much of the online information flows directly to non-leaders and to assess how opinion leaders use the information from the Internet in their discussions with others.

One may object that this supposed two-step flow, if it exists, is bound to be temporary in nature. As the Internet becomes more integrated into people's lives, more and more non-leaders will access online sources of campaign information directly. I fully acknowledge that the Internet constitutes a moving target – as Kluver, Jankowski, Foot, and Schneider (2007) have so fittingly put it. Even during the time between my analysis and its publication the Internet may have undergone meaningful change. Hence, any objection pointing to the transitory nature of online phenomena is hard to refute definitively.

At the same time, a convincing argument can be made for the lasting nature of the online two-step flow. Internet sources are not only well-suited to the information requirements of opinion leaders. They are also tailored to the information processing skills that opinion leaders are more likely to possess. Mossberger, Tolbert, and Stansbury (2003) point out that the use of online sources requires a higher level of information literacy than the use of other media. Information literacy is defined as the ability to effectively utilize information resources and to identify valuable pieces of information. Individuals with a high level of education and those who frequently engage in interpersonal discussions are generally better at assessing the credibility and quality of information (Huber, 2009). Given their above-average level of education and their active engagement in discussions, opinion leaders are prone to be particularly information literate. This may explain their strong reliance on online information sources. Thus, the disproportionate Internet use for campaign information of opinion leaders and the supposed two-step flow of online information may actually persist over time.

To obtain a view on the relative importance of interpersonal communication online and offline, the third-level differences between the two modes of

interaction have been assessed. The results demonstrate that people consider face-to-face discussions to have a considerably higher impact on their political views than interpersonal communication on the Internet. Since even heavy users of the Internet discuss politics less often on the Internet than they do face-to-face, it is not unexpected that people generally regard online discussions as less impactful. Interestingly, those individuals who more frequently talk about politics online than offline also regard interpersonal communication on the Internet as less important for their political opinion formation. So, it is not just the generally lower level of discussion activity online that explains the relatively low influence of political discussions on the Internet.

It remains an open question, why even the most active Internet users discuss politics less often online than offline, and why even those who talk more about politics online than offline view online conversations as less crucial for their political attitudes. Maybe Fish et al. (1992) are right that many people see online communication as less suitable for complex and socially controversial subjects because of its low social presence. And, maybe the low social presence reduces the persuasive force of online interaction even when people prefer to discuss politics on the Internet rather than face-to-face. But maybe the differences between face-to-face and online communication in terms of frequency and persuasiveness will simply fade with time. It seems that only future research will be able to provide elucidation.

It has already been established that alike any survey-based research the validity of the present study depends on the accuracy of the respondents' perception. It has also been pointed out that this limitation is of particular relevance for people's descriptions of how external factors influence their views and behaviour. While

people may give fairly reliable accounts of their level of political interest and their media consumption, their perception of influence may well differ from real influence processes. Research shows that people sometimes find it hard to identify the factors that influence their opinions. At times, they do not even realize that their opinions have changed in response to a given source. In these cases, people's reports of the strength of different sources of influence are bound to be inaccurate. The comparison of the persuasive force of interpersonal discussions with that of the media is further complicated by the fact that cognitive media effects may be more difficult for people to detect.

Thus, additional research is necessary to test whether the findings of the present study with regards to perceived influence also apply to actual influence. Longitudinal data on political opinion formation and change in the run-up to elections should allow us to acquire a better understanding of the comparison of actual effects of interpersonal communication online and offline. It could also be interesting to conduct a field experiment comparing the influence of in-person and online communication on voter turnout (cf. Gerber & Green, 2000).

In any event, the substantially higher perceived impact of face-to-face discussions together with the established disproportionate political Internet use of those who influence others in face-to-face discussions suggest an interesting conclusion. While the direct effect of online activity on people's political opinions seems to be relatively limited, opinion leaders probably incorporate the information published and exchanged on the Internet in face-to-face discussions with others. And, as these in-person discussions have such a vital effect on people's political views, the Internet's role in political opinion formation, despite its indirect nature, seems to be rather important.

It is worth emphasizing that the VZ survey was advertised solely to select political groups on the VZ networks. Hence, alike other convenience samples collected on political websites, it is neither representative of the German general public nor of German Internet users. Moreover, the data probably does not reflect the attributes of the average member of a political group on the VZ networks. With a response rate below 1 percent the sample is likely to be biased towards high levels of political interest and participation.

The comparison between the general public and the VZ respondents reveals statistically significant differences for all socio-demographic and political variables. VZ respondents are substantially younger, better educated, more satisfied with the democratic system, more politically interested, and have higher internal efficacy. At the same time, VZ respondents are more likely to be male, to be situated towards the left of the political spectrum, to be a party member, to identify closely with a political party, and to hold a more extreme political attitude.

Among the representative group, one can differentiate between those who do and those who do not use the Internet to gather political information. Despite large remaining age and education differences, VZ respondents closely mirror many of the political characteristics of the so-called political Internet users within a representative sample. In fact, there are no statistically significant differences between the two groups for six out of the seven examined political variables. Moreover, the voting profile of political Internet users and VZ respondents diverges from the official result in a comparable fashion. Both groups show significantly more support for the green party and substantially less for the two major parties than the general public. Overall, VZ respondents are fairly similar to

political Internet users among the representative sample. Hence, the validity of this study's analysis of differences between online and offline communication does not seem to be restricted to the VZ sample.

Declaration

Hiermit erkläre ich, dass ich die Dissertation selbständig, insbesondere ohne die Hilfe einer Promotionsberaterin oder eines Promotionsberaters angefertigt, dabei keine anderen Hilfsmittel als die im Quellen- und Literaturverzeichnis genannten benutzt und alle aus Quellen und Literatur wörtlich oder sinngemäß entnommenen Stellen als solche kenntlich gemacht habe.

Weiterhin versichere ich, dass die Dissertation, Bestandteile der kumulativen Dissertation oder wesentliche Teile derselben nicht bereits einer anderen Prüfungsbehörde zur Erlangung des Doktorgrades vorlagen, und erkläre, dass die Arbeit in keiner Form bereits publiziert ist.

Max Odefey

Hamburg, den 17. Oktober 2011

Appendices

Appendix A: Self-designating scales

Keller and Berry's (2003) "influentials" scale

Here is a list of things some people do about government and politics. Have you happened to have done any of these things in the past year? Which ones?

- 1) Written to or called any politician at the state, local, or national level.
- 2) Attended a political rally, speech, or organized protest of any kind.
- 3) Attended a public meeting on town or school affairs.
- 4) Held or run for a political office.
- 5) Served on a committee for some local organization.
- 6) Served as an officer for some club or organization.
- 7) Written a letter to the editor of a newspaper or magazine or called a live radio or TV show to express an opinion.
- 8) Signed a petition.*
- 9) Worked for a political party.
- 10) Made a speech.
- 11) Written an article for a magazine or newspaper.
- 12) Been an active member of any group that tries to influence public policy or government.

* Not included in respondent scores, but used to test for social desirability.

Darr and Graf's (2007) "poli-fluentials" scale

A person described as an "Influencer" answered "yes" to any three of these:

- 1) Made a speech on a political topic.
- 2) Wrote an article for a magazine or newspaper on a political topic.
- 3) Was an active member of an advocacy group, that is, one that tries to influence public policy or government.
- 4) Wrote a letter or sent an email message to any public official at the state, local or national level.
- 5) Wrote a letter or sent an email to the editor of a newspaper or magazine.
- 6) Attended a political rally, speech, or protest.

7) Called alive radio or TV show to express an opinion on politics or public policy.

A person described as a “Political” answered “yes” to any two of these:

- 1) Leading up to the November 7, 2006, election, did you perform volunteer work for a political campaign?
- 2) Thinking back to the 2004 presidential election, did you donate money to any candidate, political party, or a group promoting or opposing a cause or issue?
- 3) Leading up to the November, 7, 2006, election, did you donate money to any candidate, political party, or a group promoting or opposing a cause or issue?

Appendix B: Teaser page for VZ survey



[English](#) [Suche](#) [Einladen](#) [Hilfe](#) [Klartext](#) [Handy](#) [Blog](#) [Raus hier](#)

Suche

Start

- [Meine Seite](#) [bearbeiten](#)
- [Meine Freunde](#)
- [Meine Fotos](#)
- [Meine Gruppen](#)
- [Nachrichtendienst](#)
- [Mein Account](#)
- [Privatsphäre](#)

Papa wird hier bald richtig Chef. [Stromberg-Preview!](#)

MEINVERZEICHNIS
Röhre Plauderkasten (0)

Meine Stimme zählt!

Beschreibung

Liebe Gruppenmitglieder,

als Teil der Kampagne "Meine Stimme zählt", zu der auch diese Gruppe gehört, seid Ihr VorreiterInnen der politischen Partizipation im web 2.0. Mit Eurem Engagement auf studiVZ und meinVZ habt Ihr die beiden Plattformen zu den wichtigsten sozialen Netzwerken im Bundestagswahlkampf gemacht.

Ein Doktorand der Universität Bamberg möchte das Kommunikationsverhalten auf unseren Seiten wissenschaftlich untersuchen. Wir helfen ihm dabei gerne. Durch seine Ergebnisse werden wir unser Netzwerk in Zukunft noch besser auf Eure Bedürfnisse abstimmen können. Wenn Ihr also Lust habt, macht mit, sagt nochmal Eure Meinung, diesmal in Form eines Fragebogens, zu dem Ihr über folgenden Link kommt:

[Umfrage der Universität Bamberg](#)

Selbstverständlich werden Eure Angaben vertraulich behandelt und anonymisiert ausgewertet.

Außerdem: Jeder, der die Umfrage vollständig ausfüllt, hat die Chance, einen iPod nano zu gewinnen.

Information

Name:	Meine Stimme zählt!
Gründer:	Team Wahlen VZ
Kategorie:	Gemeinsame Interessen
Verzeichnis:	meinVZ






[Alle Themen \(Forum\)](#)

[Mitgliedschafts-Einstellungen](#)

[Leute einladen](#)

[Die Gruppe Freunden zeigen](#)

[Gruppe verlassen](#)

[Gruppe melden](#)

Status

Appendix C: Survey questionnaire

A. Personality strength (English)

Here is a list of statements. How well does each item describe you and your personality?

1 = "perfectly", 2 = "fairly well", 3 = "not well", 4 = "not at all"

	Answer weighting	
	1 and 2 = Yes	3 and 4 = No
a. I usually rely on being successful in everything I do.	13	7
b. I am rarely unsure about how I should behave.	14	7
c. I like to assume responsibility.	15	7
d. I like to take the lead when a group does things together.	17	8
e. I enjoy convincing others of my opinions.	15	7
f. I often notice that I serve as a role model for others.	16	8
g. I am good at getting what I want.	14	7
h. I am often a step ahead of others.	18	9
i. I have many things others envy me for.	15	9
j. I often give others advice and suggestions.	14	7
Categories of personality strength		
a. Very strong (opinion leaders)	151	129
b. Strong (opinion leaders)	128	114
c. Above average	113	98
d. Moderate	97	84
e. Weak	83	76

A. Personality strength (German)

Hier sind verschiedene Eigenschaften. Wo würden Sie sagen: Das passt auf mich...?

1 = "voll und ganz", 2 = "eher", 3 = "eher nicht", 4 = "überhaupt nicht"

a. Gewöhnlich rechne ich bei dem, was ich mache, mit Erfolg.		
b. Ich bin selten unsicher, wie ich mich verhalten soll.		
c. Ich übernehme gerne Verantwortung.		
d. Ich übernehme bei gemeinsamen Unternehmungen gern die Führung.		
e. Es macht mir Spaß, andere Menschen von meiner Meinung zu überzeugen.		
f. Ich merke öfter, dass sich andere nach mir richten.		
g. Ich kann mich gut durchsetzen.		
h. Ich bin anderen oft einen Schritt voraus.		
i. Ich besitze vieles, worum mich andere beneiden.		
j. Ich gebe anderen öfter Ratschläge, Empfehlungen.		

B. Political opinion leadership (English)

To what extent do you agree with the following statements?

1 = "do not agree at all", 2 = "tend not to agree", 3 = "neutral", 4 = "tend to agree", 5 = "fully agree"

- a. In personal discussions, I am asked for advice on political questions.
 - b. In personal discussions, I try to convince others of my political opinions.
-

Opinion leaders: Those who answered "tend to agree" or "fully agree" to at least one of the statements.

B. Political opinion leadership (German)

In wie weit stimmen Sie folgenden Aussagen zu?

1 = "überhaupt nicht", 2 = "eher nicht", 3 = "teils/teils", 4 = "eher", 5 = "voll und ganz"

- a. Ich werde zu politischen Themen in persönlichen Gesprächen um Rat gefragt.
 - b. Ich versuche, andere in persönlichen Gesprächen von meiner politischen Einstellung zu überzeugen.
-

C. Political opinion seeking and political discussion (English)

To what extent do you agree with the following statements?

1 = "do not agree at all", 2 = "tend not to agree", 3 = "neutral", 4 = "tend to agree", 5 = "fully agree"

- a. In personal discussions, I seek others' advice on political questions.
 - b. I talk to others face-to-face about political questions.
-

C. Political opinion seeking and political discussion (German)

In wie weit stimmen Sie folgenden Aussagen zu?

1 = "überhaupt nicht", 2 = "eher nicht", 3 = "teils/teils", 4 = "eher", 5 = "voll und ganz"

- a. Ich frage andere in persönlichen Gesprächen zu politischen Themen um Rat.
 - b. Ich unterhalte mich in persönlichen Gesprächen über politische Themen.
-

D. Political opinion leadership online (English)

To what extent do you agree with the following statements?

1 = "do not agree at all", 2 = "tend not to agree", 3 = "neutral", 4 = "tend to agree", 5 = "fully agree"

- a. On the Internet, I am asked for advice on political questions.
 - b. On the Internet, I try to convince others of my political opinions.
-

Opinion leaders: Those who answered "tend to agree" or "fully agree" to at least one of the statements.

D. Political opinion leadership online (German)

In wie weit stimmen Sie folgenden Aussagen zu?

1 = "überhaupt nicht", 2 = "eher nicht", 3 = "teils/teils", 4 = "eher", 5 = "voll und ganz"

- a. Ich werde zu politischen Themen im Internet um Rat gefragt.
 - b. Ich versuche, andere im Internet von meiner politischen Einstellung zu überzeugen.
-

E. Political opinion seeking online and political discussion online (English)

To what extent do you agree with the following statements?

1 = "do not agree at all", 2 = "tend not to agree", 3 = "neutral", 4 = "tend to agree", 5 = "fully agree"

a. On the Internet, I seek others' advice on political questions.

b. I talk to others on the Internet about political questions.

E. Political opinion seeking online and political discussion online (German)

In wie weit stimmen Sie folgenden Aussagen zu?

1 = "überhaupt nicht", 2 = "eher nicht", 3 = "teils/teils", 4 = "eher", 5 = "voll und ganz"

a. Ich frage andere im Internet zu politischen Themen um Rat.

b. Ich unterhalte mich im Internet über politische Themen.

F. Political characteristics (English)

In general, how would you describe your level of interest in politics?

1 = "not at all interested", 2 = "less interested", 3 = "moderately interested", 4 = "fairly interested"
5 = "very strongly interested"

How satisfied are you, overall, with democracy as it exists today in German?

1 = "very dissatisfied", 2 = "fairly dissatisfied", 3 = "neutral", 4 = "fairly satisfied", 5 = "very satisfied"

In politics, people often speak of "left" and "right". Where would you place yourself on the below scale?

1 = "left", 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 = "right"

Many people in Germany consistently identify themselves with a particular political party, even though they might from time to time vote for a different party. Do you generally identify with a specific party?

1 = "CDU", 2 = "CSU", 3 = "SPD", 4 = "FDP", 5 = "Bündnis 90/Die Grünen", 6 = "Die Linke",
7 = "another party", 8 = "none", 9 = "do not know"

How strong or weak is your identification with that party?

1 = "very weak", 2 = "fairly weak", 3 = "neither weak nor strong", 4 = "fairly strong", 5 = "very strong"

Are you a member of a political party?

1 = "CDU", 2 = "CSU", 3 = "SPD", 4 = "FDP", 5 = "Bündnis 90/Die Grünen", 6 = "Die Linke",
7 = "another party", 8 = "none"

F. Political characteristics (German)

Einmal ganz allgemein gesprochen: Wie stark interessieren Sie sich für Politik?

1 = "überhaupt nicht", 2 = "weniger stark", 3 = "mittelmäßig", 4 = "ziemlich stark", 5 = "sehr stark"

Wie zufrieden sind Sie - alles in allem - mit der Demokratie, so wie sie in Deutschland heute besteht?

1 = "sehr unzufrieden", 2 = "ziemlich unzufrieden", 3 = "teils/teils", 4 = "ziemlich zufrieden",
5 = "sehr zufrieden"

In der Politik wird oft von "links" und "rechts" gesprochen. Wo würden Sie sich einordnen?

1 = "links", 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 = "rechts"

Viele Menschen in der Bundesrepublik neigen längere Zeit einer bestimmten Partei zu, obwohl sie auch ab und zu eine andere Partei wählen. Wie ist das bei Ihnen: Neigen Sie - ganz allgemein gesprochen - einer bestimmten Partei zu? Wenn ja, welcher?

1 = "CDU", 2 = "CSU", 3 = "SPD", 4 = "FDP", 5 = "Bündnis 90/Die Grünen", 6 = "Die Linke",
7 = "andere Partei", 8 = "keiner", 9 = "weiß nicht"

Wie stark oder schwach neigen Sie dieser Partei zu?

1 = "sehr schwach", 2 = "ziemlich schwach", 3 = "mäßig", 4 = "ziemlich stark", 5 = "sehr stark"

Sind Sie Mitglied einer Partei?

1 = "CDU", 2 = "CSU", 3 = "SPD", 4 = "FDP", 5 = "Bündnis 90/Die Grünen", 6 = "Die Linke",
7 = "andere Partei", 8 = "nein"

G. Internal efficacy (English)

To what extent do you agree with the following statements?

1 = "do not agree at all", 2 = "tend not to agree", 3 = "neutral", 4 = "tend to agree", 5 = "fully agree"

a. I am confident to take on a leading role in a group dealing with politics.

To what extent do you agree with the following statements?

1 = "fully agree", 2 = "tend to agree", 3 = "neutral", 4 = "tend not to agree", 5 = "do not agree at all"

b. Politics is so complicated that someone like me does not always understand what's going on.

Overall internal efficacy measures the sum of the answers to both questions.

G. Internal efficacy (German)

In wie weit stimmen Sie folgenden Aussagen zu?

1 = "überhaupt nicht", 2 = "eher nicht", 3 = "teils/teils", 4 = "eher", 5 = "voll und ganz"

a. Ich traue mir zu, in einer Gruppe, die sich mit politischen Themen befasst, eine aktive Rolle zu übernehmen.

In wie weit stimmen Sie folgenden Aussagen zu?

1 = "voll und ganz", 2 = "eher", 3 = "teils/teils", 4 = "eher nicht", 5 = "überhaupt nicht"

b. Die ganze Politik ist so kompliziert, dass jemand wie ich nicht immer versteht, was vor sich geht.

H. External efficacy (English)

To what extent do you agree with the following statements?

1 = "do not agree at all", 2 = "tend not to agree", 3 = "neutral", 4 = "tend to agree", 5 = "fully agree"

a. Politicians generally try to represent the public's interests.

To what extent do you agree with the following statements?

1 = "fully agree", 2 = "tend to agree", 3 = "neutral", 4 = "tend not to agree", 5 = "do not agree at all"

b. Political parties are solely interested in winning votes, not in the public's opinion.

Overall external efficacy measures the sum of the answers to both questions.

H. External efficacy (German)

In wie weit stimmen Sie folgenden Aussagen zu?

1 = "überhaupt nicht", 2 = "eher nicht", 3 = "teils/teils", 4 = "eher", 5 = "voll und ganz"

a. Die Politiker bemühen sich im Allgemeinen darum, die Interessen der Bevölkerung zu vertreten.

In wie weit stimmen Sie folgenden Aussagen zu?

1 = "voll und ganz", 2 = "eher", 3 = "teils/teils", 4 = "eher nicht", 5 = "überhaupt nicht"

b. Die Parteien wollen nur die Stimmen der Wähler, ihre Ansichten interessieren sie nicht.

I. First and second vote (English)

At the federal election on September 27 you were allowed to place two votes. One for a candidate in your voting district and one for a party. Which candidate and party did you vote for?

1 = "CDU/CSU", 2 = "SPD", 3 = "FDP", 4 = "Bündnis 90/Die Grünen", 5 = "Die Linke",
6 = "another party", 7 = "do not know anymore"

I. First and second vote (German)

Bei der Bundestagswahl am 27. September konnten Sie ja zwei Stimmen vergeben: Die Erststimme für einen Kandidaten aus Ihrem Wahlkreis, die Zweitstimme für eine Partei. Was haben Sie bei dieser Bundestagswahl auf Ihrem Stimmzettel angekreuzt?

1 = "CDU/CSU", 2 = "SPD", 3 = "FDP", 4 = "Bündnis 90/Die Grünen", 5 = "Die Linke",
6 = "andere Partei", 7 = "weiß ich nicht mehr"

J. Candidate evaluation (English)

To what extent do you agree with the following statements about Angela Merkel/Frank-Walter Steinmeier? Angela Merkel/Frank-Walter Steinmeier is...

1 = "do not agree at all", 2 = "tend not to agree", 3 = "neutral", 4 = "tend to agree", 5 = "fully agree",
6 = "unable to judge"

a. ... a strong leader.

b. ... trustworthy.

c. ... likeable.

J. Candidate evaluation (German)

In wie weit treffen folgende Aussagen Ihrer Meinung nach auf Angela Merkel/Frank-Walter Steinmeier zu? Angela Merkel/Frank-Walter Steinmeier ist...

1 = "überhaupt nicht", 2 = "eher nicht", 3 = "teils/teils", 4 = "eher", 5 = "voll und ganz", 6 = "kann ich nicht beurteilen"

- a. ... führungsstark.
 - b. ... vertrauenswürdig.
 - c. ... ist als Mensch sympathisch.
-

K. Problem-solving competence and relative influence of different sources (English)

In your view, what is currently the most significant political problem in Germany? (open question)

And, which political party is, in your view, most qualified to solve this problem?

1 = "CDU", 2 = "CSU", 3 = "SPD", 4 = "FDP", 5 = "Bündnis 90/Die Grünen", 6 = "Die Linke", 7 = "another party", 8 = "all equally", 9 = "none"

To what extent has each of the below factors influenced your opinion on the above topic?

1 = "not at all", 2 = "fairly weakly", 3 = "moderately", 4 = "fairly strongly", 5 = "very strongly"

- a. Face-to-face discussions with friends, family or colleagues
 - b. Independent mass media content, e.g. newspaper articles, TV, magazines
 - c. Online communication with friends, family or colleagues, e.g. on social networks, via email
-

K. Problem-solving competence and relative influence of different sources (German)

Was ist Ihrer Meinung nach gegenwärtig das wichtigste politische Problem in Deutschland?

Und welche Partei ist Ihrer Meinung nach am besten geeignet, dieses Problem zu lösen?

1 = "CDU", 2 = "CSU", 3 = "SPD", 4 = "FDP", 5 = "Bündnis 90/Die Grünen", 6 = "Die Linke", 7 = "andere Partei", 8 = "alle Parteien gleich gut", 9 = "keine"

In wie weit hatten folgende Faktoren einen Einfluss auf Ihre Meinung zu diesem Thema?

1 = "überhaupt nicht", 2 = "ein wenig", 3 = "weniger stark", 4 = "ziemlich stark", 5 = "sehr stark"

- a. Persönliche Gespräche mit Freunden, Familie oder Kollegen
 - b. Unabhängige Medieninhalte (z.B. Zeitungsartikel, Fernsehen, Zeitschriften)
 - c. Kommunikation mit Freunden, Familie oder Kollegen im Internet (z.B. soziale Netzwerke, Email)
-

L. Media use (English)

How many hours of your leisure time per day do you spend on average using the following media?

1 = "less than half an hour", 2 = "half an hour to an hour", 3 = "1-2 hours", 4 = "2-3 hours", 5 = "3-4 hours", 6 = "4-5 hours", 7 = "more than 5 hours"

- a. TV
 - b. Newspapers
 - c. Radio
 - d. Internet
-

Where did you get the most information about the federal election campaign?

1 = "TV", 2 = "newspapers", 3 = "radio", 4 = "Internet", 5 = "personal discussions", 6 = "another source"

How often did you use the below online sources to get information about the federal election campaign?

1 = "never", 2 = "rarely", 3 = "once a month", 4 = "several times per month", 5 = "once a week", 6 = "several times per week", 7 = "daily"

- a. News media websites, e.g. Spiegel Online, Süddeutsche Online, FAZ Online, Bild online, etc.
 - b. Independent political groups in social networks, e.g. Wahlzentrale, "Meine Stimme zählt!"
 - c. Political party websites
 - d. Candidate profiles in social networks
 - e. Websites of the federal, regional and local government
 - f. Politician websites
 - g. Supporter networks of parties or politicians, e.g. teAM Deutschland, wahlkampf09
 - h. Reading of political emails
-

L. Media use (German)

Wie viele Stunden verbringen Sie täglich im Durchschnitt mit folgenden Medien in Ihrer Freizeit?

1 = "weniger als eine halbe Stunde", 2 = "zwischen einer halben und einer ganzen Stunde",

3 = "1-2 Stunden", 4 = "2-3 Stunden", 5 = "3-4 Stunden", 6 = "4-5 Stunden", 7 = "mehr als 5 Stunden"

- a. Fernsehen
 - b. Zeitung
 - c. Radio
 - d. Internet
-

Woher bekamen Sie die meisten Informationen über den Wahlkampf zur Bundestagswahl?

1 = "Fernsehen", 2 = "Zeitung", 3 = "Radio", 4 = "Internet", 5 = "persönliche Gespräche",

6 = "andere Quelle"

Wie häufig nutzten Sie folgende Quellen im Internet, um sich über den Wahlkampf zur Bundestagswahl zu informieren?

1 = "nie", 2 = "selten", 3 = "einmal im Monat", 4 = "mehrmals im Monat", 5 = "einmal pro Woche",

6 = "mehrmals pro Woche", 7 = "täglich"

- a. Nachrichtenportale (z.B. Spiegel Online, Süddeutsche Online, FAZ Online, Bild online, etc.)
 - b. Parteiunabhängige Gruppen in sozialen Netzwerken (z.B. Wahlzentrale, "Meine Stimme zählt!")
 - c. Internetseiten der Parteien
 - d. Profile von Kandidaten in sozialen Netzwerken
 - e. Internetseiten der Bundesregierung, der Landesregierung oder der Ministerien
 - f. Internetseiten von Politikern
 - g. Unterstützer Portale der Parteien und Politiker (z.B. teAM Deutschland, wahlkampf09)
 - h. Lesen von politischen Emails
-

M. Political participation online (English)

How often did you engage in the following activities during the federal election campaign?

1 = "never", 2 = "rarely", 3 = "once a month", 4 = "several times per month", 5 = "once a week",

6 = "several times per week", 7 = "daily"

- a. Donating to a political party
 - b. Participating in political polls
-

M. Political participation online (German)

Wie häufig waren Sie im Wahlkampf auf die folgenden Weisen politisch aktiv?

1 = "nie", 2 = "selten", 3 = "einmal im Monat", 4 = "mehrmals im Monat", 5 = "einmal pro Woche",

6 = "mehrmals pro Woche", 7 = "täglich"

- a. Online-Spenden an eine Partei
 - b. Beteiligung an politischen Umfragen
-

N. Opinion leadership behavior online (English)

How often did you engage in the following activities during the federal election campaign?

1 = "never", 2 = "rarely", 3 = "once a month", 4 = "several times per month", 5 = "once a week",
6 = "several times per week", 7 = "daily"

- a. Sending emails with political content, e.g. party information, to friends, acquaintances or colleagues
 - b. Publishing own political commentary or analysis on the Internet
 - c. Contributing to political blogs or bulletin boards
 - d. Twittering political content
-

N. Opinion leadership behavior online (German)

Wie häufig waren Sie im Wahlkampf auf die folgenden Weisen politisch aktiv?

1 = "nie", 2 = "selten", 3 = "einmal im Monat", 4 = "mehrmals im Monat", 5 = "einmal pro Woche",
6 = "mehrmals pro Woche", 7 = "täglich"

- a. Verschicken von Emails mit Parteiinformationen/Videos an Freunde, Bekannte, Arbeitskollegen
 - b. Eigene politische Kommentare und Analysen ins Netz stellen
 - c. Beteiligung an Foren und in Blogs zu politischen Zwecken
 - d. Twittern zu politischen Zwecken
-

O. Level of education (English)

What is your highest-level degree?

Categories 1-3 below = "below high school degree"

Categories 4-5 below = "high school degree"

Categories 6-8 below = "university degree"

O. Level of education (German)

Welches ist Ihr höchster allgemeiner Bildungsabschluss?

1 = "bin zur Zeit Schüler", 2 = "Hauptschulabschluss", 3 = "Mittlere Reife, Realschulabschluss, Fachschulabschluss", 4 = "Fachhochschulreife, Abschluss einer Fachoberschule", 5 = "Abitur, allgemeine oder fachgebundene Hochschulreife", 6 = "Abschluss Fachschule, Meister-, Technikerschule, Berufs- oder Fachakademie", 7 = "Fachhochschulabschluss", 8 = "Hochschulabschluss (Bachelor, Master, M.A., Diplom, Staatsexamen, Promotion)"

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