Lena Masch

Politicians' Expressions of Anger and Leadership Evaluations

Empirical Evidence from Germany

Nomos

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Acknowledgments

Table of Contents

List of Figures

List of Tables

13

List of Abbreviations

AfD	Alternative for Germany (Alternative für Deutschland)
ANES	American National Election Studies
API	Application Programming Interface
CDU	Christian Democratic Party (Christlich Demokratische Union)
CSU	Christian Social Union in Bavaria (Christlich-Soziale Union in Bayern)
DFG	German Research Foundation (Deutsche Forschungsgemeinschaft)
EASI	Emotions as Social Information (Model)
EMG	Electromyography
EU	European Union
FACS	Facial Action Coding System
fMRI	Functional Magnetic Resonance Imaging
FDP	Free Democratic Party (Freie Demokratische Partei)
GLES	German Longitudinal Election Study
MTurk	Amazon Mechanical Turk
OLS	Ordinary Least Squares
PEGIDA	Patriotic Europeans Against the Islamisation of the West (Occident) (Patriotische Europäer gegen die Islamisierung des Abendlandes)
PVV	Party for Freedom (Partij voor de Vrijheid)
SPD	Social Democratic Party Germany (Sozialdemokratische Partei Deutschland)

1 Introduction: Why Politicians' Emotion Expressions Matter

1.1 The Relevance of Studying Politicians' Emotion Expressions

Modern representative democracies are built on two core principles: contestation and participation (Dahl 1989). Hence, voting can be considered as the most important form of political participation in modern democracies. If citizens can freely choose among competing parties in an election, this process legitimizes the elected government and legislative in representative democracies. As a result, voting is often conceptualized as civic duty that citizens intend to express (Fiorina 1976). Since the second half of the 20th century, electoral research has determined decisive factors in individual voting behaviors. Early accounts of voting behavior have considered class voting and social networks as influential factors (Lazarsfeld et al. 1969), followed by a social psychological account of the Michigan model, which focuses on individual attachments towards a political party as long-term effects (Campbell et al. 1960). Taking the well-established Michigan model into account, electoral behavior can be explained by three factors. First and foremost, someone's party identification acts as a funnel of causality for all subsequent judgments, as it is a strong predisposition that is the product of one's upbringing and socialization. Consequently, political issues and candidate appearances are evaluated by individual voters as short-term effects (Campbell et al. 1960).

With a gradual decline of social cleavages and a shrinking manifestation of social classes, there has been a dealignment between political parties and societal groups across developed democracies since the 1980s (Dalton 1984; Dalton & Bürklin 2003; Dalton 2002; Dalton 2014; Arzheimer 2017). In an individualized society, stable long-term effects such as party identification lose importance, and short-term effects, such as political issues and candidate appearances, should gain momentum (Campbell 1960: 399). Likewise, voting decisions are made closer to the election date and the number of independents as well as swing voters has increased; as a result, short-term voting decisions have spread across the electorate (Roth & Wüst 2007: 402–406; Reinemann et al. 2013: 9). In addition to these societal developments across Western democracies, the mediatization and digitalization further shape the ways in which political issues and candidate appearances can affect voting decisions (Beck & Beck-Gernsheim 2002).

19

In the information age, media reports and visual cues are omnipresent. The internet enables citizens, and potential voters, to watch television and newscasts on-demand or even live-stream public appearances of party conventions – whenever they choose. Hence, potential voters can select the content they consume, which also includes the possibility to avoid politics altogether. However, even citizens with a low interest in politics might take notice of politicians and their appearances if video clips are trending online. Such video clips may be particularly noticeable when political *faux pas* or extraordinary statements occur and are caught on camera. Previous research has shown that online users share content more often when the content induces emotions high in arousal (Berger 2011). Such content could then reach citizens with at least a slight interest in politics. Therefore, the internet does not necessarily diminish the importance of TV appearances for politicians; on the contrary, the internet potentially reaches a broader audience as noticing an appearance of a political leader becomes even less restricted by time and place, as it had already occurred before with the advent of television (Meyrowitz 1985).

Studies on social media activities can show that TV appearances of political candidates even drive social media activity (Shah et al. 2015: 242). During U.S. TV debates, politicians' nonverbal communications, such as their facial expressions and gestures, are particularly talked about in these online discourses in real time (Shah et al. 2015: 242), highlighting the need for further insights into the candidate perceptions and their trait evaluations by viewers. Such inevitable effects of televised nonverbal communication on viewers have been discussed ever since television first started shaping mass communication and introducing visual cues as a predominant source of information (Frey 1999). Hence, the digital age might favor candidate appearances and the potential impact of candidate appearances on individual vote choices.[1]

The personalization of politics in modern democracies has been linked to television as a tool of mass communication (Meyrowitz 1985; Frey 1999). In presidential democracies, candidate appearances have traditionally been studied more closely than in parliamentary democracies as a result of the heightened amount of power that is vested in the president. Due to the decline of party alignments, the term *candidate-centered politics* has been coined (Wattenberg 1991); in contrast, German politics has been de-

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1 This trend is also reflected in a growing number of studies that focus on visual political communication in the digital age (e.g., Lalancette & Raynauld 2019; Spier et al. 2018; Veneti et al. 2019).

scribed in the past as lacking personalization (Kaase 1994). While campaign strategies became noticeably more *presidentialized* across political parties (Poguntke 2005: 77–79; Brettschneider & Gabriel 2002: 137), this development did not translate into a continuously growing influence of political candidates on individual voting decisions (Brettschneider & Gabriel 2002: 140). Contextual factors that can change between elections shape the impact candidate evaluations have on voting decisions (Brettschneider & Gabriel 2002: 153), such as the emphasis of political issues during election campaigns (Poguntke 2005: 80). In recent general elections, candidate evaluations affected individual voting intentions, especially candidates' trustworthiness and competence ratings (Ohr et al. 2013: 227), and candidate preferences were in some instances even influenced by a candidate's likeability rating (Klein & Rosar 2016: 104).

In non-democratic, totalitarian societies, dictators are often known for their urge to control their public image by censoring any unfavorable images. While the rule of law and freedom of the press prohibit such censorship in modern democracies, democratic leaders are still likely to care about their public image as a means to foster support. The public image of political leaders is not a modern phenomenon either. In the Roman Empire, the coinage of currencies was used to mint the emperors in a favorable light such as victors after a battle (Manders 2012). Since ancient times, the possibilities of self-presentation for political leaders have increased tremendously. Political leaders of all major parties in developed democracies use social media platforms such as Facebook and Instagram to curate their image. They also appear as guests on YouTube channels as well as the more traditional television talk shows. During election campaigns, TV debates between leading candidates gain particular public attention which is indicated by a high viewership. In all these varying forms of televised public appearances, the nonverbal communication of politicians is crucial to foster support (Frey 1999). Displaying certain emotions is one means of appealing to supporters (Glaser & Salovey 1998).

Due to present-day use of mobile devices such as smartphones and tablets, there is a potential for citizens to be constantly exposed to new information, which also includes political issues as presented in newspaper articles and online political discussions. While more information becomes available, issue orientation does not necessarily become more important, as it also becomes more challenging in *post-truth politics*, which raises the necessity for citizens to carefully consider the reliability of sources of information. This adds to the notion of *information overload*, a term that has been coined to describe the constant exposure to new information given

limited cognitive capacities (Bomann & Jones 2003). As current affairs are followed intensely by only a small percentage of the public, many voters use *information shortcuts* when participating in politics, for example when casting their votes in an election or signing an online petition. These information shortcuts are particularly crucial in cases of low information voting (Lau & Redlawsk 2001) and difficult decisions in times of complexity and uncertainty (Clarke et al. 2017). Widely used *information shortcuts* are heuristics such as party affiliations, ideological stereotypes, endorsements from trusted sources, polls, and candidate appearances (Lau & Redlawsk 2001: 953–954; Popkin 1995).

Some heuristics, such as ideological stereotypes, polls, and endorsements from political elites and institutions, are more likely to be applied by well-informed voters, compared to heuristics that are used by nearly everyone. These popular heuristics include party affiliations as well as candidate appearances (Lau & Redlawsk 2001: 958). However, this view has been challenged recently with some evidence that all voters apply candidate heuristics (Bucy 2011: 195), and other evidence that sophisticated voters are even more likely to apply candidate heuristics (Clarke et al. 2017). Regardless of their level of sophistication, voters generally tend to use candidate heuristics when confronted with difficult decisions in uncertain situations (Clarke et al. 2017: 769).

During the past two decades, a growing body of literature has focused on the personalization of politics (e.g., Bittner 2011; Garzia 2017; Lobo & Curtice 2014; Karvonen 2010), which states an increasing importance of candidate appearances on individual voting behavior (Karvonen 2010: 4). This view is contested, however, since some scholars have pointed out that candidate effects have remained stable since the advent of television (Garzia 2017: 646; Hayes 2009). Scholars agree on deeming candidate effects as being crucial even within parliamentary systems and parliamentary elections (Brouard & Kerrouche 2013; Ferreira Da Silva & Costa 2019: 117).

The effect of candidate appearances on voting decisions has been studied from several angles, from a focus on the candidates' attractiveness (e.g., Rosar et al. 2008; Jäckle & Metz 2017) to their competence ratings derived from visual cues (Ballew & Todorov 2007; Dumitrescu et al. 2015; Mattes et al. 2010; Spezio et al. 2008; Todorov et al. 2005). The latter studies showed that competence judgments based on visual appearances (pictures or short video clips) are even useful predictors of election outcomes (see also Benjamin & Shapiro 2009; Todorov et al. 2005).

In comparison to issue voting, candidate appearances have long been considered as less valid grounds for a vote choice from a normative perspective, especially in parliamentary democracies (Rosar et al. 2008: 65). More recently, candidate assessments based on candidate appearances have also been considered as affecting vote choices across election types (Dalton 2006: 217).

In a similar vein, previous studies indicate that images of candidates can spillover and shape the evaluation of political parties and even the issue-ownerships of political parties (Hayes 2005). As yet, such processes of reciprocal causation between party leaders and political parties have gained little attention in political science and have rarely been studied (Garzia 2017: 642). Nonetheless, some empirical evidence from Western European countries exists indicating that the evaluation of party leaders can affect citizens' party identifications (Garzia 2017: 643; Garzia 2013a; Garzia 2013b). Given this interdependence between key political figures and political parties, the impact of politicians' emotional expressions on candidate perceptions and their trait evaluations is relevant to the study of individual voting behavior.

A growing polarization of party systems can be observed in several developed democracies, especially across Europe. Populist right-wing parties have risen across Europe and openly expressed anti-establishment and/or anti-European sentiments (e.g., Akçali & Korkut 2012; Corbetta & Vignati 2014; Decker 2016). When doing so publicly their appearances are often combined with displays of anger by their key players or even contempt for other politicians and the political establishment as it was expressed by Donald Trump during the 2016 U.S. presidential election campaign (Redlawsk et al. 2018). In addition, compared to Hillary Clinton, Donald Trump used a heightened amount of emotional appeals during the election campaign (Nai & Maier 2018). Emotional expressions of anger/threat have been associated with those who challenge existing power structures (Bucy & Grabe 2008: 81) and are therefore more likely to be expressed by trailing candidates (Bucy & Grabe 2008: 84), or politicians of the opposition (Bucy & Grabe 2008: 90).

This rise of right-wing populism has also been linked to the emergence of a new social cleavage, a transnational cleavage of support and opposition towards supranational institutions and agreements (Hooghe & Marks 2018). This cleavage also reemphasizes existing cleavages such as capital and labor between winners and losers of globalization (Hooghe & Marks 2018). The emergence of such a new cleavage could potentially cause a realignment between parties and voters, in this case right-wing populist par-

ties and voters. However, not only are right-wing populism, nationalism, and protectionism on the rise and pose a threat to democratic values (most likely as a response to a more globalized world) – left-wing populist parties have also gained support. This is especially the case for countries whose economies have been hit hard by the financial crisis, such as Greece and Spain. Both the rise of Syriza in Greece and Podemos in Spain have been linked to the global financial crisis (Stavrakakis & Katsambekis 2014; Ramiro & Gomez 2017). Hence, the emotional appeals of populist parties and potential realignment processes between populist parties and voters could be crucial for the continuity of democratic societies. Political leaders are particularly crucial for populist movements (Mudde & Kaltwasser 2017: 62). The self-presentation as a prototypical "charismatic strongman" and a "simple man" are frames that are commonly used by populist leaders to appeal to the public, especially during election campaigns (Mudde & Kaltwasser 2017: 62; Grabe & Bucy 2009: 105–108). Therefore, the study of candidate evaluations can also add beneficial insights into the growing research on populism.

This book focuses on the emotional communication displayed by party leaders and key political figures in order to explore how emotion expressions affect candidate evaluations. Candidate appearances are often mediated and televised by mass media and are thereby predominantly asymmetric in nature. Emotional displays might affect trait inferences regarding trustworthiness, leadership skills and likeability and therefore gain particular importance in times when media attention shifts towards the candidate. As candidate appearance effects are widely studied with regard to the personalization of politics, the question arises as to whether politicians' emotional displays shape the evaluation of political candidates. Subsequently, voting decisions could be impacted.

1.2 Emotions and Emotional Displays

The study of emotions has long been neglected in political science, as its scientific discourse has been dominated by the rationalist approach and the rational choice paradigm with a strong normative preference favoring rationalism to emotions (e.g., Marcus 2000). In electoral research, this has traditionally resulted in attempts to model voting decisions according to the rational choice paradigm with a focus on issue voting (e.g., Bartels 1986). However, the social sciences and humanities have experienced an *affective turn* (Hoggett & Thompson 2012; Clough & Halley 2007); as a re-

sult even the model of the homo economicus has been frequently adjusted to acknowledge cognitive limitations, emotions, and feelings as being reasons for individual choices and actions (Kahneman 2003; Kaufman 1999; Chong 2013). As underlying driving forces of political decisions and behavior, emotions have gained more attention, especially within the field of political psychology. Consequently, many studies in political science have focused on emotions in recent years, and especially on emotional states of citizens, potential voters, and activists (e.g., Schoen 2010). The theory of affective intelligence (e.g., Marcus et al. 2000; MacKuen et al. 2007; Marcus et al. 2019) is a noteworthy contribution in the field and has consistently emphasized the importance of emotions, especially enthusiasm, fear, and lately anger, on citizens' cognitive information processing and lastly their voting decisions. When voters encounter new information, it is generally assumed that they use affective and cognitive mechanisms while processing the information, and subsequently forming attitudes and making political decisions (Redlawsk & Pierce 2017). When investigating the role of emotions for political behavior, especially political participation, negative-active emotions such as anger have gained particular attention: "Anger in particular has increased in importance as scholars uncover its role in motivating participation and partisanship" (Searles & Mattes 2015: 172).

Group-based anger has been considered as motivation for collective action and found that this kind of anger can lead to collective action tendencies: "All these results suggest that group-based anger and group efficacy predict collective action tendencies when one's in-group is disadvantaged" (van Zomeren et al. 2004: 654–655). Besides the field of collective action and political participation, emotions have also been considered as being decisive factors in mobilizing voters (e.g., MacKuen et al. 2007; Kalmoe 2019). In this light, it is not only relevant to study which emotions drive political beliefs and attitudes, but also how politicians' emotional displays – political leaders in particular – influence impressions of political candidates. Further research is needed to investigate whether these impressions alter attitudes towards politicians, and potentially even towards voting decisions. Compared to voters' emotional states, emotional expressions of candidates and political leaders have gained less scientific attention in recent years. Moreover, when they did, these studies have often focused on specific aspects of emotional expressions, e.g. verbal expressions. However, since emotional expressions are multifaceted, more research is needed regarding the impact of candidates' verbal and nonverbal emotional expressions; this also holds true for the effects of visual displays in general (Dumitrescu 2016).

Candidate appearances are likely to evoke affective responses in viewers: "there is little doubt that exposure to nonverbal communication generates emotion in viewers" (Dumitrescu 2016: 1669). When emotional expressions are part of these appearances it becomes even more likely that these appearances evoke emotions in viewers. Several mechanisms can explain affective emotional responses in interpersonal communications (van Kleef 2016: 37–55). The emotions of political leaders can be mimicked by viewers but do not necessarily have to lead to congruent reactions, i.e. anger leading to feelings of anger. Whether emotional expressions evoke congruent emotional reactions is likely to depend on the viewers' views, dispositions and the situational context in which the message is received. Since the underlying mechanism of candidate appraisals could also be based on cognition – consciously or pre-consciously, varying effects could alter how emotional expressions are perceived and affect candidate evaluations (for comparison see van Kleef 2016: 56–78).

Experimental research designs have been applied to study the impact of emotional expressions since the so-called "Dartmouth group" started their research on the impact of emotional expressions of U.S. presidents (e.g., McHugo et al. 1985; Masters et al. 1986; Sullivan & Masters 1988). During the mid-1980s this research group of political psychologists at Dartmouth University applied experimental tools to study the effects of politicians' emotional expressions on voters. Several studies analyzed varying aspects of viewers' responses including physiological measures (McHugo et al. 1985). These studies mainly differentiate three forms of emotional expressions based on an ethological perspective: happiness/reassurance, anger/threat, fear/evasion (e.g., Sullivan & Masters 1988). Since then, this categorization has been used to classify and study nonverbal behavior of political leaders (e.g., Bucy & Grabe 2008, Stewart et al. 2009b).

Ethological and social psychological arguments have been applied in order to explain the assessment of politicians' emotional displays (McHugo et al. 1985; Sullivan et al. 1991: 188; Sullivan & Masters 1988; Masters & Sullivan 1989a). However, this branch of research has only gained attention sporadically (Brader & Marcus 2013: 190), as only a few studies have been conducted that focused on emotional expressions by politicians (Bucy & Bradley 2004; Bucy & Grabe 2008; Bucy & Newhagen 1999; Glaser & Salovey 1998; Stewart et al. 2009a; Stewart, et al. 2009b; Stewart & Ford Dowe 2013; Stroud et al. 2005, Redlawsk et al. 2016; Redlawsk et al. 2018). One of the more recent attempts, Stewart and Ford Dowe (2013), investigated how former U.S. president Barack Obama's facial expressions are interpreted by viewers. The ethological arguments in some of these

studies base emotional displays on social group standings (e.g., Stewart & Ford Dowe 2013; Sullivan 1996; Sullivan & Masters 1988). Following this ethological framework, facial expressions of happiness/reassurance are typically displayed by leaders of social groups and hence, advisable for incumbent leaders who wish to remain in power. In contrast, facial expressions related to anger/threat are typically displayed by the political opposition wishing to defeat the incumbent. Furthermore, displays of fear should not be displayed by anyone pursuing a higher social standing within any given group (Schubert & Masters 1991). In the 1980s and 1990s, studies by the Dartmouth group showed that facial displays of happiness/reassurance had a positive impact on the ratings of Ronald Reagan (e.g., McHugo et al. 1985); negative-passive emotions of fear/evasion barely had a positive effect on his evaluation (Sullivan et al. 1991: 201). For negative-active emotional displays of Reagan, they found contrasting effects (Sullivan et al. 1991): "anger/threat excerpts were intermediate, generating moderately positive responses from supporters but not from critics" (Sullivan et al. 1991: 201). By providing varying party labels when presenting emotional expressions of a putative politician, party identification has also been established as a decisive factor for the evaluation of such emotional expressions (Stroud et al. 2005). Participants preferred candidates of the party they supported (Stroud et al. 2005: 37), and in the absence of party cues, they viewed strong emotional expressions as more favorable (Stroud et al. 2005: 38).

More recently, similar positive effects could be observed when analyzing facial expressions of Barack Obama (Stewart & Ford Dowe 2013). A few studies have recently dealt with negative-active expressions of political leaders (Redlawsk et al. 2016; Redlawsk et al. 2018). They differentiated between various forms of negative-active expressions, such as anger and contempt, and focused specifically on the effects of contempt on viewers. However, distinct expressions of anger have been widely neglected until recently, with the exception of some studies that have investigated how uncivil behavior might affect attitudes towards politicians and political trust (Mutz 2015; Mutz 2007; Mutz & Reeves 2005). Nonetheless, these studies have not focused on negative-active emotions such as anger and indignation, but rather analyze a specific side of negative-active emotions – incivility and attack politics. These forms of negative campaigning have been linked to politicians' expressions and viewers' perceptions of contempt rather than anger (Roseman et al. 2019). Hence, the effects caused by displays of genuine anger and indignation on candidate evaluation are likely to vary from the effects of incivility on candidate evaluations.

In the last decade, political psychology has firmly established that emotions are best studied as discrete emotions which resulted in a number of studies that have subsequently focused on specific emotions such as happiness, contempt, disgust, and anger (e.g., Brader & Marcus 2013: 175–182). Politicians' expressions of these discrete emotions have rarely been studied. Some studies imply that "the look of losing" for candidates at least partially consists of negative-passive emotions such as avoidance behavior (Bucy 2016). On the contrary, politicians' displays of confidence have led to positive evaluations (Dumitrescu et al. 2015).

Happiness has only gained attention sparingly (e.g., Stewart & Ford Dowe 2013; Stewart et al. 2015); while it is widely established to distinguish between negative emotions such as fear and anger, positive emotions have often been grouped together and analyzed as one (Brader & Marcus 2013: 175). A few studies have analyzed the impact of politicians' smiles on viewers and political supporters and highlighted the need to distinguish specific forms of smiles (e.g., Stewart et al. 2015). Hereby, the ability of leaders to reassure their supporters with positive emotional displays seems of particular importance in facilitating positive leadership evaluations (Stewart et al. 2015: 86). Likewise, voters' hopefulness towards presidential candidates has been linked to voting behavior (Finn & Glaser 2010). However, even displays of positive emotions are context-specific because they can be deemed as being inappropriate behavior in certain situations (Bucy & Bradley 2004). Given those situations, strategic displays of positive emotions could severely backfire and diminish politicians' approval ratings if they are perceived as inadequate or inauthentic (Bucy & Bradley 2004).

Besides happiness, humor and wit are rhetorical devices that can foster support and improve leadership evaluations (e.g., Carpenter et al. 2019; Stewart 2011). Likeability ratings are particularly susceptible to displays of self-deprecating humor, which can increase politicians' likeability (Stewart 2011). Other-deprecating humor at the cost of someone else however, can backfire for politicians (Stewart 2011). Thus, the specific context of emotional displays, nonverbal behavior and verbal utterances is likely to influence cognitive appraisals by viewers and following leadership evaluations.

In a similar vein, displays of contempt or disgust of political competitors might co-occur with anger in a same speech or appearance; their potential effects, however, could vary significantly from anger expressions. Voters who experience contempt towards candidates are less likely to vote for such candidates (Redlawsk et al. 2018). Furthermore, politicians might implement a disgust rhetoric to foster support on issues of morality; however, such a distinct emotional rhetoric can lead to a backlash against the speak-

er in parts of the electorate (Gadarian & van der Vort 2018: 539). Likewise, aggressive metaphors can be evaluated positively – at least within specific sociodemographic groups that show a high number of individuals with an aggressive personality trait (Kalmoe 2019). Another experimental study provides empirical evidence that anger can lead to backlash effects that lower likeability and competence ratings compared to more neutral messages (Van't Riet et al. 2019). Additionally, the study also showed that these effects can be moderated based on participants' predispositions towards the political messages (Van't Riet et al. 2019). In order to understand the occurrence of backlash effects, it seems necessary to distinguish the various types of anger and to consider the circumstances of emotion expressions.

While emotional expressions of politicians have gained some attention by political scientists, effects of emotional displays by German politicians on German citizens have rarely been studied empirically. The impact of German politicians' nonverbal communication on the evaluation of their character traits has been analyzed with student samples from other countries in order to avoid previous exposure effects (Frey 1999: 111). In addition, an early study focused on the frequencies of emotional displays on German television (Masters et al. 1991). The impact of emotional expressions by German political leaders on the German public has not been studied systematically. Most assumptions about the impact of emotional displays on viewers are derived from findings based on American political culture, especially U.S. presidential candidates (see also Brader & Marcus 2013: 190) and a few findings from France (Masters & Sullivan 1989a; Masters & Sullivan 1989b). Conducting a similar design in Germany provides a crucial cross-cultural comparison of emotional displays. For example, the North American culture has been known to be more emotionally expressive than other cultures (Barrett 2017: 34). Previous studies have also shown different effects of anger expressions in France and the U.S. Hence, it is insightful to gain further evidence on the impact of emotional expressions on viewers. In addition, evidence from parliamentary systems has been lacking.

Presidential systems place more emphasis on their presidents and presidential candidates as potential political leaders, whereas voters in parliamentary systems typically vote for the party instead of political candidates. As a result, the evaluations between parties and politicians are likely to be intertwined in parliamentary systems (Dalton 2006: 217). Therefore, it is worthwhile replicating these previous studies at a different time, place, and within a different cultural context, one in which political candidates have

traditionally been less important. In addition to the replication of earlier findings within a different cultural and political context, the experimental design is modified and extended based on earlier findings in order to investigate the possible impact of emotional displays on viewers. The need for such a replication study, complementing prior research on emotional expressions and the impact of emotional messages has been pointed out (Brader 2011: 344).

Most recently, a growing political polarization has been observed in several established Western democracies. This holds true for the electorate as well as the political elite. An increasing divide between voters has been found, whereby moderate views and sympathies towards the previously established mainstream parties are less widespread. Additionally, a social sorting of partisans has taken place in some countries, such as the U.S. (Mason 2018; Mason & Wronski 2018), so that both main parties have a distinguishable clientele with unique sociodemographic characteristics. Since populist parties – especially right-wing populism with nationalist views – have been electorally successful across Europe in recent elections, scholars have shifted their attention towards voters' emotions and emotional appeals when investigating the lure of populist parties (e.g., Salmela & von Scheve 2018). In this light, a noticeable number of contributions have focused on anger as a mobilizing force of political participation and protest (e.g., van Troost et al. 2018), especially with regard to right-wing authoritarian activities and support (Marcus et al 2019; Webster 2018). Previously, a large body of research has focused on the role of anxiety for political information processing, while the role of anger and complexity of concurrent emotions has been neglected (Marcus et al. 2019: 121, 130). Anger has gained more attention in order to explain support for authoritarian ideologies, distrust in supranational institutions such as the EU, reactions to terror attacks and voting behavior (e.g., Marcus et al. 2019; Vasilopoulou & Wagner 2017; Vasilopoulos et al. 2019; Wagner 2014). Based on the affective intelligence theory (for comparison see Marcus et al. 2000; Marcus 2002), threatening information can induce anxiety and anger concurrently (Marcus et al. 2019: 110) or trigger anger on its own (Marcus et al. 2019: 111). In contrast to a state of uncertainty that could evoke anxiety, the individual experience of anger is seen as a response to perceived norm violations and particularly common for citizens with strong prior moral convictions (Marcus et al. 2019: 120). The predominant experience of anger subsequently fosters the reliance on heuristics when forming political decisions (Marcus et al. 2019: 117). Candidate appearances can be

used as one fast heuristic in individual voting decisions (Lau & Redlawsk 2001).

Therefore, this book focuses on emotional expressions as the political communication strategy of politicians. These emotional expressions might be displayed intentionally, while they could also mirror true emotions. Likewise, these emotional expressions could evoke affective responses from viewers or evoke cognitive processing followed by an appraisal of the situation. Affective and cognitive processing are the two main pathways when processing emotions as social cues (van Kleef 2016). Expressions of anger might not necessarily evoke anger, since the social context is key when a situation is appraised cognitively. Politicians' anger expressions could evoke anger, if it is an affective reaction towards a common target (Hareli & Hess 2010; de Melo et al. 2012). Anger expressions might simultaneously lead to a positive appraisal of the politician who displayed anger. Following the idea of reverse appraisal, observers evaluate a social situation based on its context-specific setting – even unconsciously or pre-consciously. Hence, minor alterations of the social setting can alter the outcome of anger expressions.

This contribution aims to shed some light on the potential impact of anger expressions on voters and to provide a general framework for the study of politicians' emotional expressions regardless of their ideology and communication style. To put it differently, this book asks how emotional expressions such as anger and indignation impact the evaluation of politicians and political leaders. The theoretical framework of this study should be applicable to all communication settings within the political sphere.

The book sets out to analyze these effects empirically by focusing on politicians who were members of parties which were part of the 17th and 18th German Bundestag, i.e., party members of the CDU/CSU, SPD, Greens, FDP and the Left. Besides focusing on the evaluation of politicians as a social group in a stereotypical manner, this study investigates emotional expressions by three key political figures at the time in more detail - Angela Merkel, Sigmar Gabriel and Gregor Gysi.

Due to Angela Merkel's long-time role as chancellor, she is widely known by the public and she is highly visible on German television. At the time the experiment was conducted – in the spring of 2015 – Sigmar Gabriel was leader of the Social Democratic Party, and Minister for Economic Affairs and Energy as part of the grand coalition between the CDU/CSU and the SPD. By contrast, Gregor Gysi was the parliamentary leader of the Left during this time. All three politicians have been in politics for a considerable period of time, whereby Merkel was by far the most

well-liked politician out of the three in the spring of 2015. The following Figure 1 displays the overall ratings of the three politicians since 2000 and highlights the period of data collection.

Figure 1: Overall Ratings of Angela Merkel, Gregor Gysi and Sigmar Gabriel
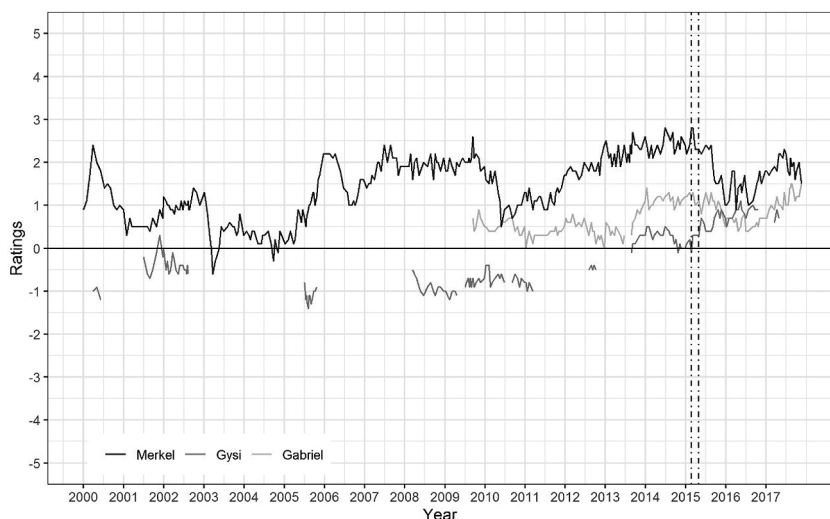
Note: The figure displays assessments according to scalometer ratings from 01/2000 to 12/2017 based on the Politbarometer (Berger et al. 2001a; Berger et al. 2001b; Berger et al. 2002a; Berger et al. 2002b; Forschungsgruppe Wahlen 2015a; Forschungsgruppe Wahlen 2017). The vertical dashed lines indicate the period in which the experimental data with three panel waves were collected. Author's own illustration.

The findings of these case studies will provide a deeper understanding of the impact of anger expressions by politicians. Two of the three key politicians belonged not only to the government at that time, but also represent mainstream parties. In contrast to traditional catch-all parties, the Left was the largest opposition party within the German Bundestag at the time of the data collection and can be regarded as a left-wing populist party (e.g., Bakker et al. 2016a). Hence, the impact of anger expressions can be compared for these three politicians who vary with regard to their status within the political system of government and opposition as well as in terms of the party types they represent.

Emotional expressions can be seen as one channel of information, cues or signals which are used to make social inferences about others and shape

32

how persons are perceived (Hareli & Hess 2012; Hochschild 2012). Hence, this social psychological axiom of person perception also applies to the evaluation of politicians. Before this relationship is explored in more detail, it is necessary to determine what is understood as emotion and emotional expressions. A multitude of concepts exist which define emotions differently and emphasize varying functions of emotional expressions. The structure of emotions is discussed in the following Subchapter 1.2.1.

1.2.1 The Structure of Emotions

While the definition of emotional states is discussed controversially, Parrott (2004) suggests that emotions are "best thought of as processes that unfold in time, involving a variety of components" (Parrott 2004: 5). Cognitive evaluations of situations are such crucial components, so-called appraisals (Parrott 2004: 5; Scherer 2003). Taking appraisal theory into consideration, the following definition can be applied: "an emotion can be loosely defined as a reaction to personally significant events, where 'reaction' is taken to include biological, cognitive, and behavioral reactions, as well as subjective feelings of pleasure or displeasure" (Parrott 2004: 6).

Psychological research has studied emotions and the three main angles regarding their physiological, cognitive, and social and cultural implications (Parrott 2004: 18). This book focuses predominantly on the social function of emotions and emotional expressions. The social signaling function of emotions has recently gained support and scientific attention (Crivelli & Fridlund 2018; Fischer et al. 2019). Through such an evolutionary or social psychological approach, the focus shifts from the internal state of the person who experiences the emotion to the emotional expression in a social situation. As Masters (1991) puts it: "Nonverbal cues are social signals – and as such, their relationship to the inner state of an individual may often be less important than their function as mechanisms of interaction and social regulation" (Masters 1991: 167). Emotions are not usually freely expressed without some form of regulation. The social conventions for displaying emotions can also be described by "display rules" that exist within societies (Ekman & Friesen 1975; Hochschild 2012). Likewise, emotion expressions can signal violations of norms and societal standards (Hareli et al. 2019).

33

The Valence Model

Earlier research in political psychology has applied the two-dimensional valence model (see Steenbergen & Ellis 2006: 109). The valence approach classifies emotions into positive and negative emotions. This dichotomous classification provides the most basic distinction possible. It distinguishes between positive emotions (such as happiness, pride, hope) and negative emotions (such as anger, anxiety, fear) without any further distinction between the discrete emotions. Due to its simplicity, the valence approach is commonly implemented in sentiment analysis tools, which are used in quantitative text analysis (e.g., Kouloumpis et al. 2011). One well-known contribution within political psychology is the theory of "the rationalizing voter", in which Lodge and Taber (2013) base their assumptions on the theory of motivated reasoning including a valence approach towards emotions (Lodge & Taber 2013). However, the valence approach is often seen as being insufficient, particularly so in political psychology. Based on previous research, Redlawsk and Lau (2013) also deem the valence approach to be insufficient for studies in political psychology and highlight the importance of discrete emotions: "Instead, discrete emotions – such as anxiety, enthusiasm and anger – are key to understanding affect" (Redlawsk & Lau 2013: 154). This view is shared by several political psychologists and political communication scholars (e.g., Marcus et al. 2006: 34–35; Steenbergen & Ellis 2006: 109–110; Grabe & Bucy 2009: 101; Petersen 2010: 357). According to Steenbergen and Ellis (2006), studies have shown that the valence approach is insufficient for the study of negative emotions:

> "[…] it is sometimes necessary to discriminate between two different types of negative affect: anxiety (e.g., feeling afraid, anxious, uneasy, or worried) and aversion (e.g., feeling angry, bitter, contemptuous, disgusted, hateful, loathing, or resentful […])." (Steenbergen & Ellis 2006: 109)

The need occurs because emotions of the same valence are rooted in different antecedents (Steenbergen & Ellis 2006: 112), and therefore can result in varying responses. Put differently, discrete emotions can have "distinct triggers and effects" (Petersen 2010: 357), which need further consideration. Some discrete emotions cluster together as a "family of emotions" (Brader & Marcus 2013: 175).

Marcus, MacKuen, Wolak and Keele (2006) emphasize the distinguishable features of negative emotions, and the distinct role of anger within the circumplex model (Marcus et al. 2006: 35). This assessment is based on a study by Bodenhausen, Sheppard and Kramer (1994), who demonstrate

that anger and sadness affect social information processing differently when these emotions are experienced (Bodenhausen et al: 1994: 57–59).

Similarly, the varying distinct features of negative emotions have also been highlighted when focusing on the affective state of the receiver, whereas positive emotions are assumed to manifest in less distinct, more coherent positive feelings (Isbell et al. 2006: 57).

By pointing out that emotions with a negative valence can differ substantially in terms of their experiences and consequences (Isbell et al. 2006: 65), the valence model appears as insufficient for a detailed analysis of the impact of negative emotional expressions by political leaders. Consequently, in recent years the valence approach has been applied less frequently in political psychology, which has mostly shifted towards the analysis of discrete emotions, particularly in assessing the impact of voters' emotional dispositions on their information processing and their voting behavior (e.g., Banks & Valentino 2012; Mattes et al. 2017; Small & Lerner 2008).

The Circumplex Model

The circumplex or dimensional model has been developed subsequently to the concept of emotional valence (Russell 1980). In addition to their valence, it classifies emotions into their level of arousal: high and low (aroused and calm). This arousal dimension can also be referred to as activation dimension (Bakker et al. 2014; Hill et al. 2013; Scherer 2005) because it represents the varying degrees of physiological, mental, and physical activity of emotions (Bakker et al. 2014: 409; Scherer 2005). The level of activation can be distinguished as active or passive (Scherer 2005: 720). Following this distinction along two dimensions, four categories of emotions exist: positive-active, positive-passive, negative-active and negative-passive emotions. Discrete emotions can be distinctively assembled within these four categories; however, the circumplex model has been criticized for its circular arrangement of emotions. This model has categorized negative emotions into "activated" and "unactivated" and thereby placed anger in close proximity to fear (Russell & Barrett 1999: 808). Both emotions show high levels of arousal or activation. For this reason, it has been discussed whether anger is in fact in closer proximity to enthusiasm than previously believed (Brader & Marcus 2013: 179). Enthusiasm as well as anger show high levels of power and dominance, while fear is linked to low levels of dominance (Mehrabian & Russell 1974; Bakker et al. 2014). Therefore, a third dimension of dominance should be reconsidered when classifying emotions (Bakker et al. 2014). Dominance is linked to feelings of being in control (Mehrabian & Russell 1974) and a coping potential due to control

35

and power in social situations (Scherer 2005: 722). By considering a third dimension, emotions such as fear and anger can be clearly distinguished. Another circumplex model is Plutchik's "wheel of emotions". In this model anger is placed opposite to fear and therefore distinguishes these two emotions clearly (Plutchik 2001).

Emotions as Discrete Emotions

The study of emotion research has emerged as a subfield of psychology. Early accounts of the evolution of emotional expression date back to Darwin (Darwin 1965). The structure of emotions has since been studied systematically and widely discussed for more than four decades. In emotion research, scholars have largely agreed on the existence of a few distinct universal basic emotions (Ekman & Friesen 1971; Ekman 1992). Despite this overall agreement, no consensus exists regarding the actual number of distinct basic emotions. Most scholars suggest several basic emotions ranging between eight and twelve discrete emotions (see also Brader & Marcus 2013: 170), although the distinct number of existing discrete emotions remains controversial within the field of emotion research. More recent research discusses up to 17 potential discrete emotions (e.g., Ekman & Cordaro 2011). Anger is commonly considered to be a basic emotion.

Compound Emotions

Prior empirical research has recently found that "compound emotions" exist (Du et al. 2014). The term "compound emotions" refers to two discrete emotions that form a new and distinguishable emotion. In an experiment, participants were asked to display reactions towards certain events and occurrences. When asked to imagine either a positive or negative surprise, participants formed facial expressions that were clearly distinguishable from each other. Hence, the combination of two discrete emotions (surprise and joy vs. surprise and disgust) led to different facial expressions. Therefore, some scholars discuss compound emotions as being emotions in their own right (Du et al. 2014). The research into compound emotions also aligns with a recent development in emotion research to consider further emotions as discrete emotions (Ekman & Cordaro 2011), whereby Ekman & Cordaro discuss up to 17 emotions as being discrete, which is a noticeable extension of the traditional six discrete emotions that had been established since the early stages of emotion research by Ekman and colleagues (Ekman & Friesen 1971; Ekman et al. 1972).

The valence approach, however, is often too broad and more nuanced evaluations of a communicative context need to be considered when emo-

tions are expressed by politicians, for example character frames and narratives (Grabe & Bucy 2009: 101). By focusing more specifically on anger as a negative-active emotion, which can easily be accompanied by indignation, wrath, and other strong negative emotions of the same nature, a more nuanced differentiation can be reached. Negative-passive emotions such as sadness and hopelessness, are not considered within the negative-active expression of politicians, since these emotions are clearly passive emotions which could potentially lead to different evaluations. Early studies in political science differentiate between politicians' expressions of anger/threat, fear/evasion and happiness/reassurance (McHugo et al. 1985; Sullivan & Masters 1988; Bucy & Grabe 2008). This three-factor model of emotional expressions can be regarded as a practical compromise in the field of politics between the valence approach and discrete emotions. The empirical structure of emotions expressed by German politicians is discussed in more detail in Subchapter 4.3.1. This book focuses particularly on a range of negative-active emotional expressions that can be characterized by a negative valence, a high level of arousal, and a high level of dominance or coping potential. While such a classification is not commonly used in political psychology, it enables this book to focus on anger and a range of closely related emotional expressions that can include outrage, indignation, and contempt, while it does not entail negative emotions with low arousal, or high arousal and low coping potential, such as fear. Emotions with low arousal and/or low coping potential are classified as "passive" in this book. The meaning of the discrete emotions within the group of "negative-active" emotions is discussed in more detail in the next section.

1.2.2 Emotion Expressions of Anger and Indignation

According to evolutionary psychologists like Ekman (1992), anger is a universal basic emotion, while some biologists have claimed that anger evolved later as a social function to be distinguished from disgust (Jack et al. 2014). Carver (2004) describes anger as a neurobiological reaction of approach towards frustrating setbacks, resistance, or blockages when pursuing (personal) goals (Carver 2004: 7; Carver & Harmon-Jones 2009). This view is further shared and elaborated on by political and social psychological research (Searles & Mattes 2015: 172; Brader & Marcus 2013: 179–180).

In the social-psychological literature, anger is discussed as having two sides. One side is a negative expression of negative emotions. However, anger is always aimed at something or someone and addresses an object

cognitively. Therefore, anger can have a positive component which represents (justified) anger towards the present state of affairs or individuals. The positive side of anger has only recently found recognition within the literature of social psychology (Hess 2014). The trade-off between emotions and reason has been discussed since the days of ancient Greek philosophers (see also van Kleef 2016: 1; Hess 2014: 55), and so the potential positive side had already been mentioned by Aristotle:

> "[…] since those who do not get angry at things at which it is right to be angry are considered foolish, and so are those who do not get angry in the right manner, at the right time, and with the right people. It is thought that they do not feel or resent an injury, and that if a man is never angry he will not stand up for himself; and it is considered servile to put up with an insult to oneself or suffer one's friends to be insulted." (Aristotle: Nic. Eth. 1126a)

Hess (2014) shows that not only has the positive side of anger been acknowledged in ancient Greece, but also that its negative side and destructive power have been discussed as least since ancient Rome with Seneca's "De Ira" (Hess 2014: 55). Seneca's letter "De Ira" aims at providing advice on how to regulate emotions and particularly anger, which Seneca describes as the most maddening and destructive emotion of all:

> "You have importuned me, Novatus, to write on the subject of how anger may be allayed, and it seems to me that you had good reason to fear in an especial degree this, the most hideous and frenzied of all the emotions. For the other emotions have in them some element of peace and calm, while this one is wholly violent and has its being in an onrush of resentment, raging with a most inhuman lust for weapons, blood, and punishment, giving no thought to itself if only it can hurt another, hurling itself upon the very point of the dagger, and eager for revenge though it may drag down the avenger along with it. Certain wise men, therefore, have claimed that anger is temporary madness." (Seneca LCL 214: 106–107)

The destructive side of anger is known in many diverse cultures across the world (Parkinson et al. 2005: 77–81), where anger is often seen as destructive or dangerous (Parkinson et al. 2005: 79). This assessment holds true particularly for collectivist societies (Parkinson et al. 2005: 79). In individualist societies anger can also be connected with assertiveness and seen in a more positive light. The two sides of anger in individualistic societies are described as follows: "[…] anger does not seem to be represented solely

seen in disruptive or destructive terms in individualistic societies, but is also seen as a means to emphasize one's rights, or to put right wrongs" (Parkinson et al. 2005: 80).

While Hess (2014) also notes these two distinct sides of anger, additional features of anger become apparent when focusing on cross-cultural comparisons. The English word "anger" is used in a broader sense than in other languages (Wierzbicka & Harkins 2001: 5). The Latin word "ira" could also be translated as "wrath", which connotes with rage and quick, rash, unreflective decisions. Seneca's fears and worries about anger are closely related to these elements of wrath and thus anger as a broader category. However, anger does not necessarily have to involve a "blind rage" or "irascibility" and Seneca noted that already himself: "An angry man may not be an irascible man; an irascible man may, at times, not be an angry man" (Seneca LCL214: 116–117).

"Anger" is used to describe a basic emotion within the English language and combines several varying aspects that are distinguished with several nouns in other languages and cultural contexts. Anger can be seen as "a basic or superordinate emotion category" (Durst 2001: 126), a broader category that does not exist in several other languages, such as German, Mandarin, or Russian (Barrett 2016; Durst 2001; Wierzbicka & Harkins 2001: 5).

Since this study focuses on German politicians and politics, the German linguistic concept of anger seems to be worth mentioning, since language represents culture. A semantic analysis by Durst (2001) shows that no single German counterpart exists that equally conveys the broad range of meanings to anger (Durst 2001: 117), with a main difference of the broadness that anger encompasses: "anger/angry seems to cover a wider range of use than each of the German words in question" (Durst 2001: 116). The German language has been said to commonly distinguish between three kinds of anger, namely rage/fury ("Wut"), anger/annoyance ("Ärger"), and wrath ("Zorn") (see also Barrett 2016; Durst 2001). Further negative components of anger are discussed as "bad anger" ("böse") (Durst 2001: 117), while more positive aspects are discussed as moral "outrage" or "indignation". These distinctions exist within the English language as well (Wierzbicka & Harkins 2001: 5):

> "Anger is indeed intuitively simpler than related emotion concepts like outrage or indignation (in English), which are often explained in terms of it. For example, outrage is considered to be a 'stronger version' of anger, and indignation to be anger arising from some specific offence or injustice. Thus it may appear that 'anger' is basic to a num-

ber of other emotions, and in lexicography as well as psychology there is a well established tradition of defining complex emotions in terms of ones that appear to be simpler." (Wierzbicka & Harkins 2001: 5)

Wrath and anger can certainly differ, while wrath is more closely related to the madness, unpredictability, and unstableness described by Seneca.[2] Seneca has also acknowledged these different aspects of anger when relating the lack of linguistic differences for aspects of anger in Latin compared to ancient Greek:

> "The other categories which the Greeks, using a multiplicity of terms, establish for the different kinds of anger, I shall pass over, since we have no distinctive words for them; and yet we call men bitter and harsh, and, just as often, choleric, rabid, clamorous, captious, and fierce – all of which designate different aspects of anger." (Seneca LCL 214: 116–117)

By illustrating these cultural specifics that have existed since the classical period, different aspects of anger come to mind and further emphasize Hess's claim for the need to "distinguish anger from hostility and aggression" (Hess 2014: 56). While those aspects can certainly accompany anger, they do not have to do so per se. Likewise, anger is distinct from contempt and disgust, while those emotions can also occur in conjunction. When focusing on its positive side, anger can be interpreted as an approach emotion and signal strength to observers (Hess 2014: 56–58), or as taking a moral stance, thereby signaling a moral character (Parrott 2019).

According to Haidt (2003), anger and other negative-active emotions such as contempt and disgust can be seen as moral emotions and more specifically as "other-condemning emotions" (Haidt 2003: 855). Haidt (2003) defines anger along with elevation, compassion, and guilt as prototypical moral emotions (Haidt 2003: 853). To illustrate this point, Haidt compares the selfish emotional life of a homo economicus, who is only interested in his own affective state and well-being with the range of potential emotional states for homo sapiens in general (Haidt 2003: 855, 866). Haidt calls anger "the most underappreciated moral emotion" (Haidt 2003: 856) by pointing out that anger has often been described regarding its negative aspects, but it has rarely been seen as the well-intentioned reac-

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2 The German title of Seneca's "De Ira" is typically translated in German with "über den Zorn" [on wrath] instead of "über den Ärger" [on anger]. This ambiguity has been also noted by Durst (Durst 2001: 116).

tion it can be (Haidt 2003: 856), for example when it emerges as a result of perceived injustices (Haidt 2003: 856; Tavris 1989: 261). While anger can be felt out of self-interest, because one feels unfairly treated, one's anger can be evoked due to the unfair treatment of others, if it is perceived as unfair:

> "Anger may be most frequently triggered by perceived injustices against the self, and sympathy may be most strongly felt for one's kin, but the point here is that some emotions are easily triggered by triumphs, tragedies, and transgressions that do not directly touch the self, whereas other emotions are not." (Haidt 2003: 854)

As a moral emotion, anger can evoke action tendencies due to its approach character towards injustices (Haidt 2003: 857). This mechanism of attack not only results in destruction, it also facilitates the functioning of society by ensuring cooperation among members of society, the adherence to laws and rules. This can also extend to explain acts of reciprocal altruism (Haidt 2003: 855; see also Trivers 1971), which would not be feasible between rational actors with a mere self-interest in their own advancements.

This is especially the case in questions of moral violations regarding justice and injustice; from an evolutionary standpoint it can be argued that anger has emerged to enforce morally adequate behavior within a given social group (Haidt 2003; Hess 2014; Trivers 1971): "anger can be conceived of an emotion employed to condemn violations linked to notions of justice, freedom, fairness, individualism, individual choice, and liberty" (Hess 2014: 58).

One important aspect in the evaluation of emotional expressions is the level of control inherent in the emotional expression that is conveyed by the emoter. In contrast to more submissive emotional expressions, expressions of anger are typically associated with a high level of control over the situation, as pointed out by Hess (2014): "Thus an angry person experiences a motivation-incongruent (low goal conduciveness) unpleasant state but considers the situation to be potentially under his or her control (high coping potential)" (Hess 2014: 60).

This high coping potential is expressed by the approach of the target, which can then be interpreted as independence, assertiveness, and self-confidence (Parkinson et al. 2005: 80). These positive assessments are particularly widespread in individualistic cultures, despite the fact that anger can also violate social conventions and display rules. In collectivist societies – such as Japan – anger is more commonly perceived as a violation of the societal rules and as aggressive behavior (Parkinson et al. 2005: 80). There-

fore, anger expression could directly impact the candidate evaluation of character traits, especially along the dimension of competence. This point is also highlighted by Hess (2014): "In sum, angry individuals are perceived as threatening but at the same time the anger can signal strength and the ability and motivation to address bad situations" (Hess 2014: 63).

When the goal of anger expressions is helping others, these expressions might even have positive effects on the evaluation of someone's empathy (Hess 2014: 58; Kinder 1986: 241). In the context of politics, such anger expressions could be aimed towards policies or politicians who represent certain policies. However, it has to be noted that other social psychologists such as Parkinson et al. (2005) deem a moral component of indignation as not being a necessity.

In contrast to outbursts and indignation, a vast amount of research in political science has previously focused on negative campaigning as well as incivility, a form of negativity that is accompanied by hostility and attacks aimed at other politicians (Mattes & Redlawsk 2015; Mutz 2015; Mutz 2007; Mutz & Reeves 2005; Nai & Walter 2016). Although such incivility can be shown in conjunction with anger, it is certainly a specific component of anger that can be distinguished in its own right.

Previous research on negativity and negative campaigning has found that personal attacks on politicians' character traits are more likely to be evaluated as unjust by viewers compared to policy attacks (Benoit 2016: 40). Furthermore, uncivil behavior that classifies as "incivility" has potentially negative effects on politicians' ratings and evaluations (Mölders & van Quaquebeke 2017). Moreover, Walter and Nai (2016) describe a possible "boomerang" or "backlash" effect that might occur as a result of negative campaigning (Walter & Nai 2016: 98), whereby displays and expressions of negativity in the form of attacks on other politicians and their policies might lead to negative evaluations of the attacker. Lau and Redlawsk (2016) also describe frequent potential backlash effects on those politicians who sponsored negative advertisements (Lau & Redlawsk 2016: 249). Negative advertisements appear "when a candidate criticizes the opponent, his or her policies or party" (Lau & Redlawsk 2016: 253).

The many facets of anger underline the claim that anger is a complex emotion whose expressive evaluation depends heavily on the contextual setting. Emotions are expressed in specific moments for various reasons; this context is likely to influence the evaluation of emotional expressions: "Emotions (more so than moods) are context specific" (Gooty et al. 2010: 982).

While this book mainly focuses on expressions of anger in a broad sense of negative-active emotions, it should be noted that positive emotions are not of lesser complexity. A simple smile can be distinguished as to whether it appears genuine and real ("Duchenne smile") or forced and faked ("volitional smile"), thereby directly influencing its evaluation (Ottati et al. 1997: 1154; see also Stewart & Ford Dowe 2013; Stewart et al. 2015). Positive emotions can also have negative sides and lead to unfavorable outcomes (Parrott 2014: 282–285), especially if they are seen as inappropriate (Bucy & Newhagen 1999). However, the impact of positive emotions on the evaluation of politicians is not the focus of this book.

As a social function, "anger serves to blame others or recruit allies in resistant situations" (Parkinson et al. 2005: 216). Hochschild (2012) presents an overview of discrete emotions and the momentary focus of the person who experiences the emotion (Hochschild 2012: 240–241). For anger, Hochschild (2012: 240) describes an experienced discrepancy between the current situation and a preferred outcome. According to Hochschild, the individual as a causal agent feels as if they could attack if they wanted to. Indignation is similarly classified, while Hochschild adds the notion that the individual agent disapproves of the current state of affairs (Hochschild 2012: 240). Similar to Haidt's classification of "other-condemning emotions" (Haidt 2003), Hochschild classifies disgust and contempt as being partially related to anger and indignation (Hochschild 2012: 241).

The study of negative emotions is particularly relevant because negative emotions could potentially have a stronger impact on voters than positive emotions. In the context of negative campaigning, Lau & Redlawsk noted that negative ads are more memorable than positive ads (Lau & Redlawsk 2016: 250). Their finding is in line with wider psychological research claiming that negative events are more memorable than positive events (Baumeister et al. 2001).

Like the focus on personal attacks in studies dealing with negative campaigning, anger has often been assessed as having an interpersonal target whereby the opposing candidate is often held accountable for the undesirable present state (Parkinson et al. 2005: 202; Smith & Lazarus 1993: 238).

However, the focus on another person is problematic, since nonhuman objects – such as cars and computers – can be the reason or target of someone's anger (Crivelli & Fridlund 2018: 8; Parkinson et al. 2005: 203). Anger could also be related to abstract concepts such as ideas, ideologies and political issue positions. Building on this assumption, blaming someone else is not a necessary condition for anger. Anger can be caused by some form of resistance that prevents someone from "getting through", in-

cluding resistance in social interactions and arguments, if a conversational partner refuses to consider one's viewpoint: "when someone just won't listen or acknowledge our point (when we can't 'get through' to them)" (Parkinson et al. 2005: 203–204).

1.3 Outline of the Book

To date, few studies have investigated the association between politicians' emotional expressions and candidate – or leader – evaluations.[3] Hence, this book aims to fill the existing gap with regard to the effects political leaders' anger expressions can have on citizens. In order to do so, it begins by reviewing the relevant literature on candidate appearances, and candidate evaluations in the light of emotional expressions, particularly anger expressions. The second chapter also introduces potential underlying causal mechanisms that shape the perception of candidate evaluations. Theoretical expectations about the impact of anger on candidate evaluations are then presented while considering theoretical contributions in the areas of political psychology, social and evolutionary psychology as well as sociology. It systematically explores key factors of social interactions and investigates their implications for the appraisal of anger expressions.

The theoretical background of this book is followed by a third chapter that presents empirical evidence for the prevalence of anger expressions by German politicians on German television, particularly as seen in the news and political talk shows. The data used in this book were collected as part of a larger research project funded by the German Research Foundation (DFG) on politics and emotions.[4] A media content analysis of German news and political talk shows was conducted in order to determine the prevalence in which emotional displays can be seen on TV. These empirical findings are drawn from the content analysis that lasted a year between

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3 In this book the term "candidate evaluations" is sometimes used interchangeably with leadership evaluations for two reasons: The term frequently occurs within the respective literature on voting behavior and secondly, political leaders have often been or will be political candidates at some point. Hence, it is possible to consider political leaders at least as potential candidates.

4 The original title of the research project was "Die Bedeutung emotionaler Botschaften für die politische Urteilsbildung" [the relevance of emotional messages for political judgments]. The principal investigators of this project were Prof. em. Dr. Oscar W. Gabriel, University of Stuttgart, and Prof. Dr. Jürgen Maier, University of Koblenz and Landau.

44

May 2013 and April 2014, and thereby covers the heightened period of campaigning leading up to a general election, in which the highest amount of angry attacks could be expected. The relevance of anger displays can be established by analyzing the media content analysis data. In addition to the media content analysis, this book draws on data from an experiment that was conducted as part of the previously mentioned research project. The experimental data are used to answer the main research question of this book – how do citizens evaluate politicians' personality traits based on their expressions of anger?

Therefore, the fourth chapter outlines the experimental design which was developed to analyze the impact of politicians' emotional expressions on the evaluation of their personalities and their respective political parties. It further discusses the suitability of the experimental method to answer the research question, then describes the development of the experimental design and provides an empirical analysis of the emotion structure of discrete emotions as displayed by politicians on television. Furthermore, it gives an overview of the measurements of the dependent and independent variables of this study, i.e., the experimental treatment. This chapter also pays particular attention to the validity of emotional expressions, by analyzing a manipulation check that was administered within the survey questionnaire as well as external measurements of validity.

Thereafter the fifth chapter presents the experimental findings, starting with the average treatment effects of anger expressions on the evaluation of politicians' character traits, followed by an overview of moderating effects of individual predispositions on the treatment effects. As a next step in the analysis, the longevity of effects as well as spillover evaluations on political parties are tested. The longevity of treatment effects in the context of electoral choices and candidate evaluations has rarely been studied empirically – with a few exceptions (e.g., Gerber et al. 2011; Lodge et al. 1995). If exposure effects remain two weeks after the experimental treatment was administered, such long-standing effects could highlight the relevance of televised emotional expressions on the evaluation of political candidates. A spillover effect is tested by analyzing the evaluation of the respective political parties after participants saw emotional expressions by their leading politicians. Lastly, the response time is analyzed to provide some insight into whether video clips with emotional expressions increased the amount of time participants spent considering the candidate evaluations. Finally, the sixth chapter provides a summary of the empirical findings, discusses their implications, and concludes by providing recommendations for future research.

45

2 Candidate Appearances and Candidate Evaluations

2.1 Candidate Evaluations Based on Appearances

As previously mentioned, candidate evaluations are often considered to be a key factor in addition to political issues and party identification that influences individual vote choices, particularly since the Michigan or Ann Arbor model has highlighted the importance of political candidates in its social psychological model and has thereby shaped the research on candidate effects (Campbell et al. 1960). Given their impact on voting decisions, a considerable amount of literature has been published on appearances of political candidates and leaders. Qualitative approaches have been undertaken to generate in-depth psychological assessments of political leaders (e.g., Winter 2013), while quantitative studies have analyzed a range of personal characteristics that can have an impact on trait evaluations of political candidates.

One of the first TV appearances that gained popular and scientific attention was the 1960 TV debate between Vice President Nixon and his challenger, Senator John F. Kennedy (Druckman 2003: 563). The common interpretation of the first TV debate postulates that the perception of Kennedy as the winner of the debate has largely been affected by Kennedy's good and healthy-looking appearance compared to the Nixon who was still recovering from an injury and sickly looking without the help of make-up. Since such a lead for Kennedy could not be found for those citizens who listened to the radio, the debate is seen as early evidence that voters derive social information from physical appearances and nonverbal communication (Druckman 2003; Kraus 1996).

Since that early debate, more recent attention has focused on physical appearances of political candidates and politicians in office. Over half a century later, the importance of physical appearances, particularly facial features, has been sufficiently studied in political science and the concept of "faces as a low-information heuristic" (Lenz & Lawson 2011: 587) has been widely established (Murray 2014: 33). Psychological studies have shown that these trait inferences based on candidate faces are made rapidly – in less than a second (Todorov et al. 2005; Fiske & Taylor 2017: 70). While candidate appearances and visual images have mainly been discussed as a low information heuristic that is used by unsophisticated voters

46

(Lau & Redlawsk 2001: 954; Sniderman et al. 1986: 428), political candi-
dates' physical appearances can affect voters regardless of their level of so-
phistication (Bucy 2011: 195; Bucy 2000: 194; Sniderman et al. 1986: 246–
427). Recent empirical evidence suggests that in some instances sophisti-
cated voters can rely on candidate evaluations even more so than unsophis-
ticated voters (Clarke et al. 2017). The view that candidate appearances are
relevant for all voters regardless of their level of sophistication is also in
line with previous research. The level of sophistication could determine to
which personality traits voters pay attention to in their attitude formation.
Miller, Wattenberg, and Malanchuk (1986) found that sophisticated voters
pay attention to different leadership qualities than unsophisticated voters .
Personal characteristics such as reliability, competence, and integrity are
particularly important for sophisticated voters, whereas unsophisticated
voters seem to pay more attention to the charisma and personal character-
istics of political leaders (Miller et al. 1986: 531). In general, it can be as-
sumed that the use of candidate heuristics in political decision-making pro-
cesses has increased over time (Bittner 2011: 104–108; Garzia 2014: 83–84;
Garzia 2017: 647).

Studies looking at potential appearance effects of political candidates
have covered a broad range of physical and biographical characteristics.
When predicting outcomes of presidential elections according to an index
of biographical candidate characteristics, the index performed well at pre-
dicting the popular vote and its performance was comparable to sophisti-
cated econometric models (Armstrong & Graefe 2011: 703). The index in-
cluded information about the candidate's families and their marital status,
their level of education and previous professional experiences – especially
in the military and politics, traumatic personal experiences, sociodemo-
graphic characteristics such as their ethnicity, gender and age, as well as
physical characteristics such as height, weight, facial hair, wearer of glasses,
baldness, physical attractiveness, and facial competence. In addition, fur-
ther aspects such as their intelligence, region of origin, the prevalence of
their first and last name, and their status as celebrities due to previous ac-
tivities were considered (Armstrong & Graefe 2011: 704–706).

One strand of research has focused on attractiveness as a decisive factor
in candidate appearances. The positive effect of attractiveness has been
found in several countries, especially across Western democracies (for ex-
ample the USA and European countries), such as Finland (Berggren et al.
2010) and Germany (Rosar et al. 2008; Jäckle & Metz 2016; Jäckle & Metz
2017). Overall, these studies have found that attractive political candidates
have an advantage in comparison to their less attractive competitors. When

considering the political expertise of voters, Hart et al. (2011) have found that political experts overcorrected for physical attractiveness, whereby they evaluated attractive candidates to be less favorable (Hart et al. 2011: 190). Nonetheless, voters are likely to be affected by the physical attractiveness of candidates.

In contrast to studies that have focused on physical attractiveness following a conventional concept of beauty, a number of studies have focused on "looking the part" (Murray 2014: 33) rather than looking more beautiful than the competition. Those studies rely on the assessment of competence that is derived from physical appearances, especially faces (Todorov et al. 2005; Ballew & Todorov 2007). Researchers have found that more competent looking facial features are preferred by voters (Todorov et al. 2005). These findings are further supported by several studies providing scenarios of war and peace: During hypothetical times of war, more dominant facial features are deemed more beneficial for politicians than baby-facedness or having faces with more feminine features (Laustsen & Petersen 2017). Furthermore, Knutson (1996) has pointed out that faces express dominance or submissiveness to varying degrees (Knutson 1996: 176) and in the light of wars or threatening scenarios voters are likely to prefer dominant facial features (Murray 2014: 41).

This preference for strong political leaders in times of war can also be explained by evolutionary theories – according to Murray (2014), who argues that this preference in physically strong leaders is due to "evolutionary adaptations derived from humans' violent ancestral environment" (Murray 2014: 43). Positive effects for politicians' physical features such as stature measured in height and weight can occur within war time scenarios and even during times of peace (Murray 2014: 43).

Considering physical appearances, candidates are often evaluated based on their gender (Huddy & Terkildsen 1993; Debus 2017: 39); following evolutionary theories, this might be further related to the presumed physical strength of a political leader (Murray 2014: 41), resulting in a disadvantage for female politicians.

Additional evidence has been found that the ethnicity of politicians shapes how voters perceive and evaluate them (Masters 1994; McDermott 1998; Pietraszewski 2016; West 2017). This aspect gains particular relevance in multi-ethnic societies with ethnic groups that differ in their degree of political representation.

Besides their visual appearances, politicians' paraverbal behavior can also determine how political leaders are perceived (Schubert 1991). The paraverbal behavior includes several aspects such as the "fundamental fre-

quency or pitch, intensity or amplitude, variation in pitch and intensity, speech rate, and speech fluency" (Schubert 1991: 209). Recent studies have established that politicians' voice pitch has an impact on leadership evaluations (Klofstad 2016). According to this research, overall lower-pitched voices are evaluated more favorably compared to higher-pitched voices, especially when competing against a male contestant (Klofstad 2016: 734). Some evidence has also suggested that a higher-pitched voice might be favorable for male candidates when competing against female politicians (Klofstad 2016: 734). In addition to these paraverbal characteristics, gestures and motion patterns while giving speeches can have an impact on politicians' candidate evaluations (Koppensteiner & Grammer 2010; Koppensteiner 2013).

Many of these studies build on the assumption that political candidates' physical appearance, for example their facial features, can be used as heuristics to evaluate candidates. Consequently, it is not far-fetched to assume that likewise, facial expressions and emotional displays can be used to infer character traits and evaluate politicians quickly and automatically (Fiske & Taylor 2017: 70). Such an approach has been previously chosen by social psychologists in order to investigate the impact of emotional expressions (e.g., Hareli & Hess 2012). Before discussing these processes that potentially underlie how emotional expressions of politicians affect viewers, the assessment of political leaders along personality traits will be examined in more detail.

The Dimensionality of Candidate Trait Evaluations

According to psychological research on person perception and the stereotype content model, impressions about individuals are typically formed according to two underlying dimensions – warmth and competence (Fiske et al. 2007; Abelson et al. 1982). The dimension of warmth consists of factors such as likeability and friendliness, which can be described as personal factors and are less related to job performances. Warmth can also include empathy for others; as a result, aspects of external efficacy such as caring about ordinary people have been described early on as "political empathy" (Kinder 1986: 241).

In contrast to the dimension of warmth, the dimension of competence is strongly related to performance impressions such as competence (e.g., intelligence, knowledgeableness), and strong leadership skills. Instead of competence and warmth, scholars such as Caprara and Vecchione (2013) describe two similar dimensions: integrity and leadership (Caprara & Vecchione 2013: 44).

49

The terms "integrity" and "leadership" are sometimes used interchangeably with "friendliness" and "energy/extraversion" by Caprara and Vecchione (Caprara & Vecchione 2013: 44). These terms represent two latent clusters of the Big Five personality traits, whereby integrity stands for "a blend of agreeableness, conscientiousness, and emotional stability" (Caprara and Vecchione 2013: 44) and leadership consists of "a blend of energy/extraversion and openness to experience" (Caprara and Vecchione 2013: 44). In this dichotomy, the two broader dimensions can also be described as "friendliness" and "energy/extraversion" (Caprara & Vecchione 2013), whereby friendliness equates to the dimension of warmth and energy/extraversion equates to the dimension of competence. Schumann (2014) has pointed out that while electoral research has focused on politicians' characteristics, it has rarely described them in terms of personality trait dimensions such as the Big Five (Schumann 2014: 592).

In social psychology, and more specifically the field of person perception, these two underlying dimensions are commonly described as "warmth" and "competence" (Fiske et al. 2007). In political science, this dichotomy has only been introduced lately (e.g., Blumenberg & Blumenberg 2017; Ferreira Da Silva & Costa 2019). Furthermore, an interesting observation has been made by Caprara & Vecchione (2013) stating that politicians are not only typically evaluated along these two dimensions like others, but that politicians frequently score higher on both dimensions than nonpoliticians (Caprara & Vecchione 2013: 44). Consequently, an ideal political candidate scores highly on both dimensions, thereby fulfilling expectancies as a diplomatic statesman as well as a competent leader. Such expectations could reflect the idea of the representative function of politicians within a representative democracy that is at least to some extent built on political elites. Furthermore, the evaluation of politicians according to these two dimensions has been found as stable over time (Caprara & Vecchione 2013: 44). In a similar vein, previous studies have investigated whether politicians are compared to an ideal politician, "a superman", or whether they are judged as ordinary people (Kinder 1986; Sullivan et al. 1990). Sullivan, Aldrich, Borgida, and Rahn (1990) found that citizens held politicians to higher standards and appeared to favor ideal attributes of their political candidates: "We concluded, therefore, that most people want their presidential candidates to be as trustworthy, altruistic, and in control as possible" (Sullivan et al. 1990: 482). These expectations seemed even slightly higher for challengers than for the incumbents (Sullivan et al. 1990: 482).

In addition, Caprara and Vecchione (2013) describe the functional use of heuristics in evaluating politicians' personalities:

> "The use of this kind of dispositional heuristic allows voters both to simplify the personal information that is made available about candidates and to anchor their judgments to personality traits that are most relevant for holding political offices." (Caprara & Vecchione 2013: 44)

In line with *role theory*, the dimension of competence is often regarded to be closely related to the social role of politicians, the role expectations politicians face and therefore relating to their job performance, whereas the dimension of warmth is considered to be more personal attributions which are less strongly linked to the social role of politicians and their job performance. However, if the dimension of warmth includes aspects such as integrity or friendliness (Caprara & Vecchione 2013; Ohr & Oscarsson 2011: 188–190) or political empathy (Kinder 1986), this dimension might be more strongly related to the job performance than has been previously accounted for. If agreeableness and conscientiousness strongly shape this dimension, values such as cooperative, considerate, and scrupulous behavior gain importance. These attributes are very well in line with the image of an ideal politician who is a diplomatic statesman or stateswoman, able to cooperate, create and agree on consensual solutions. Therefore, this second dimension is not completely unrelated to the performance of politicians regarding their social roles and professional requirements for politicians.

Over the last three decades, the two dimensions of warmth and competence have gained support within the literature on person perception (Abelson et al. 1982; Fiske et al. 2007; Cuddy et al. 2008). Nonetheless, additional dimensions have been discussed within the literature, for example an additional third dimension of integrity (Ohr & Oscarsson 2011: 188–190). Other scholars have investigated four underlying dimensions: competence, leadership, integrity, and empathy, which have also shaped the measurement of candidate appearances in the American National Election Study (ANES) since the 1980s (Kinder 1986; ANES 2010). By analyzing open-ended survey questions some studies have suggested evaluations along five underlying trait dimensions: competence, integrity, reliability, charisma, and personal attributes (Miller et al. 1986).

In addition, Funk (1999) has highlighted the necessity to differentiate between varying trait assessments which influence overall candidate evaluation (Funk 1999: 701). Drawing on ANES survey data and using a confir-

matory factor analysis, she found the three trait dimensions of leadership effectiveness, integrity, and empathy (Funk 1999: 710).

According to Bittner (2011), more than two dozen different classifications of leadership evaluations have been developed by researchers (Bittner 2011: 34). More recent studies have mostly found two or three dimensions on which candidates are evaluated (Bittner 2011: 30). Using longitudinal election studies across seven industrialized Western democratic countries over forty years, Bittner analyzed the dimensionality of leadership traits and gained sufficient support for a two-dimensional model (Bittner 2011).

Scholars who propose a two dimensionality of leadership assessments typically differentiate between the two dimensions of warmth and competence (Fiske et al. 2002; Cuddy et al. 2008; Abelson et al. 1982). In political science, these dimensions are often labeled as "personality and performance" (e.g., Kinder et al. 1980: 317; Vetter & Gabriel 1998: 75), and sometimes as "character and competence" (e.g., Bittner 2011). Bittner (2011) describes character as consisting of honesty and compassion, while competence includes intelligence and strength of leadership (Bittner 2011: 7). In essence, the conceptualization of these two dimensions typically fits to the general concept of warmth and competence evaluations.

Some scholars propose a three-dimensional structure of leader assessments, whereby they further distinguish between competence/leadership, empathy, and integrity (e.g., Funk 1999: 715). Others have grouped candidates traits along the three dimensions of competence, character, and personal attraction (e.g., Glass 1985: 525).

Despite these attempts at distinguishing trait evaluations, a large amount of research studies in election research focuses only on overall ratings instead of specific trait evaluations (Bittner 2011: 16). From a comparative perspective these overall assessments are crucial to determine the effect of candidate appearances across countries (Garzia 2017: 638). These overall ratings are often measured as thermometer ratings (e.g., Stewart & Ford Dowe 2013), and sometimes as *scalometer* favorability ratings (e.g., by Gallup; Saad 2012). The scalometer ratings have a particularly long-standing tradition within German electoral research, and are frequently included in the Politbarometer and German Election Study (GLES) (e.g., Forschungsgruppe Wahlen 2017; Rattinger et al. 2017). Such overall assessments, either measured by thermometer or scalometer favorability ratings, have often been criticized as broad measurements that lack a clear distinction and could measure a multitude of factors (e.g., Garzia 2017: 636). However, they are commonly used in two-party systems, in which a net favorability score can be calculated between both main candidates (e.g.,

Lavine & Gschwend 2007). Some scholars have argued that the overall favorability of a candidate is more closely related to the dimension of warmth than competence evaluations (Laustsen & Bor 2017: 105), while earlier studies have found that the overall evaluation is particularly influenced by performance and competence-assessments of political leaders despite minor cultural differences (Pancer et al. 1999: 363; Ohr & Oscarsson 2011; Garzia 2017: 636).

In general, more specific trait evaluations appear as superior measurements compared to overall assessments of leadership skills. Research has shown that trait evaluations are also not free from biases which could occur due to effects of voters' party identification and ideology (Garzia 2017: 636–637) and the fact that voters might not be able to perform specific trait evaluations when they know only little about the politicians in question, particularly lesser well-known candidates (Kinder 1986: 254).

Next, Subchapter 2.2 discusses how politicians' emotional expressions potentially affect viewers and their candidate evaluations along these trait dimensions. In order to do so, possible underlying mechanisms will be outlined considering social psychological findings, evolutionary theories, and cognitive theories of information processing. The next section focuses specifically on the role of emotional expressions as heuristics or social cues and further possible mechanisms that explain how emotional expressions affect candidate trait evaluations.

2.2 Candidate Evaluations Based on Politicians' Emotion Expressions

2.2.1 The Social Function of Emotions

Social psychology has a long tradition of focusing on the interpersonal aspects of emotional expressions, whereby the social functions of emotional expressions are considered (Parkinson et al. 2005: 214–217). These theoretical contributions are often built on evolutionary theories to gauge the importance of emotional expressions (e.g., Plutchik 2001). More recently, the communicative function of emotional expressions has been studied theoretically and empirically by social psychologists. One noticeable contribution by van Kleef (2009) describes the communicative function of emotional expressions in depth by postulating a model called "Emotions As Social Information (EASI)" (van Kleef 2009; van Kleef 2010; van Kleef 2016). The following section describes the EASI model and related theories in more detail to exemplify the theoretical underpinnings of emotions as so-

cial functions. By doing so, further causal and underlying processes such as emotional contagion, appraisal and attribution theories, and the theory of affective intelligence are mentioned as parts that can be integrated within the framework of the EASI model. In addition, the evolutionary and ethological arguments of previous studies in the field of emotional expressions are described to complete the theoretical framework by linking these theories to social contextual factors for the following analysis.[5]

Emotions as Social Information in Communicative Acts

The social function of emotional expressions can be considered in light of their informative value regarding the social interaction for those who observe the emotional expressions. Such a focus on emotional expression within the framework of social interactions (Parkinson et al. 2005) is closely related to models of communicative interactions (e.g., Bühler 1990). While some early mathematically inspired communication models only consider a sender, a receiver, and a message, for example the Shannon-Weaver model (Shannon & Weaver 1998), even early linguistic functionalist communication models consider several different communicative functions that occur with any communicative act. Following these traditional interpersonal communication approaches such as Karl Bühler's communication model and Roman Jakobson's communicative functions models (Bühler 1990; Jakobson 1960), each communication is imbedded in a social interaction that involves a message which is expressed by a sender and evaluated by a receiver through several noticeable channels of communications. Such simple communication models present the varying components of any communication, whereby the addresser addresses the addressee by uttering a message in a specific context, making contact in a given code (Jakobson 1960). These components correspond to six communicative functions: the emotive, conative, poetic, referential, phatic, and metalingual functions (Jakobson 1960). In this light, emotional expressions can be considered as another channel of communication which serves an expressive or emotive function (Jakobson 1960). This emotive function of language transmits – voluntarily or involuntarily – information about the emotional state and attitudes of the sender of any speech act. Social psychologists typically refer to the sender of a message as the "emoter" – the one who expresses the emotion – and to the receiver of a

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5 Some of the theoretical arguments have been made in a recent publication that was also based on the same research project and data (Gabriel & Masch 2017; Masch & Gabriel 2020).

message as the "observer"– the one who perceives the emotional expression (Hess 2014; van Kleef 2016). In the context of negative-active emotions, the emoter has also been described as the "anger agent", observers as the "third party", and the subject or object of anger as the "target" (Miron-Spektor & Rafaeli 2009: 155; see also Hareli & Rafaeli 2008). The third-party observers are described as almost impartial bystanders to the situation as they are not personally linked to the "anger agent" or the "target". Otherwise they can be described as the "partner" of either side (Miron-Spektor & Rafaeli 2009: 155). Such a distinction between impartial and partial observers is suitable for the context of politics, in which some voters strongly support and identify with a certain political party, while others remain independent observers. In addition, it highlights the role of the asymmetric and televised communication between politicians and voters, who rarely interact directly with politicians, but rather observe social interactions between politicians in the news and political talk shows.

One prominent view in social psychology and sociology is that the emotional expressions can then be interpreted as social cues by the observer in a heuristic manner. According to Hochschild (2012) emotional expressions act as signifiers whereby they can amplify any given verbal message; for example, expressions of anger can signify that the issue is of importance to the emoter and further indicate that they care about the given matter (Hochschild 2012: 31–34). In the *Emotions As Social Information* theory, van Kleef considers three factors to be crucial: the social-contextual factors setting the stage as well as the observers' affective and cognitive responses as two underlying mechanisms (van Kleef 2010: 333–337).

As in typical communication models, social-contextual factors matter when emotions are expressed publicly. These communicative settings are often considered as effects of direct face-to-face communication between emoters and observers. Van Kleef has researched extensively on interpersonal effects of emotional expressions regarding such professional settings as business negotiations and conflict solutions as well as such personal matters as relationships with friends and family members (van Kleef 2009; van Kleef 2016). A large amount of these studies focus on direct social interactions between emoters and observers who are often simultaneously the targets of emotional expressions at the workplace; however, it is possible to apply the theoretical assumptions to effects that occur within an asymmetric communicative setting between politicians and citizens.

Such asymmetric communicative settings with regards to space and time occur frequently within the field of politics (Meyrowitz 1985); for example, politicians' emotional expressions during a speech are televised and

observers perceive them potentially time-delayed in the comfort of their own homes or on the go via mobile devices and streaming services. Nonetheless, the social contextual factors of the emoter and observer have to be considered, as well as the situation and context in which the emotions are expressed (van Kleef 2010: 337). More broadly, cultural factors should be considered when studying interpersonal effects of emotional expressions (van Kleef 2010; Barrett 2017). This also includes cultural and societal display rules of emotional expressions as they have been discussed by psychologists and sociologists alike (Barrett 2017; Ekman & Friesen 1975; Hochschild 2012; Parkinson et al. 2005).

The effects of these emotional displays can be influenced by contextual factors. According to appraisal theory, emotion expressions raise questions about the underlying motivation for emotional displays. Following Barrett, Mesquita, and Gendron (2011) three types of contextual factors for the evaluation of emotional displays could occur:

> "(a) *stimulus-based* context, in which a face is physically presented with other sensory input that has informational value; (b) *perceiver-based* context, in which processes within the brain or body of a perceiver can shape emotion perception; and (c) *cultural* contexts that affect either the encoding or the understanding of facial actions." (Barrett et al. 2011: 286)

Hence, these three types of contextual factors are considered in this study. The emotional displays are evaluated rooted in the cultural context of the current German political discourse. To date, no study has systematically analyzed how German political leaders' expressions of anger affect viewers' evaluation of them. According to the *perceiver-based* context, the individual predispositions of the viewer are considered in how expressions of anger by politicians can influence candidate evaluations. Individuals' predispositions prime the perception and evaluation of emotional displays (Lodge & Taber 2013: 34). Such predispositions have developed over a long period of time and include the interest in politics, ideological viewpoints, party affiliations, and individual personality traits that could influence how emotional displays are perceived (Campbell et al. 1960: 499–519; Lavine et al. 2002: 343; Zaller 1992).

A *stimulus-based* context for the impact of negative-active emotional displays can include all factors that are necessary conditions for an appraisal to occur. This can include the social situation in which the emotion is expressed, the political issues that give cause to the expression of anger, and the status of the politicians within the political system.

56

Furthermore, previous research has shown that trait judgments depend on situational evaluations such as the political message (Bucy & Bradley 2004) or times of peace and war (e.g., Laustsen & Petersen 2017). These contextual aspects are analyzed in more detail in the following subchapters.

Underlying Causal Mechanisms

The *Emotions As Social Information* model considers two potential underlying causal mechanisms that can affect how emotional expressions have an impact on observers – affect and inferential or cognitive responses (van Kleef 2009; van Kleef 2010; van Kleef 2016). These two mechanisms have also been identified by political psychologists as potential underlying mechanisms that influence voters, whereby these mechanisms can work separately as well as interact with each other when voters form judgments such as candidate evaluations (e.g., Redlawsk & Pierce 2017: 425).

Affective responses refer to reactions that are induced by the emotional expressions and result in a change of the affective state of the observer. These responses can consciously or unconsciously affect the observer. Common phrases such as "having a contagious smile" exemplify the general idea of emotional contagion. One basis for this emotional contagion is facial mimicry whereby facial expressions are mimicked physiologically, therefore resulting in affective responses for the observers themselves (Wood et al. 2016). Affective responses are then pleasant or unpleasant feelings that are evoked by the emotional expressions of others.

In addition to affective responses that might occur, emotional expressions can evoke cognitive inferential responses that affect judgments and dispositions towards the emoter. As previously stated, these inferential processes might occur consciously or unconsciously. The information processing of emotional expressions can be further described by theories of social psychology such as appraisal theory, attribution theory, and lastly dual-mode theories of information processing such as the theory of affective intelligence. The theory of affective intelligence is a suitable framework of information processing that has been commonly applied in the field of political psychology (Ridout & Searles 2011: 441). Its role in this study is to distinguish between heuristic and systematic information processing in regard to the expression of emotions. These two potential mechanisms are outlined in more depth by describing the theoretical assumptions that can be derived from a range of theories regarding affective and cognitive responses.

2.2.2 Affective Responses

Hatfield, Cacioppo, and Rapson (1992) define a primitive form of emotional contagion as "the tendency to automatically mimic and synchronize expressions, vocalizations, postures, and movements with those of another's person and consequently, to converge emotionally" (Hatfield et al. 1992: 153–154, see also Hatfield et al. 1993: 96). The authors acknowledge various forms of emotional contagion, i.e., underlying mechanisms which cause emotions to be "contagious" – mimicry and feedback (Hatfield et al. 1993: 97–99).

For face-to-face interactions, Hatfield et al. (1993: 97) mention that people continuously mimic emotional expressions (Hatfield et al. 1993). They particularly emphasize the mimicry of facial expressions which most likely occurs rapidly and unconsciously (Hatfield et al. 1993: 97–99) or even automatically (Kelly 2004: 99). Supporting their claims with previous research which used EMG measurements of facial activity in response to emotional expressions, they note that particularly positive emotions, for example smiling, seem to evoke mimicry – participants moved their cheeks after seeing positive emotions, while they moved their brow region after seeing negative emotions (Hatfield et al. 1993: 97). Furthermore, research has shown that infants already mimic facial expressions, indicating that the behavior and its mechanism are innate. Mimicry is not limited to facial expressions, however; studies have also presented evidence for synchronized conversational rhythms and nonverbal behavior in general (Kelly 2004: 100), for example movement and postures (Hatfield et al. 1993: 97). Synchrony is closely related to mimicry, whereby the conversational speakers synchronize during their social interactions by mimicking each other (Kelly 2004: 100).

As a second mechanism, Hatfield et al. (1993) suggest a feedback loop that is based on facial mimicry (Hatfield et al. 1993: 97). Because individuals mimic facial expressions, movements. and postures of others, they might make cognitive inferences occur about their own emotional state which has been evoked by the emotional expression of others. However, the authors state that it is uncertain to which extent these feedback loops are essential for experiencing emotions (Hatfield et al. 1993: 98).[6]

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6 It is important to note that such feedback processes are not just discussed in the context of emotional contagion, they are also discussed within the wider context of emotion research and the experience of emotional states.

Similar concepts to emotional contagion have emerged in psychological research, as pointed out by Kelly (2004), who mentions three similar concepts to emotional contagion which have been discussed within the psychological literature (Kelly 2004: 99–100). For one, emotional contagion could be at work due to basic learning processes (Kelly 2004: 99); she exemplifies this with learned reactions such as "when a loud voice causes momentary fear" (Kelly 2004: 99). Furthermore, the concept of "behavioral entrainment" has been defined as a mechanism that is closely related to synchrony, in which one individual changes their behavior in accordance with another individual, whereby this mechanism is said to increase the positive affect towards the emoter or interaction itself (Kelly 2004: 100). Finally, McIntosh, Druckman, and Zajonc (1994) mention a concept that is almost synonymous to emotional contagion – "socially induced affect", which also indicates affect that is induced socially by someone who expresses emotions (Kelly 2004: 100; McIntosh et al. 1994).

Finally, one additional aspect needs further consideration. Researchers have previously suggested that emotional contagion depends on the individual abilities of the emoter as well as of the observer (Kelly 2004: 101; Hatfield et al. 1994). For observers, these abilities include the emotional intelligence of an individual, which consists of several components, the important one in this case being the decoding of emotional expressions (Hatfield et al. 1994: 147–182; Kelly 2004: 101). This individual capacity is important for observers, since people who possess a high emotional intelligence might be more likely to be affected by emotional contagion (Hatfield et al. 1994: 147–182; Kelly 2004: 101). Likewise, the emotional expressivity of the emoter also comes into play according to Hatfield et al. (Hatfield et al. 1994: 128–146). Following their assumptions, emoters need to express emotions strongly for any emotional contagion to occur, so that individuals with a lower emotional intelligence are also affected (Hatfield et al. 1994: 146; Kelly 2004: 101).

Regardless of the individual differences between viewers, mechanisms of emotional contagion can elicit affective responses to emotional expressions. Such affective reactions have often been considered as preceding cognitive reactions to emotional expressions of others. Zajonc (1984) has coined the term "primacy of affect", which assumes that emotional responses can be evoked "without the participation of cognitive processes" (Zajonc 1984: 118–119). According to this view, affective reactions precede cognitive efforts and are derived unconsciously or pre-consciously. Nonetheless, cognitive responses can shape how politicians' emotional expressions have an impact on observers. What follows is an account of cog-

nitive theories that can facilitate a deeper understanding of the voters' reactions to politicians' emotional expressions.

2.2.3 Cognitive Responses

One of the predominant cognitive approaches to the study of emotion has built on appraisal theory (Parrott 2004: 12). This approach has been put forward by cognitive psychologists such as Lazarus (1984), Scherer (1997), and Roseman (2001).

The basic idea of appraisal theory concerns the experience of emotions, in which the cognitive appraisal or evaluation of a situation leads to the emotion experience. This approach is widely established among cognitive psychologists, but is however not without contestation and so Parrott (2004) concedes that these evaluations have to be made rapidly for an emotion-inducing effect to occur: "Many times, however, it seems that appraisals, if they indeed play a role in producing emotions, must be very quick, outside conscious awareness, and independent of our rational faculties" (Parrott 2004: 12).

Taking appraisal theory into consideration, scholars who have studied the impact of emotional expressions on person perception have suggested the notion of "reverse appraisal" (e.g., Hareli & Hess 2012) or "reverse engineering" (e.g., Hareli & Hess 2019). Reverse appraisal has been described as cognitive processes and appraisals that are derived by "inferring information about another's mental state from his or her appearance or behavior" (Gratch & Marcella 2014: 9). Reverse appraisal theory builds on appraisal theory as underlying fundamental processes that have resulted in the emotion expressions of the emoter, while the observers infer which information might have caused the emotion expression. Hence, reverse appraisal theory aims at identifying the emoter's "beliefs, desires, and intentions" (Gratch & Marcella 2014: 9). Due to these "appraisal attributions" (Gratch & de Melo 2019), the definition of reverse appraisal theory is connected to attribution theory, which is therefore, mentioned at this stage.

Attribution theory was first developed by Heider (1958), who proposed that ordinary citizens act as "naïve scientists" by trying to understand the behavior of others and searching for causal explanations for their behavior (Heider 1958; Fiske & Taylor 2017: 164–165). Kelley (1973) and Weiner (1972; 1985; 1986) have subsequently further shaped the development of attribution theory with their contributions (Fiske & Taylor 2017: 167–171). Following Weiner (1972), attribution theory aims to identify the un-

derlying causes of behavior: "Attribution theorists investigate the perception of causality, or the judgment of why a particular incident occurred. The allocation of responsibility manifestly guides subsequent behavior" (Weiner 1972: 203). Attribution theory has emerged in psychology and since then has also been applied in social and political psychology to describe "how ordinary people make sense of and explain social events" (Yoon 2015: 41). In the field of political science – especially electoral behavior, the attribution of responsibility has been described as being central for determining public support and vote choices (Yoon 2015: 43), while the focus of political scientists has been on accountability as a cause for sociotropic voting (Yoon 2015: 43) and pocketbook voting (Tilley et al. 2018). Thus, the notion of responsibility or accountability of politicians has often been linked to the rational choice paradigm instead of attribution theory – with a few exceptions (e.g., Wagner 2014).

One important aspect in attribution theory is personal agency. The attribution of personal agency plays an important role in the evaluation of the self as a motivational factor (Weiner 1972) and in the person perception of others (e.g., Haider-Markel & Joslyn 2008; Harell et al. 2017), whereby internal and external attributions are distinguishable. Internal attributions indicate a high personal agency, in which the outcome of a social event or an individual achievement can be attributed to the agents' capabilities, intelligence, or effort (Weiner 1972: 204). In contrast to internal attributions, external attributions indicate the social situation itself as a crucial causal element for the outcome or individual achievement. Weiner developed attribution theory further by integrating the notion of stability and controllability (Weiner 1985; 1986). According to Weiner's studies on educational achievement, achievement can be linked to individual effort and ability – factors that are of internal control but differ in regard to their level of stability (Weiner 1985: 551). In addition, external factors are often less likely to be controllable and can be stable or unstable; for example, in educational research, these external factors could include task difficulty, chance, or luck (Weiner 1972: 207). Personal success might be attributed to the individual skills of students, while their failings might have been under their control or could be alternatively explained by societal disadvantages. Hence, the control of an agent over the situation is important for the evaluation of a performance. This also holds true for the field of politics and political ideologies (Haider-Markel & Joslyn 2008: 294–295). Attitudes towards the distribution of social benefits can be the result of underlying beliefs about agency and controllability. People who believe that everyone is in control of their own financial and social situation are less likely to sup-

port social policies, while those who believe poverty and homelessness can be caused by external factors are more likely to support them (Haider-Markel & Joslyn 2008: 294). The theory of attribution has also been applied to cultural aspects of liberalism and conservatism such as attitudes towards marriage equality (Haider-Markel & Joslyn 2008) and anti-immigration policies (Harell et al. 2017).

Weiner has further found that high achievers tend to approach tasks, while low achievers tend to avoid them (Weiner 1972). This notion is important for person perception, since those who approach problems or express approach emotions are likely to be seen as being more capable and competent due to their status as high achievers (Hess 2014: 63), while those who avoid conflicts, problematic topics, and choose emotions of avoidance could be seen as being less capable and competent.

Finally, several contributions within the social psychological literature have noted that the attribution process does not necessarily derive the true cause for any outcome or social situation, since individuals are not free from causal bias (Weiner 1972: 206). This causal bias has also been described as misattribution (Fiske & Taylor 2017: 172–173). Such attributions could be the result of effortful thinking or be made as snap judgements.

When describing potential underlying cognitive responses to emotional expressions, the processing of such information needs to be considered. A vast amount of studies within political psychology has built on individual processing of information, most noticeably the theory of affective intelligence (e.g., Marcus et al. 2000; MacKuen et al. 2007). This theory builds on dual-process theories, whereby individuals apply one of two cognitive strategies in order to process information (Tversky & Kahneman 1974; Kahneman 2011). Kahneman divides cognitive thinking into two underlying systems which determine how information is processed – "system 1" and "system 2" (Kahneman 2011). These two systems have various names within the literature while referring to the same concept of two different thought processes. System 1 is also called automatic or heuristic processing as well as disposition system, whereas system 2 can also be described as systematic processing or surveillance system (Kahneman 2011; Marcus et al. 2000). As indicated by their names, system 1 is the initial system that is most often applied in everyday life, especially in routine behavior, which does not require a great deal of cognitive effort. Decisions are made quickly and automatically within system 1. For example, heuristics and information shortcuts are used to derive judgements. In contrast to system 1, system 2 requires a larger amount of cognitive effort. It involves the systemat-

ic processing of information and can also work as a surveillance system for the automatic processes. The theory of affective intelligence claims that certain emotions such as anxiety are particularly well-suited to activate system 2 thinking, i.e., a more thoughtful and systematic consideration (Marcus et al. 2000: 63). Therefore, several framing experiments have aimed at inducing anxiety to study participants' attention and information searches (e.g., Brader 2005), whereby thorough cognitive processes within the realm of system 2 processing have been expected after inducing anxiety. The results of these studies suggest a link between anxiety and an increase in attention and information seeking (Brader 2005; Brader 2006; Redlawsk et al. 2007; Valentino et al. 2008). According to the theory of affective intelligence and other dual-mode theories, intensive cognitive processes can also be the result of unexpected or irritating situations, as it has been pointed out by Redlawsk and Pierce (2017):

> "On the other hand, when novel and unexpected/uncertain situations arise, the surveillance system recognizes the mismatch between expectations and reality, and takes over, inhibiting system 1 processing, and drawing attention to the anxiety-causing stimuli (say, something your party's candidate said that is opposite your preferences.) This turns processing to system 2: where more analytic processes take over, including increased information search." (Redlawsk & Pierce 2017: 413)

Such an increase of deliberation due to unexpected affective responses has also been discussed in light of the expectancy violation theory (Johnston et al. 2015: 488). Affective responses have been further discussed with regard to political candidates and party identification. Johnston, Lavine, and Woodson (2015) have suggested that unexpected candidate evaluations can lead to more deliberate cognitive processing and can override the use of party cues:

> "From this perspective, we might once again suggest that respondents who report positive evaluations of the out-party candidate or negative evaluations of the in-candidate actually experience anxiety as a result, and our problem is one of measurement rather than theory." (Johnston et al. 2015: 489)

In the context of politicians' emotional expressions, it is important to consider how underlying mechanisms of emotional contagion and cognitive responses such as heuristics, appraisal theory, and attribution theory fit within the framework of information processing. The theory of affective intelligence suggests that emotional states influence how intensely cogni-

tive processes take place (Marcus et al. 2000). Emotional contagion is most likely to occur quickly and automatically (van Kleef 2016). Therefore, conscious cognitive effort is not necessary, and it is likely that emotional contagion occurs within the realm of automatic information processing or system 1 thinking. In the absence of anxiety and contradictory information, individuals are likely to apply automatic processes because they have no reason to worry, to be anxious or doubtful of the information. While it is now widely established that anxiety can activate the surveillance system, the potential impact of anger on cognitive processes has gained less attention – empirically and theoretically (Ryan 2012: 1140). Recent advances in the theory of affective intelligence have linked anger to automatic information processing (Marcus et al. 2019). While some have suggested that anger prevents information seeking behavior (Valentino et al. 2008), a few studies could show that anger can also trigger information searches (Huddy et al. 2007; Ryan 2012). However, despite the fact that both emotional states can potentially lead to heightened attention and information seeking, the question remains whether these emotional states are linked to balanced information searches. Thus far, several studies have indicated that the impact of these emotional states depends on contextual factors and can result in biased and unbalanced information seeking (Ladd & Lenz 2011; Redlawsk et al. 2007: 174, Ryan 2012: 1149; Valentino et al. 2009).

Affective responses can therefore influence citizens' evaluations of politicians without activating deliberate cognitive processes (e.g., Lodge & Taber 2013: 35–42). Similarly, even cognitive information processing can occur pre-consciously, for example as "hot cognition" (Lodge & Taber 2013: 43–45). Therefore, cognitive responses to emotional expressions can occur within system 1 or system 2 processing, since even cognitive responses and appraisals can be made rapidly and unconsciously.

Previous research on candidate appraisal has largely been built on the use of candidate images as heuristics and information shortcuts by voters (Lau & Redlawsk 2001; Popkin 1995; Sullivan et al. 1990) – without the need for deep thinking, therefore placing these cognitive responses within the context of system 1 and automatic cognitive processing. This approach has also been applied to the effect of emotional expressions, whereby the emotional expressions are used as social cues to make snap judgments (Bucy 2011; Hareli & Hess 2012; Hochschild 2012). The use of heuristics and information shortcuts is particularly proposed as underlying mechanisms when non-verbal displays of candidates are concerned (Bucy & Grabe 2008). As heuristics, these judgments do not require a large amount of effortful thinking.

Although voters use their cognitive capabilities, the cognitive effort is only minimal and therefore fast and falls within system 1. Assuming that the underlying cognitive responses to emotional expressions are built on appraisal or rather reverse appraisal theory and/or attribution theory, it is highly debated how much cognitive effort is needed for these theories to work. Scholars of appraisal theory and those who have put forward the idea of reverse appraisal theory have emphasized that these judgments might be made quickly, unless the appraisal is made within a novel situation (Ellsworth 2013: 129). If situations are familiar, however, it is likely that appraisal processes are made rapidly (Ellsworth 2013: 129). Reverse appraisal could occur when common patterns of behavior can be identified to evaluate a situation. For attribution theory to take place, it is possible that more thoughtful processes are needed. Hence, depending on the underlying cognitive and affective responses, candidate evaluations could be made quickly or formed after more thorough thought processes.

According to some information processing theories, voters keep "running online tallies" as summary evaluations of politicians (Lodge & Taber 2013: 52). These judgments are formed spontaneously and updated with each appearance of the political candidate. The original situation that led to the evaluations is thereby not stored in memory, only an affective tag is added to the politician in question (e.g., Lodge & Taber 2013). In addition, competence judgments are highly context-sensitive (Laustsen & Petersen 2017). When processing and evaluating media appearances of politicians including their emotional displays, voters use these underlying cognitive processes and update the running online-tally, the summary evaluation that is later used as an information shortcut to cast the vote (e.g., Lodge & Taber 2013). Affective and cognitive responses can be at work simultaneously, interacting with each other and building the underlying mechanisms of candidate evaluations.

2.2.4 Social-Contextual Factors

The social and cultural context has to be considered when emotional expressions are studied (Barrett et al. 2011; Parkinson et al. 2005; van Kleef 2016). This includes the status of the emoter, the dispositions of observers, and situational context of emotional expressions (Barrett et al. 2011).

Previous research has found that display rules of emotions exist within any given culture and determine whether and what kind of emotions should be expressed (Ekman & Friesen 1975). These display rules deter-

mine the time and place in which emotion expressions are appropriate for emoters, particularly if emotions are expressed publicly. The appropriateness of emotional expressions has also been studied by sociologists with the notion of "feeling rules" (Hochschild 2012) and has been investigated in the context of politics (Bucy & Bradley 2004; Bucy & Newhagen 1999).

Political communication scholars have analyzed in which context emotional displays by televised political leaders are assessed as being appropriate by viewers (Bucy & Bradley 2004; Bucy & Newhagen 1999; Grabe & Bucy 2009). Experimental studies have shown that negative and less intense emotional displays are more likely to be judged as being appropriate, while positive or intense emotions are more likely to be evaluated as being inappropriate emotional displays for political leaders (Bucy & Newhagen 1999: 76). From these findings, it can be inferred that negative-active emotions such as anger and indignation are potentially more likely to be seen as inappropriate or at least in need of further contextual information. It can be assumed that expressed anger only results in a positive evaluation if it is seen as appropriate, i.e., reasonable and meaningful.

A sociological perspective on emotion expressions was introduced by Arlie Hochschild (2012), who established the concept of *emotional labor* that corresponds with certain feeling rules. Hochschild based her work on Erving Goffman's "theory of dramaturgy" that he laid down in "The Presentation of Self in Everyday Life" (Goffman 1959).

In his work, Goffman uses theatrical metaphors such as performing and acting on a front stage to illustrate how ordinary citizens are aware of their appearance, manner, and lastly the impressions they make on others during social interactions. He believed that individuals aimed at presenting the best version of themselves to others in any social interaction. Such performances also require practice or preparation in private moments, much like an actor needs to practice his performances. Hochschild then transfers the idea of impression management to the expression of emotions, by which individuals seek advantages in their social lives (Hochschild 2012: 62). In her contribution, she focuses on emotional labor as a term that describes the amount of work employees, typically in the service industry, have to bring up in order to regulate their emotions as part of their job requirement (Hochschild 2012: 57). She notes, however, that emotional labor is part of almost any job (Hochschild 2012: 11); thus, emotional labor is likely to be part of a politicians' job when making public appearances, especially at party conventions and campaigning events. The amount of emotional labor that has to be put into any performance depends on a set of feeling rules. Similar to the idea of Ekman's display rules, Hochschild

66

coins the term feeling rules, which "guide emotion work by establishing the sense of entitlement or obligation that governs emotional exchanges" (Hochschild 2012: 56). Although Hochschild mainly frames feeling rules as a part of economical exchanges, feeling rules also exist within private lives (Hochschild 2012: 56). Feeling rules can also be seen as established emotional conventions (Hochschild 2012: 57), whereby citizens can hardly describe these conventions but can easily spot violations of such rules by inappropriate emotional expressions that do not coincide with the expected behavior of the emoter (Hochschild 2012: 58–59).

Previous studies researching the nonverbal communication of politicians – and more particularly the effect emotional expression (especially facial expressions) of political leaders have on viewers – have built on evolutionary theories and ethological arguments (e.g., Bucy & Grabe 2008; Masters et al: 1986; Stewart & Ford Dowe 2013; Stewart et al. 2009b; Sullivan 1996; Sullivan & Masters 1988).

Since the early studies that focused on political leaders' emotional expressions (Masters et al: 1986), social psychological as well as ethological arguments have laid the theoretical foundations for this field of research. Because social psychological theories regarding politicians' emotional expressions have been previously elaborated on, this section deals with ethological arguments that can aid in explaining the impact that emotional expressions might have on viewers. Ethological arguments partially determine which emotional expressions are seen as appropriate for incumbents and challengers by the general public. This ethological notion of appropriateness is grounded in societal conventions and expectations that have evolved to establish order in social groups and communities. In the early stages of biopolitics, a field combining biology and politics (see Peterson & Somit 2017),[7] researchers studied primate behavior to gain a better understanding of human politics, particularly with a focus on the nonverbal communication of politicians and political leaders (Schubert & Masters 1991). By studying nonhuman social behavior, hierarchies within communities become transparent. These hierarchies in turn then determine which emotional displays are appropriate – in the sense that they are suitable expressions for those who lead the social group, aim to remain in power, or

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7 Throughout this book, biopolitics is used to refer to the intersection between the life sciences and politics. The term "biopolitics" is also used by post-structuralists who focus on Foucault's concept of biopolitics, a term to describe the ways in which the state governs the shape and health of the public body, i.e., its citizens (Liesen & Walsh 2012).

67

for those who strive to gain higher social standing and even lead the group themselves.

These studies focus on the social status within a social group when expressing emotions. According to the *biopolitical* framework, political leaders are best advised to display emotional expressions of happiness/reassurance – especially political leaders who are incumbents wishing to remain in power. Politicians from the opposition wishing to induce a shift in public support in favor of the opposition can attack the incumbents and show expressions of anger and indignation by criticizing the status quo. Lastly, passive emotional expressions such as displays of sadness and fear are rarely beneficial to leaders who are either in power or pursuing office (Sullivan et al. 1991; Stewart et al. 2009b: 51). This ethological framework can also have been setting emotional conventions and defining what kind of emotional expressions citizens expect from politicians. Those emotions that are expected are also seen to be appropriate, while violations of these conventions will be most noticeable to viewers – for example, politicians who cry publicly[8] (see also Brooks 2011; Knutson 1996; Tiedens 2001). Crying has been shown to decrease the overall evaluations of male and female politicians alike, while it can have slight positive effects on their empathy ratings (Brooks 2011: 609).

From an evolutionary perspective, emotional expressions” can be studied regarding their “functional significance for social behavior” (Masters 1991: 166). This view was first made popular by Darwin (Darwin 1965) and since then has resulted in a vast amount of social psychological literature that focuses on the social function of emotion expressions (e.g., Fischer & Manstead 2008; Fischer & Roseman 2007; Fischer & van Kleef 2010; Parkinson et al. 2005). Based on an evolutionary perspective, nonverbal cues can be derived from sensory information such as taste, touch, smell, sound, and sight, whereby sound and sight are most important for social cues within social groups (Masters 1991: 166). Facial expression, move-

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8 One example is a public appearance by Peer Steinbrück, who cried during a public event in the election campaign in 2013, while he was running for office for the Social Democrats. His emotional expressions were picked up by German newspapers. *Die Zeit* wrote “Steinbrück moved to tears” [Steinbrück zu Tränen gerührt] and *Spiegel Online* used the headline “Steinbrück's emotional outburst – tears don't lie” [Steinbrücks Gefühlsausbruch. Tränen lügen nicht], see: http://www.zeit.de/politik /deutschland/2013-06/steinbrueck-traenen-frau-spd-konvent (last accessed: 06 May 2020) and http://www.spiegel.de/politik/deutschland/steinbruecks-emotionen-wen n-harte-hunde-weinen-a-906155.html (last accessed: 06 May 2020).

ments, of political leaders can be assessed as carrying social meaning to other group members (Sullivan et al. 1991; Stewart et al. 2009b: 50–51).

Within this framework, the nonverbal characteristics of politicians who express emotions are central for the interpretation by the observer. Previous research in communication studies has emphasized that the appropriateness of emotional expressions by politicians affects how citizens judge politicians by applying an *emotional appropriateness heuristic* (Bucy & Newhagen 1999; Bucy 2000). The evaluation of politicians therefore depends heavily on whether emotions are assessed as appropriate, which is heavily affected by the situation and communicative context (Bucy 2000: 215). If emotional expressions were seen to be appropriate, they resulted in more favorable evaluations of politicians, while emotional expressions that were seen as inappropriate resulted in less favorable evaluations (Bucy 2000: 215).

According to ethological assumptions, group members evaluate the nonverbal and verbal communications of political leaders from their status as incumbents or challengers (Schubert & Masters 1991). Voters can hold different expectations towards politicians depending on their position within the political system. It is also not far-fetched to assume that communicative behaviors of politicians are evaluated in comparison to each other. Such comparative evaluations by voters have been previously highlighted as being an integral part of the electoral campaign seasons; this is particularly true for presidential systems:

> "The political setting of presidential campaigns creates what is fundamentally a choice problem. Thus, the process of impression formation is, from the beginning, a task that must result in a choice between two individuals. This setting means that candidates will be comparatively assessed on the key dimensions of competence and personal qualities." (Rahn et al. 1990: 155)

For the U.S. presidential election in 1984, the comparative choice problem of two main candidates is exemplified further: "Therefore, the question is not simply whether Mondale was perceived to be competent or not, but whether he was seen to be more or less competent than Reagan" (Rahn et al. 1990: 141). While the importance of candidate evaluations in presidential elections seems apparent, the comparative evaluation of candidates has also been shown in multi-party systems.

By looking at the physical attractiveness of political candidates in the North-Rhine Westphalia state election in 2005, it could be shown that comparative assessments influence the electoral success of candidates with-

in the constituencies. Attractive candidates have a relative advantage when competing against less attractive candidates within the same constituency, especially the more extreme the attractiveness of competing candidates varies (Rosar et al. 2008: 76).

In addition, it has been noted that the disposition of the emoter as well as the observer are important for processes of emotional contagion (Elfenbein 2014; Hatfield et al. 1994). Next to such politicians' characteristics as their status, political party affiliations, gender, and ethnicity, observers' individual predispositions are crucial for their assessment of emotional expressions and evaluations of the emoter.

Linked to the emoter's characteristics, studies have found that observers with similar characteristics regarding age, gender, and ethnicity evaluate those people more positively who are more similar to them (Bailenson et al. 2008; McDermott 1998). Hence, it seems worthwhile to consider factors that indicate a homophilic relationship between emoters and observers, i.e., politicians and citizens.

Furthermore, the dispositions of the observers have to be taken into consideration. Research into party identification has suggested that identifying with a political party provides a crucial basis for the stereotypical evaluation of others, whereby persons belonging to the same party are evaluated significantly higher than those who belong to another party, similarly to a different social group or social identity (e.g., Green et al. 2004; Mayer 2016; Ohr & Quandt 2012). Following this approach, strong party attachments are seen as being part of an individual's social identity. Hence, ingroup favoritism could occur for party members, comparable to the effects of sociodemographic characteristics. In addition to party identifications, political ideology could have a significant effect on the evaluation of politicians' emotion expressions. This might be particularly true in a multiparty system in which party identification has declined over the last decades (Dalton 2014; Dalton & Bürklin 2003) and voters could sympathize with several parties belonging to one block of parties that represents similar ideological views along the dimensions of cultural and social as well as socioeconomic liberalism.

Moreover, a range of individual personal characteristics could have an impact on the evaluation of politicians' disposition of observers. Previous research has discussed individual personality traits and moods as being potential factors that could shape individual evaluations of political candidates (e.g., Lodge & Taber 2013). While someone's mood is a temporary state that could potentially affect the reaction towards any form of emo-

tional expression (Forgas & Bower 1987), individual trait characteristics could affect how emotional expressions of politicians are assessed.

Previous studies have also focused on the impact of personality traits in order to explain political attitudes (Ulbig & Funk 1999; Peterson & Maiden 1993; Bakker & de Vreese 2016), political participation and voter turnout (e.g., Gerber et al. 2011; Schoen & Schumann 2007; Schoen & Steinbrecher 2013), as well as the vote choice of populist parties (e.g., Bakker et al. 2016a) or vote switching (Bakker et al. 2016b). Personality traits have also been linked to political ideologies, particularly liberalism and conservatism (e.g., Hibbing et al. 2013; Carney et al. 2008; Jost 2017). Furthermore, differences between liberals and conservatives have been linked to varying cognitive styles (Jost et al. 2003) as well as to different affective and physiological responses (Smith et al. 2011); for example, conservative ideological beliefs have been linked to stronger physiological responses and feelings of disgust induced by disgusting images compared to those who hold more liberal beliefs (Smith et al. 2011). Hence, political ideology has been studied as result of underlying individual cognitive and affective processes and personality traits, especially along the dimensions of the Big Five (openness, conscientiousness, extraversion, agreeableness, and neuroticism).

2.3 Candidate Evaluations Based on Politicians' Anger Expressions

This section provides a detailed account of the existing literature regarding the impact politicians' anger expressions might have on viewers and also discusses potential effects in light of the previously described underlying mechanisms.

2.3.1 Anger and Affective Responses

Experimental studies that use physiological measures might be most suited to detect mechanisms of emotional contagion. Early research into the effects of politician's emotional expressions used such physiological measurements. The Dartmouth group has identified some evidence for affective responses in participants due to televised images of political leaders and trailing candidates, mainly for Ronald Reagan and opponents (e.g., McHugo et al. 1985; McHugo et al. 1991; Sullivan & Masters 1988). By focusing on psychophysiological measures such as participants' skin resis-

tance levels, heart rates, and facial muscular activity (corrugator and zygomatic muscle activities of frowning and smiling), researchers could find that Reagan's displays of anger/threat led to less relaxed skin resistance levels compared to Reagan's displays of happiness/reassurance (McHugo et al. 1985: 1521). Participants were also more likely to react with tenser corrugator muscles, i.e., frowning, to images of his displays of anger/threat (McHugo et al. 1985: 1521). Without sound, no increase in heart rate activity could be monitored, while the image-plus-sound condition of anger/threat displays led to higher heart rate activity across all groups (McHugo et al. 1985: 1525). Furthermore, participants reported higher levels of confusion without sound after seeing images of Reagan's anger/threat displays, which researchers attributed to an ambiguity without sound (McHugo et al. 1985: 1519). Overall, they found l rather negative emotional responses for participants who did not support Reagan (McHugo et al. 1985: 1521). In contrast to non-supporters, they observed positive reactions in Reagan supporters to his anger/threat displays: "Reagan's supporters reported substantially different emotional reactions. They responded empathically to happiness/reassurance and anger/threat displays, and they had a mixed reaction to the fear/evasion displays" (McHugo et al. 1985: 1521). Thus, indicating that the observer's attitudes towards politicians and political leaders can moderate the response to their anger expressions. Likewise, drawing on ANES data, Finn and Glaser (2010) found marginally significant effects of anger on the voting behavior, whereby participants were slightly less likely to vote for Obama if they felt anger towards him (Finn & Glaser 2010: 270). However, these effects were only significant at a 10-percent level and could not be found for the opposing candidate McCain.

Although emotional contagion has been reported to be stronger for negative emotions than for positive emotions, emotional responses towards anger expressions have been incoherent across studies (Miron-Spektor & Rafaeli 2009: 155–156). In contrast to the notion of "smiling is contagious" for positive emotion expressions, anger expressions have evoked varying emotional responses. Emotional contagion of anger can occur when emoters express their anger about a target to friends or family members who offer an empathetic response, which could then result in a shared anger towards the same target (Miron-Spektor & Rafaeli 2009: 158–159). Such an empathetic response and emotional contagion could also occur for party supporters, when party leaders express anger about a common political opponent and their ideological conceptions. However, psychological studies have found varying responses towards anger expressions (Miron-Spektor & Rafaeli 2009: 156).

Instead of emotional contagion, expressions of anger can potentially trigger complementary emotional reactions, which are also evoked automatically (van Kleef 2016: 38; Moody et al. 2007). According to van Kleef (2016), fear is the complementary response to anger, whereby expressions of anger can involuntarily evoke fear (van Kleef 2016: 42, 45). Empirical evidence of the complementary effect of emotional expressions comes from research on business and management studies in workplace settings. Experimental studies in negation research have shown that anger expressions evoked more cooperative behavior compared to friendlier expressions; however, threats were even more efficient in evoking cooperation (Sinaceur et al. 2011: 1029). Hence, Sinaceur et al. (2011) concluded that a component of threat in anger expressions could shape participants' cooperative behavior in negotiation settings (Sinaceur et al. 2011: 1029). Whereas this complementary reaction is highly plausible in those social interactions, it might less directly translate to the field of politics and political leaders' emotional expressions and their effect on viewers.

If political leaders express anger in certain contextual settings, citizens could potentially experience fear as a direct reaction. At least two contextual settings could evoke such a response in democratic societies by resembling expressions of anger that are closely linked to the madness initially described by Seneca (Seneca LCL214: 116–117): First, if a hot-headed political leader expresses an unreasonable anger that threatens the stability of a country. Particularly in presidential systems, the president as head of the military could decide to order preemptive strikes if a threat is perceived; which in turn could result in instability, violence, and war. Second, a politician of the opposition with a fiery temper who threatens the democratic principles of society and/or the human rights of certain minorities within the society could evoke fear among citizens who value the democratic order of society, human rights, and freedom. For this complementary reaction to take place, cognitive responses to anger expressions might be necessary. If anger expressions contain rage and are interpreted as signs of madness (Seneca LCL214: 116–117) or mental instability by observers, the political leader could be seen as unbalanced, unpredictable, or unhinged, resulting in an evaluation of being unfit for office. Bucy and Grabe (2008: 81) exemplify such an evaluation by the downfall of presidential candidate Howard Dean in 2004. During the Democratic National Convention 2004, he uttered a scream that led to the widely unfavorable perception of him as being "unpresidential", which cost him his nomination as Democratic candidate (Bucy & Grabe 2008: 81). For this effect to occur, the affective responses to anger expressions might interact with cognitive responses. The

73

example of presidential candidate Howard Dean's scream during the Democratic National Convention 2004 could have induced appraisals that led to the evaluation of being unhinged or "unpresidential". This further highlights the varying forms of anger, in which anger that is related to madness and rage could lead to negative evaluations, while a more "controlled" anger is less likely to evoke such evaluations. If political candidates show madness, they might be less likely to get elected. A raging president might be feared, as well as the anger displays of political candidates who pose a threat to the democratic order of society. Hence, in this context is it important to mention that the focus of this study lies on anger expressions that do not threaten the democratic principles of society. Otherwise, anger expressions could elicit strong opposing reactions from citizens due to their verbal content and political ideas.

Similarly to complementary emotional reactions, a noticeable amount of literature within political science and political communication research has discussed counter-empathetic findings or backlash effects for behavior that is associated with negativity and negative campaigning (e.g., Mattes & Redlawsk 2015; Lau et al. 2007; Fridkin & Kenney 2011), incivility (Mutz 2015), and disrespectful behavior (Mölders et al. 2017). These backlash effects might be related to general human tendencies of avoiding the experience of negative feelings and negative emotions (Carver 2006; Carver et al. 2000). The expression of specific negative emotions such as anger can elicit avoidance behavior (Carver et al. 2000), whereas facial expressions of fear have been shown to potentially elicit approach behavior in others (Marsh et al. 2005). However, backlashes are potentially highly context-dependent and neutral expressions are not necessarily more beneficial for the evaluation of political leaders. Stewart, Waller, and Schubert (2009a) could show that the removal of micro-expressions during a speech can lead to stronger negative emotional reactions by viewers. By removing micro-expressions of anger and happiness from a speech by former U.S. President George H. W. Bush, participants felt even more angry and threatened compared to those who saw the original speech (Stewart et al. 2009a: 129). The video clips were taken from a speech that was broadcast in regard to the commitment of US troops to the First Gulf War in 1990 (Stewart et al. 2009a: 126). Hence, these results further support the idea that political leaders are expected to signal dominant nonverbal cues in certain situations, including dominant emotional expressions, such as happiness and anger (Stewart et al. 2009b).

74

2.3.2 Anger and Cognitive Responses

Only a few studies in political science and political psychology have fo-
cused on the specific impact of anger expressions on the evaluation of po-
litical candidates. Recently, scholars have proposed differentiating between
distinct forms of negative emotions such as anger and contempt (Mattes et
al. 2017; Redlawsk et al. 2016; Redlawsk et al. 2018) and have focused
specifically on the role contempt plays in the evaluation of political candi-
dates – most prominently Donald Trump's expressions of contempt at the
Iowa Caucus in 2016 (Redlawsk et al. 2018).

Following reverse appraisal theory, viewers could also sympathize with
the emoter and experience anger towards the initial target or cause of
anger expression (Hess 2014: 58–61). By doing so, appraisal processes could
influence and interact with affective responses (Redlawsk & Pierce 2017:
411). Feelings of anger have been studied as underlying factors for vote
choices and party support in regard to perceived government responsibili-
ties in causing and handling the recent financial crisis (Wagner 2014). A
panel survey conducted in the UK has shown that those who express feel-
ings of anger due to the financial crisis can blame the national government
for the crisis, which can in turn lower the likelihood of support for the
government in an election (Wagner 2014: 698–700). In addition, anger has
been shown to affect attitudes, such as the support for membership in the
European Union (Vasilopoulou & Wagner 2017). Survey participants who
stated being angry with Great Britain's EU membership were more likely
to favor leaving the EU in a survey that took place 14 months prior to the
Brexit vote (Vasilopoulou & Wagner 2017). Similarly, anger regarding the
economic situation has been found to increase the support for populist
parties, such as Podemos in Spain (Rico et al. 2017).

Social psychological research on collective action has found a mobiliz-
ing effect of anger (van Zomeren et al. 2004; van Zomeren et al. 2008), par-
ticularly when anger can be seen as an affective response to perceived in-
justices against a social group within society (van Zomeren et al. 2008:
521). The mobilizing power of anger is explained by an underlying action
tendency of anger:

> "More specific to collective action, when group-based inequality or de-
> privation is perceived as unjust, group-based emotions like anger
> should motivate collective action because they invoke specific action
> tendencies to confront those responsible in order to redress their un-
> fair deprivation." (van Zomeren et al. 2008: 506)

Due to these action tendencies, anger has been previously described as an approach emotion (Frijda 1987; van Zomeren et al. 2008: 506). Besides research on collective action, anger has also been linked to political protest, protest parties and movements such as the Tea Party movement in the United States (Sparks 2015), and Pegida in Germany (Vorländer et al. 2018). Political activists often frame protests as a result of a perceived injustice and the intention to approach and lastly abolish these perceived injustices regardless of the underlying ideology. Hence, these protests are closely connected to the social function of anger expressions. In addition to some forms of political protest, further evidence suggests that anger can also have a mobilizing impact on a variety of participatory acts and campaigning (Valentino et al. 2011; Valentino & Neuner 2017) as well as the expression of partisanship as social identity during campaign seasons (Huddy et al. 2015). Anger has also been shown to moderate the support of policies that highlight social inequalities within the society – for example, induced anger has been shown to moderate the support of health care reforms depending on ideological and racial predispositions (Banks 2014).

Knutson's study on person perception (1996) builds on two experiments which differentiated the emotional content of facial expressions. Based on his findings, Knutson inferred that emotion expressions are used by observers as heuristics to make trait inferences about the emoter (Knutson 1996: 177). Most relevant to the study of anger expression, Knutson found that anger expressions led to inferences of high dominance and low affiliation: "subjects inferred high dominance and high affiliation from happy expressions, high dominance and low affiliations from angry and disgusted expressions, and low dominance from sad and fearful expressions" (Knutson 1996: 176). In terms of competence and warmth, this finding could suggest that anger expressions lead to higher inferences of competence in a professional setting and lower inferences of warmth for those who express anger. As noted by Knutson, these findings are also largely dependent on the given context and details of facial expressions, such as a gaze's direction, could lead to varying inferences (Knutson 1996: 177).

Similarly to Knutson's findings, Tiedens (2001) reported that expressions of anger have led to higher status evaluations than expressions of sadness. These effects occurred in four different studies, two of which focused on workplace scenarios: one correlation study found a positive association between the co-workers' degrees of competence and their perceived anger; one experiment by Tiedens also focused on a hypothetical job interview, whereby angry candidates were assessed as being more qualified than sad applicants (Tiedens 2001: 92). The other two experiments focused on the

field of politics. One experiment showed participants U.S. President Clinton's expressions of anger and sadness regarding the Monica Lewinsky scandal. Tiedens established that participants viewed Clinton more favorably after seeing his expressions of anger than those who saw his sadness (Tiedens 2001: 88). Tiedens also acknowledged that this effect might be due to the verbal content of the video clips, which differed slightly due to the real-world nature of the material (Tiedens 2001: 89). These varying emotional reactions by Clinton towards the accusations can also be assessed in terms of appropriateness, in which his anger expressions alongside his denial might have been the more appropriate response culturally (Bucy 2011: 199). Since the underlying causal effect remains unclear, Tiedens (2001) replicated the initial experiment with anger and sadness expressions by an unknown politician. Thereby she showed that participants were more likely to vote for the candidate if they saw his expressions of anger compared to his expressions of sadness; they also rated him as more likely being a good politician based on his anger expressions, and evaluated him as being more competent when seeing his expressions of anger compared to his sadness (Tiedens 2001: 90). However, participants also perceived him as less likeable when they saw his anger (Tiedens 2001: 90). She also found that the positive effects of his anger expression on his *status conferral* were fully mediated by the perceived competence (Tiedens 2001: 90). Hence, this finding suggests that politicians' anger expressions have a positive effect on their competence ratings, while anger expressions can have a negative effect on their evaluation of likeability and warmth.

Hareli, Shomrat, and Hess (2009) found that expressions of anger, happiness, and neutral displays led to higher evaluations of dominance after participants saw pictures of actors with varying emotional expressions, while expressions of shame and guilt led to lower evaluations of dominance and higher evaluations of submissiveness. The authors link these findings of high dominance evaluations to the approach dimension of these emotions (Hareli et al. 2009: 383). In a vignette study, Hareli and Hess (2010) found that verbal expressions of anger can result in higher ratings of self-confidence, masculinity, and aggressiveness, while they simultaneously decrease the evaluations of warmth and gentleness (Hareli & Hess 2010: 137). In this study, participants received a fictitious scenario of a job candidate who responded to blame for an allegedly poor performance at his former workplace with verbal expressions of anger, sadness, or happiness. The fictitious applicant was then evaluated as being more self-confident, masculine, and aggressive by participants who received the manipulation in which the applicant reacted with anger (Hareli & Hess

77

2010: 137). In a replication study that additionally tested a vignette with neutral emotion responses, Hareli & Hess (2010) found that in comparison with neutral verbal responses, verbal expressions of anger led to lower ratings of self-confidence but also higher ratings of the job applicant's aggressiveness, masculinity, and even warmth (Hareli & Hess 2010: 134–136). Hareli and Hess interpret their findings as evidence for the theory of reverse appraisal, because the perception of the job applicant's emotional reactions in the situational setting determined the evaluation of the candidate (Hareli & Hess 2010: 139).

Glaser and Salovey (1998) have also pointed out the potential of positive evaluations as a result of anger expressions and the necessity to avoid displays of fear, as hypothesized by the ethological framework:

> "A visibly angry candidate may be seen as passionate, strong, or both. A candidate who expresses sadness over a tragedy is more likely to be seen as caring and compassionate, but perhaps also weak, and one who shows fear is more certainly to be perceived as weak." (Glaser & Salovey 1998: 168)

2.3.3 Anger and Social-Contextual Factors

Contextual factors can occur on three levels: the emoter, situational factors, and the characteristics of viewers (Barrett et al. 2011). In addition to these candidate characteristics, empirical evidence also exists showing that individual characteristics of the observers influence the evaluation of emotional expressions. Drawing upon biopolitical assumptions regarding the status of politicians and their emotional behavior, Bucy and Grabe (2008) could show that trailing candidates were more likely to display anger/ threat than frontrunners (Bucy & Grabe 2008: 90). Likewise, Ridout and Searles (2011) reported additional empirical evidence that trailing candidates were more likely to use anger appeals than leading candidates during campaigns for 26 U.S. Senator positions in 2004 (Ridout & Searles 2011: 454). Hence, the position within the political system appears to have an impact on whether candidates choose to express emotions as a successful strategy. In the context of U.S. politics, party identification of supporters and non-supporters has been found to moderate the effect of anger/threat expressions in some instances, as previously mentioned (Bucy & Grabe 2008: 92; McHugo et al. 1985: 1521), while Tiedens found no effect for party identification in the support of Clinton staying in power (Tiedens 2001: 88).

78

The assessment of anger expressions has also been linked to the perceived appropriateness of the situation. If seen as appropriate, politicians' negative emotional expressions, could result in positive evaluations (Bucy 2000: 218). However, these effects were not necessarily dependent on an explicit evaluation of appropriateness, as significant main effects of negative displays on the evaluation of Clinton's honesty, trustworthiness, and credibility could be found (Bucy 2000: 212). Furthermore, taking the ethological framework into consideration, it can be expected that anger expressions are particularly suitable for politicians of the opposition, or for trailing candidates (Bucy & Grabe 2008). Expressions of anger and happiness by those politicians who are socially expected to challenge the incumbents and the status quo could be seen as appropriate emotional expression. These emotional expressions signify dominant instead of submissive behavior, which is crucial for those who aim to gain or maintain power (Stewart et al. 2009b: 52).

In regard to negative campaigning, previous research has hypothesized and found that some individuals are more sensitive towards negative messages and insults (Fridkin & Kenney 2011: 309, 322). However, no effect for individual levels of education on reaction towards negative campaigning was found (Fridkin & Kenney 2011: 315). Bradley et al. (1998) reported an attention bias for viewers regarding their reactions towards emotional facial expressions, whereby participants with high levels of anxiety paid more attention to threatening emotional facial expressions compared to those participants with low levels of anxiety (Bradley et al. 1998: 748–751). Hence, when studying negative emotional expressions such as anger, it seems beneficial to consider personality traits which reflect levels of anxiety and conflict avoidance tendencies. Expressions of anger could induce potential backlashes for observers holding those personality traits (Ulbig & Funk 1999).

Furthermore, effects of emotional contagion and cognitive reactions can be moderated by individual predispositions (Barrett et al. 2011). As previously mentioned, the expression of specific negative emotions such as anger can elicit avoidance behavior (Carver et al. 2000). The strength of individual avoidance and approach tendencies might also be linked to individual differences in personality structures such as personality traits of neuroticism and extraversion (Carver et al. 2000: 747–749; Carver 2006: 109).

Previous research in political science has considered individual differences in responses to expressions of negativity, negative campaigning and uncivil behavior, by proposing that reactions might be dependent on individual preferences of conflict avoidance. Mutz & Reeves (2005) have

shown that individuals with high levels of conflict avoidance react more strongly towards uncivil behavior, resulting in a stronger decline of trust in politicians and political institutions such as congress and government (Mutz & Reeves 2005: 6–7).

Studies have also shown that messages of negativity and conflict can also lead to withdrawal from political participation for certain voters depending on their personality dispositions regarding neuroticism and anxiety based on genetic dispositions (Settle et al. 2017), as well as for those with low trait aggression (Kalmoe 2019: 423). Kalmoe (2019) has found that aggressive metaphors can mobilize voters, whereby the mobilizing effect depends on the personal predisposition of the observers – more precisely their level of trait aggression. Voters with high trait aggression are more likely to be less-educated young male voters compared to well-educated elderly female voters (Kalmoe 2019: 423). Such individual differences could be strategically considered by politicians in their campaigning efforts and micro-targeting attempts (Kalmoe 2019: 424).

2.3.4 Review: Theoretical Expectations and Hypotheses Regarding the Impact of Anger Expressions

This section provides a review of crucial factors that determine how emotional expressions are perceived. The aim of this section is twofold. First, it gives an overview of important factors in relation to candidate evaluations and second, it states the hypotheses as a basis for judging effects that can be expected within the experimental study of emotional expressions by politicians.

Politicians' Political Status and the Evaluation of Anger Expressions
Taking ethological considerations into account, the first theoretical expectation concerns the status of politicians within the political system. Based on these assumptions, politicians of the opposition should be more likely to display anger because they gain the most from doing so. Their anger expressions could even lead to an increase in support and more favorable evaluations. In accordance with this first theoretical expectation and previous research (e.g., Bucy & Grabe 2008), the first hypothesis deals with the evaluation of anger expressions in relation to the social status of the politicians as emoters of anger expressions. Therefore, the first hypothesis is stated as follows:

80

H1(a-b): Displays of anger increase ratings for politicians of the opposition (a) and decrease ratings for politicians of the government (b).

Candidate Evaluations Along the Dimensions of Person Perceptions
As previous studies have shown, political candidates are evaluated at least along two dimensions of personality traits. One dimension can be described as warmth, including characteristics such as friendliness and compassion, and the other dimension can be described as competence, including leadership strength and the capability to solve political problems. Previous studies have shown that anger can have a positive impact on evaluations of dominance, since it signals an active approach of an issue or problem. Hence, it can be expected that the effects of anger expressions vary across the character traits under investigation. Evaluations of warmth might be affected negatively, while evaluations of competence could be affected positively by expressions of anger. Following this second expectation the hypothesis $H2_{(a-b)}$ states that distinct characteristics are evaluated differently when the emoter expresses anger. Previous evidence suggests that character traits which indicate dominance might be affected positively by the experimental treatment (e.g., Hareli & Hess 2010; Hess 2014; Tiedens 2001). Due to the potential backlash effects of negative campaigning and negativity (e.g., Van't Riet et al. 2019), positive effects on politicians' warmth are not expected at this stage. These assumptions are further clarified in hypothesis $H2_{(a-b)}$.

H2(a-b): Emotional expressions of anger have a positive impact on the evaluation of politicians' competence (a), while they have a negative impact on the evaluation of politicians' warmth (b).

Candidate Evaluations Based on the Target of Their Anger Expressions
Previous research has also shown that the evaluation of anger expressions is highly dependent on the given context (Barrett et al. 2011), particularly so in relation to the cause and target of the anger (Hess 2014). When anger expressions are deemed to serve a good cause, they could lead to more favorable evaluations, particularly leadership evaluations (Hess 2014; Glaser & Salovey 1998). Anger expressions that are disrespectful personal attacks on other politicians, on the other hand, might rather lead to negative evaluations (e.g., Mölders et al. 2017). The third expectation focuses on the underlying cause of anger that is responsible for the anger expressions. Due to the experimental design, the following hypothesis takes the varying nature of the corresponding messages into account. These assumptions can be tested with a comparison of the two case studies that focus on Gregor Gysi's moral anger and Sigmar Gabriel's incivility. Therefore, the follow-

81

ing hypothesis H3$_{(a-b)}$ takes the cause of anger expressions into consideration, whereby a good cause is more likely to result in positive candidate evaluations; whereas expressions of anger in the context of personal attacks and incivility are less likely to result in favorable evaluations.

> **H3(a-b):** If expressions of anger arise from a good cause, such as fighting injustices, anger expressions lead to more favorable evaluations (a). If the expressions of anger are rooted in incivility, expressions of anger lead to less favorable evaluations (b).

Candidate Evaluations and the Strength of Anger Expressions

The fourth expectation is built on the finding that negative emotions often have a stronger impact on those who experience them rather than other emotions (Baumeister et al. 2001). Positive emotions such as happiness have even been described as the norm, especially for political leaders (e.g., Bucy 2016). Hence, for the following empirical investigation, it can be expected that expressions of anger have a stronger impact on the evaluation of politicians compared to other common emotional expressions such as happiness. In line with previous research in psychology, hypothesis H4 then assumes that anger expressions have a stronger impact on observers than positive or neutral expressions. Therefore, the largest change in attitudes should be observed for the experimental groups which received anger expressions of politicians.

> **H4:** Politicians' expressions of anger have a stronger effect on viewers than their positive expressions.

Candidate Evaluations and Moderating Effects of Individual Dispositions

The fifth theoretical expectation states that individual personal dispositions might affect how observers evaluate expressions of anger. Because individuals differ from each other, it is expected that expressions of anger are more appealing to some observers than to others. This can potentially be affected by a range of attributes. First and foremost, party identification should play a role in whether candidates are evaluated more favorably, whereby those observers who support the political party in question react more positively towards anger expressions by their candidate. Likewise, and particularly so for voters who do not have a strong party identification, political ideology should make a difference in the sense that those who are closer to the ideology of a political candidate, i.e., on the same side of the political spectrum, should react more positively towards his or her anger, since they are more likely to agree with his or her view. In addition to these factors, personal dispositions such as neuroticism and ex-

82

traversion could have an impact on how individuals respond to anger expressions, influencing their attitudes towards conflict and the experience of negative emotional expressions (see also Carver 2006: 107). Neurotic citizens could be more likely to respond negatively towards expressions of anger because they are more likely to avoid and disapprove of aggressive behavior. Likewise, citizens who are less extroverted could respond in a similar manner. Therefore, hypothesis H5$_{(a-b)}$ and hypothesis H6 focus on individual characteristics of the observers. Hypothesis H5$_{(a-b)}$ assumes moderating effects based on existing party identifications and hypothesis H6 specifies moderating effects of individual personality traits.

> **H5(a-b):** If participants support a political party, they are more likely to respond favorably to anger expressions by their party leaders (a). If participants do not support the political party, they are less likely to respond favorably and more likely to respond negatively to anger expressions by party leaders (b).
>
> **H6**: If participants score high on neuroticism, they respond on average more negatively to anger expressions.

Candidate Evaluations in Light of Automatic and Systematic Processing
According to the theory of affective intelligence, one expectation that can be made affects the amount of time observers need to make their judgment about the candidate, i.e., the candidate evaluation. If observers apply systematic processing strategies after being exposed to the emotional expressions of politicians, they might need more time to evaluate a candidate. If observers rely on heuristics, or if processes of emotional contagion are at play, their evaluations should be made quickly. If observers are irritated by their own affective reactions towards the emotional expression of the political candidate, they could take a longer time to make a judgment (Johnston et al. 2015). In addition to individual dispositions and characteristics, individual information processing of the emotional expressions might have an impact on the evaluation of the politicians. Assuming that the observers paid attention to the emotional expressions of politicians, two hypotheses are tested in the empirical analysis based on the sixth theoretical expectation. If heuristics are at work – or automatic processing such as unconscious inferences – the response time should not differ between experimental and control groups. Hence, the experimental groups showing anger should not show higher response times. If more systematic processing is at work, the response time should be higher for the experimental treatment group than for the control group without video. Since the direc-

tion of this theoretical expectation is rather more exploratory than confirmatory, hypothesis H7 is stated as testing a difference.

> **H7**: If systematic information processing is at work, the response times should differ between the experimental and control groups and the experimental groups should show higher response times.

Hypothesis H8 is also based on cognitive processes, whereby a state of heightened arousal due to irritating information could result in more systematic information processing (Redlawsk & Pierce 2017: 419). Hence, hypothesis H8 states:

> **H8**: If emotional expressions induce irritating affective responses for viewers, such as enthusiasm about candidates from the other end of the political spectrum, participants need on average longer to evaluate the respective politician.

These eight hypotheses build on the core theoretical framework of this study. Subsequently, four additional hypotheses are tested which are built on broader theoretical assumptions that are taken from previous studies on the personalization of politics. Since empirical evidence is lacking when it comes to the effects of politicians' emotional expressions, the following assumptions are derived from different strands of research. Therefore, the following assumptions are more exploratory in nature. Nonetheless, a hypothesis is stated for each assumption in order to guide the research process.

Candidate Evaluations and the Longevity of Candidate Impressions
When analyzing the effects of emotional expressions on viewers one question that follows is whether these effects are long-lasting. Drawing on literature on political scandals, there is some evidence that scandals might not have long-lasting effects on citizens, and that citizens are particularly forgiving if they had already formed a positive image of the politician (Mitchell 2014; McDermott et al. 2015). Furthermore, the subject matter of the scandal can alter whether the scandal lowers ratings of support, so that politicians' private matters are often less important for voters than performance-related scandals such as tax evasion or corruption (Funk 1996). However, when politicians campaign on issues with a high moral standpoint, scandals of infidelity can harm their approval ratings more than politicians who do not maintain an overly moral image (McDermott et al. 2015). This finding is explained by a perceived hypocrisy that leads to an inauthentic view of the politician (McDermott et al. 2015). It adds further

84

weight to the argument that the context is key for candidate evaluations; in this example, political issue ownership and authenticity are relevant when voters are confronted with new information about politicians.

One assumption regarding the longevity of emotional expressions on viewers is that these emotional expressions could shape leadership evaluations permanently if they relate to a significant event for viewers. Likewise, continuous exposure to similar emotional expressions could influence leadership ratings in the same manner. Many experimental studies focus only on immediate short-term effects, while neglecting possible long-term effects of candidate appearances. Only a few studies have investigated the longevity of televised campaign effects and the evaluation of political candidates (Gerber et al. 2011; Lodge et al. 1995). Previous experiments have focused on televised campaign effects and drawn divergent conclusions for the longevity of campaign effects. Lodge, Steenbergen and Brau (1995) have found that viewers were not able to recall specific campaign information about two putative congressional candidates from memory, especially if more than a week had passed since the exposure (Lodge et al. 1995: 315–316). They concluded, however, that overall assessments of candidates, could still be affected by the initial exposure. They explained this finding as supporting the concept of an online running tally that voters keep of political candidates, without the need to retain the initial facts (Lodge et al. 1995: 321).

By administering a large-scale field experiment as part of a gubernatorial election campaign by Rick Perry, governor of Texas in 2006, Gerber, Gimpel, Green, and Shaw (2011) analyzed the magnitude and longevity of campaign advertisements. Television advertisements were randomly administered and combined with a survey component to assess the favorability of both candidates and the vote intention. The researchers found strong short-term effects for the campaign advertisements that declined rapidly and did not last longer than a week (Gerber et al. 2011: 146–147). Due to the absence of any long-lasting effects, the authors interpreted these findings as indications of priming effects instead of further support for the model of online processing of candidate evaluations (Gerber et al. 2011: 148). Nonetheless, according to the authors, further research should be conducted to analyze the longevity of effects based on campaign advertisements, with a specific focus on the quality of campaign messages such as negative campaign advertisements or their emotional content (Gerber et al. 2011: 149).

Hence, it seems worthwhile to test the longevity of experimental effects for emotional expressions. Long-lasting effects could be expected for citi-

zens who were initially affected more strongly by being exposed to political leaders, while a certain amount of continuous decay could be expected after the initial exposure. The effects could also be longer-lasting if the emotional expressions were noteworthy or violated social norms.

Due to the experimental design, the longevity of the experimental treatments can be tested by analyzing the second post-test, which was administered one week after the initial exposure (for more details see Subchapter 4.3). Hence, hypothesis H9 postulates a more conservative assumption that the experimental effects will not be longer lasting, which is derived from previous research on campaign advertisements, whereby effects strongly decayed after one week (Lodge et al. 1995; Gerber et al. 2011).

> **H9**: Expressions of anger have a short-term effect on the evaluation of politicians' personality traits.

Candidate Evaluations and Their Potential Spillover Effects

One more expectation can be derived from the personalization of politics. Research on the personalization of politics has shown that candidate evaluations can have a reciprocal impact on the evaluation of political parties (Hayes 2005; Garzia 2017; Garzia 2014; Garzia 2013a; Garzia 2013b). Hence, the evaluation of political parties could be affected by politicians' expressions of anger. In addition to spillover effects on political parties, the emotional expressions of politicians might also have a broader impact on the evaluation of politicians as a social group.

Hypothesis H10 addresses the relevance of the experimental effects with regard to the evaluation of political parties. Much like the evaluation of politicians as a social group, a spillover effect could occur, whereby the evaluation of political parties is affected by emotional expressions of their political leaders. This hypothesis tests a spillover effect that is adapted from findings on the personalization of politics (Hayes 2005; Garzia 2017; Garzia 2014; Garzia 2013a; Garzia 2013b) and has not been tested in regard to politicians' expressions of anger.

> **H10:** If the emotional expression of a key figure within a political party (a party leader) results in more favorable or less favorable views of that politician, these effects can result in a more or less favorable evaluation of the respective political party.

In addition to these spillover effects of prominent politicians on political parties, the emotional expressions of several politicians could have an impact on the perceived stereotype of politicians. During the data collection, material was collected on politicians as a social group as well as specific po-

litical leaders, allowing a focus on politicians in general as well as political leaders. Since the previous hypotheses focus on political leaders, hypothesis H11 concentrates on the evaluation of politicians as a social group. Changes in the evaluation of politicians as a social group could be seen as spillover effects from candidate evaluations that are derived from each single politician whose anger expressions were included in the video clips. According to the nature of spillover effects, hypothesis H11 presumes that the effects on the evaluation of politicians as a social group are smaller compared to changes in the evaluation of individual political leaders. This hypothesis is based on the assumptions of the previous hypotheses, whereby several characteristics of a politician and his or her anger expressions can affect the impact of anger on viewers (see H1 – H6). Weaker effects can be expected if the contextual information, such as the position or party affiliation of a politician is missing, or varying strongly with each politician who is seen in the experimental treatment.

> **H11:** The evaluation of individual political leaders is affected more strongly by their expressions of anger than the evaluation of politicians as a social group.

Candidate Evaluations and Contextual Information Surrounding Political Candidates

Because research on emotional expressions has found that the impact of emotional expressions is often context-specific (e.g., Barrett et al. 2011), a range of circumstantial factors could modify the impact of anger on viewers in addition to the political message. Previous research on candidate appearances has suggested that politicians are evaluated in relation to each other (Rahn et al. 1990). Empirical research on candidates' physical attractiveness has suggested that more physically attractive candidates have a relative advantage compared to less attractive adversaries in the same constituency (Rosar et al. 2008: 76). Likewise, it could be assumed that political candidates are also evaluated in comparison to each other when expressing emotions.

This theoretical expectation states that contextual factors influence the evaluation of politicians' emotional expressions – including the emotional expressions of others. An experiment that exposes participants to more than one political leader can test such contextual effects and so these previous empirical findings of candidate evaluations are particularly relevant for experiments in which participants were exposed to more than one political leader. Considering anchor heuristics in comparative evaluations (Tversky & Kahneman 1974: 1128), the expressions of the first politician might pro-

vide an anchor for the following inferences and evaluations of the second politician.

Similar ideas or concerns arise from survey research which has studied primacy and recency effects of items in survey questionnaires. Instead of survey items, these effects could also occur for video clips that show emotional expressions. Prior survey research has shown that the presentation of visual information in surveys has led to primacy effects in participants' response behavior (Krosnick & Alwin 1987: 202, 206). Moreover, potential biases due to contrast effects have been discussed when designing questionnaire items for list experiments (Kuklinski et al. 1997: 328). Such contrast effects can occur when one questionnaire item has an impact on the response of another item in close proximity, for example in list experiments and item batteries. Typically, one item affects the perception of a subsequent item. Likewise, these contrast effects might occur when several videos are administered. Therefore, hypothesis H12 focuses on such contrast effects, whereby the order in which the anger expressions of political leaders are presented could influence their assessments given that politicians are evaluated in comparison to each other.

> **H12**: Emotional expressions of candidate appearances anchor any following emotional expressions of other candidates. Hence, subsequent candidate evaluations are impacted by prior displays of emotional expressions.

3 The Prevalence of Anger Expressions on German Television

3.1 *The Visual Media Content Analysis of German News and Talk Shows*

The media content analysis shows how frequently politicians displayed emotions on television as well as the nature of these emotional expressions during the time of data collection. The prevalence of emotional expressions on television can provide contextual information to assess the relevance of emotional expressions in politics. Frequent emotional displays are most likely displayed intentionally to a certain extent. Politicians might act as strategic actors who are at least well aware of their media presence and should therefore manage their impressions to the best of their ability (Goffman 1959; De Landtsheer et al. 2008). As it has been noted by Glaser and Salovey (1998): "Most politicians are adept in their use of emotional display rules" (Glaser & Salovey 1998: 167). Because Glaser and Salovey deem most politicians as being "emotionally intelligent", they conclude the violation of emotional display rules by politicians should only occur rarely (Glaser & Salovey 1998: 167).

Therefore, frequently displayed emotions are likely to be those that are deemed as being somewhat beneficial or at least not harmful to politicians' images. Frequent emotions can therefore indicate which emotions are commonly used by politicians and play a role in daily politics. However, the prevalence is not the sole indicator of how important an emotional expression is. On the contrary, it could also be argued that rare emotional expressions might bear a stronger significance, especially if they violate social norms – their rare occurrence makes them more noticeable to observers and thereby potentially more influential. Nevertheless, the media content analysis can provide information about the occurrence of emotional expressions during the twelve-month period from May 2013 until April 2014, thereby covering large parts of the election campaign in 2013.

Much has been discussed around the idea that the general election in 2013 was a tame campaign season, as was the previous campaign period in 2009 (Schmitt-Beck et al. 2014: 355; Schoen & Weßels 2016: 15; Tenscher 2013: 63). One reason for this is given by Zimmermann (2014), who describes the political discourse regarding the issue of the European debt crisis and bailout measures as being consensual across the main political parties during the campaign season (Zimmermann 2014: 327). The most re-

89

cent election campaign in 2017 has also been deemed rather uneventful by media outlets,[9] which could be attributed to the grand coalition between CDU/CSU and SPD. Upcoming campaign seasons might show higher levels of conflict and potentially higher emotionality, since the AfD has been elected to the 19th German Bundestag. However, a longitudinal analysis of the development and polarizations of the German election campaign and party system is beyond the scope of this analysis. This visual media content analysis focuses solely on a period of twelve months from May 2013 to April 2014, thereby covering main parts of the election campaign in 2013. The media content analysis featured news broadcasts and political talk shows that aired during this period on two public and three private television channels.[10] These channels are arguably the most important public and private channels on German television and have the highest viewership.

The broadcasts of daily prime time news on these channels were recorded for the whole year, as were the political talk shows that were aired on these channels.[11] To deal with the amount of collected broadcasts, three samples were drawn from the material. Two samples were selected from the news broadcasts and one sample from the political talk shows. The news broadcasts samples were generated by drawing two artificial weeks. For one artificial week, seven weekdays were chosen from the complete material, whereby the newscasts from each channel were taken into consideration. This approach allowed researchers to compare the news coverage across TV channels for each day. The second artificial week was selected by drawing seven random weekdays for each channel. Hence, different days were selected for each channel in this sample. This approach of both sampling procedures resulted in a total of 70 news broadcasts. Due to the fact that four news broadcasts were selected for both artificial weeks, double entries were removed from the dataset, so that only 66 news broadcasts remained for the analysis.

The sampling approach for the political talk shows was slightly different. One episode was randomly drawn per quarter for each of the talk

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9 For example by an article in Spiegel Online, available online at: http://www.spieg el.de/wissenschaft/mensch/bundestagswahl-2017-danke-dass-der-wahlkampf-lang weilig-ist-kolumne-a-1166571.html (last accessed: 05 June 2019).

10 The two public channels were ARD and ZDF, while RTL, SAT.1 and ProSieben were selected as private TV channels for the media content analysis.

11 The prime time news on these five channels were the following: ARD Tagesschau, ZDF heute, RTL aktuell, Sat. 1 Nachrichten, ProSieben Newstime.

shows. The total sample includes 18 talk shows from five shows (Hart aber fair, Günther Jauch, Anne Will, Maybrit Illner, Eins gegen Eins).[12]

The media content analysis was predominantly conducted at the University of Koblenz and Landau, and student assistants aided in the coding of the material. The unit of analysis for the media content analysis was defined as one coherent visual unit in which a German politician was visible. A coherent unit in this case means that the focus was not disrupted or changed, for example by a pan shot, or a quick glance at the audience or reactions of other politicians. Following the definition of coherent video sequences as a unit of analysis, the sample consists of 1083 video sequences for news broadcasts and 6860 video sequences for political talk shows.

After the politicians were identified as German politicians with an important mandate on a state, national, or European level,[13] the emotional expressions of these politicians were coded by trained student assistants. Their training was completed when student coders reached an acceptable level of inter-coder reliability. This inter-coder reliability was determined in a testing phase at the University of Koblenz and Landau in 2014 by inspecting a random subsample of video sequences in news broadcasts (10 percent of the total amount of news sequences) and sequences from two political talk shows.

The media content analysis classifies emotional displays in three respects. First, raters coded whether an emotion was displayed within a given sequence at all. If that was the case, they subsequently rated the emotional displays according to the two dimensions of the *circumplex* model – its valence (positive-negative) and its arousal (active-passive).

The variable whether emotional displays occurred at all within a given video sequence has only a low inter-coder reliability. The inter-coder reliability for news broadcasts in this regard was reported to be 0.31 (Krippendorf's alpha) and 0.67 (Holsti's method), and only slightly higher within

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12 Because the political talk show "Eins gegen Eins" (Sat.1) was discontinued in 2013, only two episodes were sampled; one for each of the first two quarters of the content analysis in which the show was still on air.

13 Politicians are regarded as significant actors based on an approach that focuses on their position within the political system following Machatzke (1997). Politicians are included in the media content analysis if they are seen as relevant actors because they hold crucial positions in political parties on a European level, national level or state level in the branches of the legislative or executive. In addition, actors are also considered as relevant if they have held any of those positions in the past or are nominated as candidates for a relevant position, e.g., the candidate for chancellorship (see also Renner & Masch 2019: 102).

political talk show video sequences (Krippendorf's alpha = 0.42; Holsti's method = 0.68). Once the video sequences were rated as containing either emotional displays or no emotions (neutral expressions), the inter-coder reliability increased for the following two categories. For video sequences from news broadcasts the valence has an inter-coder reliability of 0.72 (Krippendorf's alpha; Holsti's method = 0.78); video sequences that were taken from political talk shows have a similar inter-coder reliability regarding the valence ratings (Krippendorf's alpha = 0.64; Holsti's method = 0.92). The passive-active dimension was only pre-tested for news broadcasts, in which the inter-coder reliability reached a Krippendorf's alpha of 0.69 (Holsti's method = 0.89).[14]

3.2 Politicians' Emotional Expressions on German Television

Figure 2 shows the politicians who were predominantly covered by the media content analysis, Frank-Walter Steinmeier, who was foreign minister at the time of the content analysis, and Peer Steinbrück as running candidate for the election in 2013 were covered frequently. Philipp Rösler as candidate and party leader of the FDP, is in the sample for the same reason. He stepped down after the FDP was not elected to the 18th German Bundestag. Christian Ude was running as leading candidate in the Bavarian state election in 2013. Furthermore, the sample reflects a political scandal that has been frequently featured in the news – the "Edathy-Affäre". This scandal involved the then MP Sebastian Edathy, a backbencher who gained media attention due to the alleged possession of child pornographic material. The then parliamentary leader of the SPD, Thomas Oppermann, also appeared in relation to this scandal due to his position as a spokesperson for the parliamentary party.

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14 All inter-coder reliabilities were calculated and deemed acceptable by research colleagues at the University of Koblenz and Landau, who supervised the media content analysis and trained the coders. Because of their training, coding guidelines were established to facilitate the coding process, for example the coders had to indicate whether they recognized the emotional expression because of the facial expression, the gesture, the verbal content, or overall demeanor of a politician. More information can be obtained from the codebook (Maier & Gabriel 2015).

Figure 2: *The Most Frequent Female and Male Politicians Within the Media Sample of News Broadcasts*
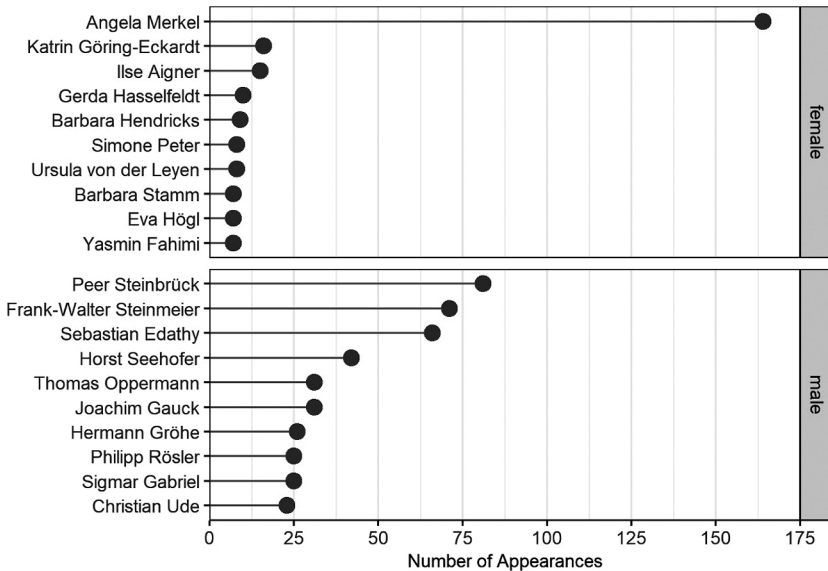
The following Table 1 shows the frequencies in which one or several politicians can be seen in a video sequence. Slightly more than six out of ten video sequences show only one single politician (62.4 percent). About one quarter of video sequences (24.5 percent) show two politicians, and three politicians could be seen in every tenth video sequence (10.9 percent). More than three politicians rarely occurred in a video sequence. Based on these sequences, Table 1 indicates in how many sequences any number of politicians express emotions.

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15 A similar figure has been produced for another publication based on the media content analysis (Renner & Masch 2019: 91).

Table 1: The Number of Politicians in Each Video Sequence

Number of Politicians in Each Video Sequence	Frequencies N	Percentages (Percent)
One Politician	4953	62.36
Two Politicians	1949	24.54
Three Politicians	864	10.88
More than Three, Focus on One	53	0.67
More than Three, Focus on Two	66	0.83
More than Three, Focus on Three	58	0.73
Total	7943	100

Note: Author's own calculations based on the media content analysis (project data). Video sequences in which no relevant politicians were identifiable are not part of the data set.

Table 2 shows the frequencies in which politicians display emotions on television. In this random sample, the majority of sequences showed no emotionality by politicians (56.5 percent), while only 34.0 percent of sequences showed politicians who clearly expressed emotions visibly, aurally, and/ or verbally. Table 2 does not distinguish between news broadcasts and political talk shows. Differences in displays of emotionality between these two program formats are considered in Table 3.

Table 2: The Emotionality in the Media Sample

	No Emotion	Emotion	Ambivalent	Total
Number of Sequences (N)	4486	2698	759	7943
Percentages (Percent)	56.48	33.97	9.56	100

Note: Author's own calculations based on the media content analysis (project data).

Table 3 shows the occurrence of emotions for each program type. In this media content analysis, slightly more than half of the video sequences in news broadcasts showed emotional expressions (55.2 percent), while less than a third (30.6 percent) of political talk show sequences included emotional expressions by politicians. The difference in emotional displays between news broadcasts and political talk shows is highly significant, $\chi^2(2, N = 7943) = 253.81$, $p < 0.001$. This finding is contrary to initial assumptions about the discursive and confronting nature of political talk shows in which heated debates could take place. One possible explanation is that any form of communicative smiles was coded as positive emotional displays for sequences that typically occurred within news broadcasts in the media content analysis. Such communicative smiles, however, mainly indi-

cate politeness and can hardly be described as intense emotion. Communicative smiles are emotional expressions that frequently occur when politicians or public officials gather. Those gatherings, meetings, and summits are commonly reported on in the news and therefore likely to lead to an imbalance between the two formats.

*Table 3: The Emotional Expressions in News Broadcasts and Political Talk
Shows*

		No Emotion	Emotion	Ambivalent	Total
News	Number of Sequences (N)	425	598	60	1083
News	Percentages (Percent)	39.24	55.22	5.54	100
Talk Shows	Number of Sequences (N)	4061	2100	699	6860
Talk Shows	Percentages (Percent)	59.20	30.61	10.19	100

Note: Author's own calculations based on the media content analysis (project data).

Focusing on the valence of emotional expressions (Table 4), it can be seen that of the 34.0 percent of video sequences which included emotional expressions (Table 2), more than half of them included positive emotions, leading to 17.7 percent positive emotions in total. Negative emotional expressions were displayed slightly less often (13.8 percent) and a small amount of expressions were coded as emotionally ambivalent (2.5 percent).

Table 4: The Valence of the Emotional Expressions

	No Emotion	Positive	Negative	Ambivalent
Number of Sequences (N)	5245	1408	1095	195
Percentages (Percent)	66.03	17.73	13.79	2.45

Note: Author's own calculations based on the media content analysis (project data).

The emotional expressions can also be classified according to the circumplex model (see Table 5). This more detailed approach shows that the vast majority of positive emotions can also be classified as positive-active emotions with only 34 video sequences that displayed positive-passive emotions (0.4 percent). Similarly, negative emotions can mainly be regarded as negative-active emotions (11.4 percent), with less than 2 percent of all video sequences being classified as negative-passive emotional expressions.

Table 5: The Valence and Arousal Levels of the Emotional Expressions

	No Emotion	Positive-Active	Positive-Passive	Negative-Active	Negative-Passive	Ambivalent
Number of Sequences (N)	5245	1323	34	903	126	312
Percentages (Percent)	66.03	16.66	0.43	11.37	1.59	3.93

Note: Author's own calculations based on the media content analysis (project data).

Next, frequencies of emotional expressions are obtained for male and female politicians separately as well as for three politicians who gained particular attention in this study due to their roles as key figures in their respective parties in 2015: Angela Merkel (CDU), Sigmar Gabriel (SPD) and Gregor Gysi (The Left) (see Table 6).

The emotional expressions differ significantly according to the gender of politicians, $\chi^2(5, N = 7943) = 58.51$, $p < 0.001$. Across all video sequences, male politicians are more likely to express no emotions than female politicians (68.1 percent vs. 59.2 percent), while female politicians show slightly higher percentages for any form of emotionality, regardless of its valence and arousal, even negative-active emotions than male politicians.

In this sample, the video sequences for the three politicians were broadcast during the news. In her role as chancellor, Angela Merkel, usually did not attend political talk shows, while the other two politicians were frequent guests during the time of the media content analysis. However, the shows they attended were not randomly chosen as part of the analysis. During the period of data collection, Gregor Gysi appeared in seven political talk shows and Sigmar Gabriel in three (for an overview of the politicians who appeared most frequently as guests in talk shows see Table A.1 in the online appendix).

Although Angela Merkel has often been described as lacking emotional expressiveness (e.g., Mölders et al. 2017: 119), she nonetheless displays positive-active emotions in more than half of the video sequences (53.7 percent). While this is an appropriate emotional expression for political leaders (Sullivan & Masters 1988: 362; Bucy & Grabe 2008: 84), this high number of emotional expressions is likely to be the result of communicative smiles that were coded as positive-active emotions within news broadcasts. Nevertheless, several video sequences from the night of the CDU's victory in the 2013 election show strong displays of joy. She also talked about personal topics and showed strong positive expressions in an interview with the women's magazine "Brigitte" that was broadcast on both private TV channels ProSieben and RTL as part of the prime time news during the election

campaign, on May 3rd 2013.[16] In addition, Angela Merkel was the politician with by far the highest coverage in the news according to the media content analysis (see Figure 2). Gregor Gysi and Sigmar Gabriel rarely appeared in the news – at least according to this sample of the media content analysis.

Table 6: *Emotional Expressions of Male and Female Politicians and Specific Politicians*

	No Emotion	Positive-Active	Positive-Passive	Negative-Active	Negative-Passive	Ambi-valent
Female Politicians						
N	1085	342	14	268	39	85
Percent	59.19	18.64	0.76	14.62	2.13	4.64
Male Politicians						
N	4160	981	20	635	87	227
Percent	68.09	16.06	0.33	10.39	1.42	3.71
Merkel						
N	62	88	2	1	3	8
Percent	37.80	53.66	1.22	0.61	1.83	4.88
Gysi						
N	2	2	-	-	-	-
Percent	50.00	50.00				
Gabriel						
N	14	7	1	1	-	2
Percent	56.00	28.00	4.00	4.00		8.00

Note: Author's own calculations based on the media content analysis (project data). In this table the unit of analysis shifts from a focus on video sequences to a focus on the politicians and their appearances across video sequences. The frequencies indicate the number of video sequences and the percentages show the percent of each emotion expression for the politicians.

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16 Merkel also gave a personal interview with the women's magazine Brigitte in the election campaign 2017. Merkel's interview with the women's magazine "Brigitte" during the election campaign in 2017 has gained some additional media attention, e.g. https://www.stuttgarter-nachrichten.de/inhalt.kanzlerin-beim-brigitte-talk-mensch-merkel.9e354d92-16a7-4774-9be6-4401d331695e.html (last accessed: 05 June 2019) and https://www.theguardian.com/world/2017/jun/30/did-merkel-trip-on-gay-marriage-vote-or-is-this-more-canny-politics (last accessed: 05 June 2019). This is mainly due to Merkel's stance on marriage equality as a personal moral choice which was a deviation from her party line. Her spontaneous answer to a member of the audience, an LGBT activist, who asked when he could finally marry his partner, later opened the way for a conscience vote in parliament only a few days later on June 30th 2017, https://www.bundestag.de/parlament/plenum/abstimmung/abstimmung?id=486 (last accessed: 05 June 2019).

Finally, politicians' emotional expressions in accordance with their status as incumbents or opposition are analyzed. Previous findings from a visual media content analysis of US media reports showed that politicians of the opposition showed displays of anger/threat more frequently than incumbents (Grabe & Bucy 2009). This finding could be due to ethological factors. Hence, it is worthwhile to test whether these findings can be replicated in the context of German politics, whereby German politicians of the opposition are assumed to display more anger than their governmental counterparts. Since the media context analysis coded emotional displays according to a circumplex model, the following analysis can only describe the emotional expressions of politicians on these dimensions and their combination. Therefore, politicians of the opposition should show a higher amount of negative-active emotions compared to incumbents. In addition, it also has to be noted that during the time of the data collection the coalition government changed on the national level as well as in two federal state parliaments: Bavaria and Hesse.

The election of members to the 18th German Bundestag, as well as the state parliament in Hesse took place on September 22nd, 2013. In Bavaria, the state parliament was elected a week earlier, on September 15th. None of the coalition governments remained in power after the elections, members of these parties on the state and respectively national levels were reassigned based on whether their parties belonged to the opposition or government. After the elections, the FDP was no longer part of any of the three former government coalitions and did not even remain in the national and Bavarian state parliament after falling below the five-percent hurdle. The SPD formed the new coalition with the CDU in the German Bundestag, while the Greens formed a government coalition as minor partner with the CDU in Hesse, the CSU was able to govern without forming a coalition with any other party in Bavaria.

Across all available video sequences, roughly one third of visible politicians belonged to the opposition (34.5 percent), while almost two thirds belonged to the government on national or state levels (65.5 percent). Hence, this finding indicates a media exposure bias in favor of members of the government and therefore, supports the notion of an incumbency advantage (e.g., Ashworth & Bueno de Mesquita 2008). Looking at all video sequences that were coded as including emotional expressions by politicians, a significant difference between politicians of the opposition and government can be detected when comparing the valence and arousal of the emotional expressions, $\chi^2(5, N = 7798) = 91.08$, $p < 0.001$. The following descriptive statistics presented in Table 7 are based on the circumplex

98

model and also included video clips without emotional expressions in them. Politicians of parties in power show emotional expressions slightly less often than politicians of parties in the opposition (33.0 percent vs. 35.3 percent). According to the circumplex model, this minor difference increases when considering negative-active and positive-active emotions. Politicians of the opposition displayed negative-active emotions slightly more often than politicians in government (15.4 percent vs. 9.1 percent). Furthermore, they displayed positive-active emotions less often which is in accordance with the theoretical assumptions (13.5 percent vs. 18.3 percent).

Table 7 also shows emotional expressions by their status separately for female and male politicians. It can be further noted that in this sample female politicians displayed negative-active emotions more frequently when they belonged to the opposition and not the government (18.6 percent vs. 4.0 percent). This difference for female politicians in regard to their political position is highly significant, $\chi^2(5, N = 1831) = 173.29$, $p < 0.001$. The difference in negative-active emotions for male politicians, however, is less noticeable (12.4 percent vs. 9.7 percent) and their emotional expressions are not significantly different at a 5-percent significance level, $\chi^2 (5, N = 5967) = 9.88$, $p = 0.079$.[17] Female and male politicians also show less positive emotional expressions if they belong to the opposition.

Table 7: Emotional Expressions According to the Political Status

	No Emotion	Postive-Active	Postive-Passive	Negative-Active	Negative-Passive	Ambiva-lent
Politicians in Government						
N	3419	935	20	466	74	190
Percent	66.99	18.31	0.39	9.13	1.45	3.72
Politicians in Opposition						
N	1742	363	12	416	50	111
Percent	64.66	13.47	0.45	15.44	1.86	4.12
Female Politicians in Government						
N	260	180	7	20	9	25
Percent	51.90	35.93	1.40	3.99	1. 80	4.99

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17 The reported results do not alter in their significance when Fisher's exact tests were applied instead.

	No Emotion	Postive-Active	Postive-Passive	Negative-Active	Negative-Passive	Ambiva-lent
Female Politicians in Opposition						
N	824	162	7	247	30	60
Percent	61.95	12.18	0.53	18.57	2.56	4.51
Male Politicians in Government						
N	3159	755	13	446	65	165
Percent	68.63	16.40	0.28	9.69	1.41	3.58
Male Politicians in Opposition						
N	918	201	5	169	20	51
Percent	67.30	14.74	0.37	12.39	1.47	3.74

Note: Author's own calculations based on the media content analysis (project data). The frequencies indicate the number of video sequences and the percentages show the percent of each emotion expression for the politicians.

Unfortunately, only a few video sequences included Sigmar Gabriel, who was part of the opposition as well as the government during the time of the data collection. As the number of observations is very small, it is hard to say whether any differences in his emotional expressions were observed by chance or as a result of his change in status. Nonetheless, the overall analysis of politicians, indicates that politicians of the opposition show more negative-active emotions compared to those in power. Combined with previous findings (e.g., Grabe & Bucy 2009), this finding provides sufficient grounds to assume that politicians of the opposition display more emotional expressions with a negative valence, particularly a negative-active valence. Hence, this chapter has shown that negative-active or anger expressions are frequently displayed by politicians and should therefore be studied in more detail. The next chapter describes the experimental design in order to investigate how emotional displays influence the assessment of political leaders and their leadership qualities.

4 Methods and Approaches to the Study of Emotion Expressions

4.1 Determining an Appropriate Research Method

The aim of this book is to analyze the impact that politicians' emotional expressions – particularly those of anger and indignation – have on the evaluation of politicians. This research endeavor depends on a causal claim, whereby the expression of anger precedes the evaluation of the politician. Quantitative approaches to the study of public opinion and attitude formation typically apply representative surveys and laboratory experiments (Frank et al. 2015: 21). Traditional observational studies and cross-sectional survey research, however, are not well suited to untangle cause and effects. This holds true in general as well as for the topic of candidate evaluation, as it has been previously noted:

> "It is hardly possible to decide whether a voter likes the politician because of his policy positions and party affiliation or whether the voter likes the politician because of the politician's character traits." (Huber 2014: 41)

Not much survey research has been conducted regarding politicians' expressions of emotions and the affective dispositions towards politicians. In the run-up to the German general election in 2013, the German Longitudinal Election Study (GLES) administered a pre-election survey in which participants were asked how strongly their positive and negative feelings were towards the two main contestants: Chancellor Merkel and Peer Steinbrück (Rattinger et al. 2017). The aim was to establish a measurement of ambivalence towards both contestants that could explain candidate preferences and candidate evaluations (Blumenstiel & Gavras 2015).[18]

In addition, the GLES online-tracking study has previously and consecutively asked participants in six panel waves, how often Angela Merkel and her (potential) contestants at the time – Frank-Walter Steinmeier, Peer Steinbrück, Sigmar Gabriel, and Martin Schulz – made them feel angry or

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18 The items have since been regularly used in intermediate inquiry surveys (Roßteutscher et al. 2016a; Roßteutscher et al. 2016b); however, they have not been administered in the pre-election survey in 2017 (Roßteutscher et al. 2018).

enthusiastic. Participants could answer both items for each politician using a 7-point Likert scale ranging from "not at all" to "very much".[19] Since 1980, the American National Election Study (ANES) has asked participants how they describe their affective state towards the presidential candidates in terms of four discrete emotions: angry, afraid, hopeful or proud.[20] If participants indicate they have ever felt this way because of the presidential candidates, a follow-up question measures the frequency of those feelings. This measure of affect has been used to explain support for presidential candidates (Finn & Glaser 2010). Both surveys attempt to measure the emotional disposition towards candidates, especially during an election season, however, the measurements have severe drawbacks. It remains unclear which events participants recall when answering these survey questions. This problem is also noted by Redlawsk and Pierce in regard to the American National Election Study:

> "This suggests that questions such as 'has [candidate] ever made you feel angry?' – the typical survey question that informs AIT – are problematic; at best there will be a significant error in recall." (Redlawsk & Pierce 2017: 417)

Figure 3 shows the distribution of feelings of anger and enthusiasm towards Angela Merkel in six annual cross-sectional surveys from September 2010 to September 2017.[21] The figure shows the cumulative percentages of the participants who often felt very angry and angry or very enthusiastic and enthusiastic towards Angela Merkel. It can be seen that anger towards

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19 GLES online-tracking studies t1 (2009) (Rattinger et al. 2011), t11 (2010) (Rattinger et al. 2015a), t15 (2011) (Rattinger et al. 2015b), t18 (2012) (Rattinger et al. 2014), t25 (2014) (Rattinger et al. 2015c), t29 (2015) (Roßteutscher et al. 2016a), t33 (Roßteutscher et al. 2016b), and t37 (Roßteutscher et al. 2017).

20 The question wording is reported as follows: "Now we would like to know something about the feelings you have toward [the democratic presidential candidate]. Has [the democratic presidential candidate] – because of the kind of person he is, or because of something he has done – made you feel: angry/ afraid/ hopeful/ proud?" (The American National Election Studies 2010).

21 The first GLES online tracking study t1 was conducted in April and May 2009 for some general tests, so the question was only administered to a subsample of the study resulting in missing data for three-quarters of the participants. In addition, the question wording has been changed since the first test. In this general test, participants could answer the question with a scale ranging from "never" feeling angry to "always" feeling angry. Due to the changes in question wording and the testing phase of the first online tracking study, the respective data have been omitted here.

her was high in 2010 and 2011 and has increased again since 2015. It is unclear as to why such a large percentage of participants felt angry towards Angela Merkel in 2010 and 2011. A sampling bias might have potentially caused higher values, since the sampling procedure changed in 2012, when the initial online access panel was replaced by a higher quality online access panel with offline recruiting.[22] Questions about feelings towards running candidates were not included in the online tracking study that was conducted during the election campaign season in September 2013. Since 2015, an increase in self-reported anger towards Merkel can be observed, which also corresponds to her decreasing popularity since August 2015 up until spring 2017 (see Figure 1). This trend is likely to be connected to the migration crisis, the emergence of Pegida, and a growing support for the AfD in the general population. The migration crisis has sparked a right-wing populism that has often targeted Merkel personally and deemed her policy decisions to be failures. Taking this longitudinal perspective, some insights can be drawn from the repetition of both questions in several surveys.

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22 More information about the online access panels can be obtained from the code-books for each study, a short description is provided online at: http://gles.eu/wor dpress/english/design/langfrist-online-tracking/ (last accessed: 05 June 2019).

Figure 3: Self-Reported Feelings Towards Angela Merkel
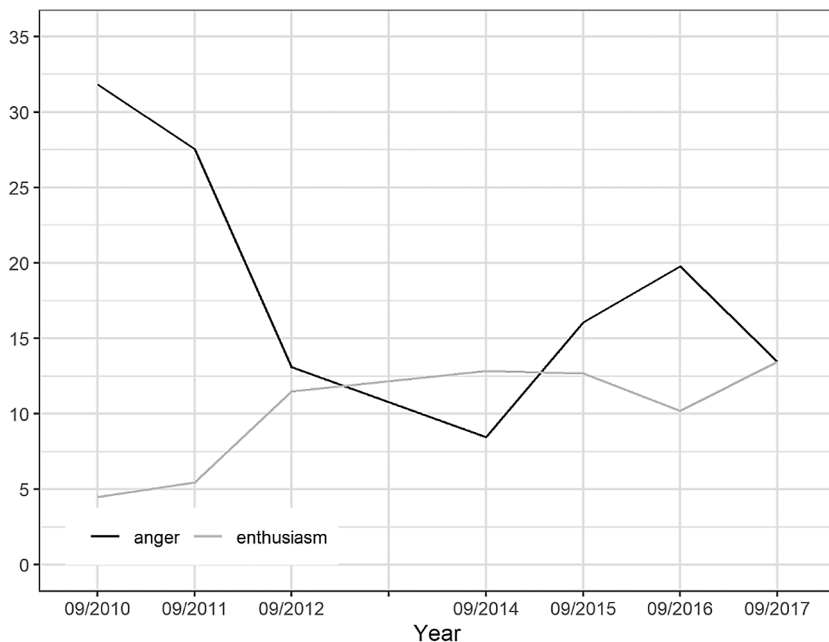
Note: Author's own calculations based on the GLES online tracking studies t11, t15, t18, t25, t29, t33, t37 (ZA5344, ZA5348, ZA5351, ZA5725, ZA5729, ZA5733, ZA6817; Rattinger et al. 2015a, 2015b, 2014, 2015c; Roßteutscher et al. 2016a, 2016b, Roßteutscher et al. 2017). The percentages represent respondents who felt strongly and very strongly towards Angela Merkel in respect to their anger and enthusiasm towards her. The online tracking study in 2013 did not include questions regarding feelings towards the running candidates. A mean imputation has been chosen to represent the respective data point. Weights have been used to adjust the sample to online users.

Similar to these self-reported feelings towards politicians, asking participants about the perception of politicians' emotional expressions in questionnaires is likely to suffer from problems regarding the recall of events. Such a measurement has not been implemented in any large-scale election study. One exception is a panel survey that was conducted before and shortly after the Iowa Caucus 2016 (Redlawsk et al. 2018). Caucus goers were asked whether they had ever heard or seen the political candidates express visually or aurally four discrete emotions: hope, fear, anger, and contempt (Redlawsk et al. 2018: 177). Due to the preceding exposure to the candidates during a significant event, participants' recalls of events were

104

less problematic. This design is similar to a quasi-experimental design; a simple cross-sectional survey, however, can only indicate associations instead of causal mechanisms.

In the realm of observational studies, one might also investigate responses to real-life events via traditional content analysis of media outlets or more direct content analysis of social media and comment sections of online newspapers that follow any noticeable public outburst. These observations, however, can only be conducted as case studies that strongly depend on the specific context. Such an approach might complement any experimental approach to gain further insight, but it is not without drawbacks. Only a small number of the electorate actively engage on social media sites or online newspaper comments in the field of politics. According to a question from the GLES online tracking study in 2015 (Roßteutscher et al. 2016a), roughly 15 percent of the German internet population engaged in political debates online, either by writing or commenting on political posts on Facebook, Twitter and other social media sites.[23] Hence, any content analysis could only be interpreted as a reaction and potential evaluation of this small and potentially non-representative proportion of the general population.

In the light of the research question, an experiment that addresses how emotional expressions of anger affect the evaluation of politicians appears to be the most appropriate research method to study the subject systematically within the general population. Although cognitive attributions and affective responses were outlined as potential underlying causal mechanisms, the main aim of this endeavor is not to test which mechanism is at work, but rather to determine how emotional expressions affect the evaluation of a politician, while acknowledging the potential impact of both cognitive as well as affective responses.

Before it is outlined how the experiment was designed to test the impact of emotional expressions, designing an experiment begins with the careful consideration of any pitfalls; hence, the next Subchapter 4.2 starts with some general thoughts on the experimental method, highlighting the strength and potential drawbacks of experimental designs. The implement-

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23 Different weights were applied to obtain this value: without weights (15.2 percent), weights adjusted to online users with speeders (15.2 percent), adjusted to online users without speeders (15.5 percent), adjusted to the micro census with speeders (14.0 percent), and without speeders (14.4 percent). Author's own calculations based on the GLES long-term online tracking study T29, 2015 (Roßteutscher et al. 2016a).

ed experimental design of this study is then thoroughly discussed, considering potential threats to its validity in the following Subchapter 4.3.

4.2 The Experimental Method

Experiments have been used in the social sciences and political science since the 1920s (Morton & Williams 2010: 3; McDermott 2002: 50). One of the first experiments in political science dealt with voting behavior, particularly voter turnout. In his study "An Experiment in the Stimulation of Voting", Gosnell (1926) sent out postcards with various contents in several randomly selected districts, for example cartoons displaying non-voters as "slackers", to measure the effect of those stimuli on the voter turnout in the following election.

Regardless of these early advances, experiments have only played a marginal role in political science up until the beginning of the 21st century (McDermott 2002). This was largely due to the high cost of experimental research and its limited feasibility in practical and ethical considerations in various subfields of political science in which random assignments could be considered unethical or infeasible. However, a continuous increase in experimental articles can be observed in the social sciences, beginning more slowly in the 1970s and amplifying in the 1990s (Morton & Williams 2010: 4). It was not until the turn of the millennium that experiments gained wider popularity as methodological tools in political science (McDermott 2002; Keuschnigg & Wolbring 2015). Especially in the last decade, studies that are built on experimental designs have increased in number. Further indications of this recent growth and academic interest in experimental studies stem from an increasing amount of literature on experimental method in political science, for example the "Cambridge Handbook of Experimental Political Science" (Druckman et al. 2011), and the launch of the "Journal of Experimental Political Science" in 2014.

The increase in experimental applications can be observed across all political science disciplines such as international relations, political economy, political psychology as well as public opinion and the social sciences more broadly. Experimental studies are frequently described as a gold standard for establishing causality across the sciences and serve "as a yardstick against which non-experimental research is assessed" (Bryman 2012: 50). In the natural sciences, such as physics and chemistry, as well as psychology, the experimental method is taught to scholars (McDermott 2002) and con-

106

sidered to be a leading methodological tool for generating new insights and creating knowledge (Lupia 2002: 319).

Due to lacking feasibility, or financial, and ethical constraints, observational studies might use several techniques to approximate an experimental design and the missing treatment or control group by using instrumental variables or statistical estimates of a counterfactual outcome (e.g., Abadie et al. 2010, Abadie et al. 2015, Horiuchi & Mayerson 2015).

True experimental designs can also vary largely across the subfields. Classic laboratory experiments manipulate one factor (or several factors systematically) – the stimulus or treatment – which is then administered randomly to participants of the experimental group in a controlled setting, while participants of the control group receive only a placebo treatment or none at all. If more than one factor is manipulated, it is desirable to test all possible factor combinations (e.g., a 2x2 design). Comparative politics might apply quasi-experimental designs in the absence of randomization. Field experiments are used to study the effects of canvassing on public opinion and voter intentions in the US (Gerber & Green 2000). Dictator games in their varieties, such as trust games, are commonly applied within the field of economic cooperation, social psychology, and international relations (e.g., Burns 2006). Studies that try to measure latent constructs, such as xenophobic attitudes, might consider implicit association tests as an experimental design (Greenwald et al. 1998). Implicit association tests that measure latent social attitudes can now be easily designed by computer software and later set up in laboratory or online settings (Greenwald et al. 1998).

One of the main reasons for the increase in experimental studies is the progress that has been made in computational technology (Morton & Williams 2010: 11). Creating and conducting experimental games in a laboratory setting can be time-consuming. Due to the advent of computer programs such as z-Tree (Zurich Toolbox for Readymade Economic Experiments), new software enables researchers to program economic experiments easily (Fischbacher 2007; for an overview of experimental games see Levitt & List 2007: 155). Hence, it has become less time-consuming and cost-intensive to run experiments.

The variations of experimental designs are manifold – offline and online, especially with regard to the possibilities of survey experiments (Mutz 2011). Survey experiments can incorporate an experimental treatment into the questionnaire and come in various forms and shapes (Gaines et al. 2007), such as list experiments which are suited to measure topics strongly suffering from social desirability biases, for example voter turnout, racial

attitudes, and drug usage (Rosenfeld et al. 2016). Vignette studies are also considered to be online survey experiments and have a wide application in market research and sociology (Wallander 2009). They have also been applied to measure political attitudes by embedding a treatment as frame, often as text messages (Goodwin et al. 2020; Hainmueller & Hiscox 2010). In addition, if they aim to set the participants in a certain mood or elicit emotions, other survey experiments might include scenario and induction techniques, such as emotion induction (Searles & Mattes 2015). In the case of political science, such emotion induction experiments have previously included campaign advertisements (Brader 2005; Searles & Mattes 2015). In this context, some studies have only changed additional wording as experimental treatment that generated the frames in which the negative campaign ads were presented (Mattes & Redlawsk 2015). Hence, experimental manipulations can be implemented in manifold ways. Previous studies have tested effects of candidate appearance and demeanor with varying tools, for example the use of photos on flyers or the ballot (Johns & Shephard 2011; Dumitrescu 2010), morphed faces (for an overview see: Todorov et al. 2015), altered voices (Tigue et al. 2012), video clips of various lengths (Masters et al. 1986; Stewart & Ford Dowe 2013; Stewart et al. 2009a; Dumitrescu et al. 2015). Especially the study of emotional expressions has been studied previously with video clips of politicians in a traditional laboratory setting (e.g., Masters et al. 1986; Stewart & Ford Dowe 2013); by doing so, the variance on terms of political party affiliation is often limited to predispositions of college students. In this regard, large-scale online samples offer an advantage by providing samples that are more heterogeneous.

These survey experiments are often embedded in online surveys and present a stark contrast to psychological and neurological experiments that use fMRI scans or physiological measurements, and are occasionally conducted in the field of political psychology to study underlying causal mechanisms (e.g., Schreiber et al. 2013; Hibbing et al. 2013). Since the aim of this research is to gauge the effect of emotional expressions on candidate evaluation, a population-based survey experiment is the most appropriate to measure the evaluation of politicians based on a heterogeneous sample. Online survey experiments are particularly useful if the experimental treatment consists of pictures or video clips that cannot be administered during a telephone interview. Furthermore, they are well-suited to minimize interviewer effects and maximize cost effectiveness compared to face-to-face and telephone surveys.

Experimental studies usually have a high internal validity (Bryman 2012: 50). However, their external validity is often limited, especially when they are merely based on student samples which are not representative of the larger population. When findings are solely based on students who grew up or live in "Western, Educated, Industrialized, Rich, and Democratic (WEIRD)" countries (Henrich et al. 2010: 61), the generalizability of their decisions made in artificial experimental settings is limited, because their decisions cannot be seen as representative of those from other living conditions (Henrich et al. 2010). The limited representativeness is amplified, especially when experimental findings are replicated merely with further student samples, and the findings are then considered as reliable evidence about universal human behavior (Heinrich et al. 2010). Hence, the external validity is typically a big concern in experimental studies and the lack of it has contributed to the current replication crisis in psychology (e.g., Shrout & Rodgers 2018). Nonetheless, the use of student samples can also be justified by interpreting the approach as theoretical sampling for specific questions (Druckman & Kam 2011): If the relationship can be found for this particular group in a given situation, it will likely apply to all other social groups, in the sense of a least-likely case sampling approach (e.g., Flyvbjerg 2006; King et al. 1994: 209).

One way to minimize the amount of student samples and to generate variation among the convenience samples is to approach other easily accessible groups, e.g., such as university employees. This specific group is accustomed to research studies and therefore potentially more likely to participate. For example, Stewart and Ford Dowe (2013) recruited 180 university employees of which 80 completed the study (Stewart & Ford Dowe 2013: 381).

Convenience samples can be easily recruited online through the use of the internet. Participants can be contacted via Facebook advertising, social media, Amazon Mechanical Turk (MTurk), or via university email lists (Buhrmester et al. 2011; Kapp et al. 2013; Ramo & Prochaska 2012). The application of experiments also benefits heavily from technological advances; computer software has been developed, such as Lime Survey and Unipark (QuestBack), which facilitates designing the online questionnaire, administering experimental treatments randomly and hosting the survey online. They are especially useful for pre-testing with student or convenience samples as well as for studies with limited budgets. Due to the cost-effectiveness, numerous American experimental research studies have recruited participants via MTurk (Buhrmester et al. 2011; Bohannon 2016). These convenience samples differ only slightly from the American internet

population regarding their overall characteristics; they seem to be younger, have lower income, less children, and are more likely to be female (Berinsky et al. 2012: 357). These concerns also apply to online access panels that frequently invite the same participants. This raises one concern regarding the familiarity of respondents with experimental designs, as they become more and more likely to have previously participated in experiments, even several times, and thereby might differ significantly from the average person who is rarely exposed to the logic of experimental designs. They can become experts in experimental studies, be aware of their participation in either a control or experimental group and thereby purposively try to resist any impact an experimental treatment might have. Such behavior caused by pre-testing could be described as a "reactive effect" (Bryman 2012: 55; Campbell & Stanley 1971: 179).

While some market research companies state they limit the amount of invitations they send to their panel members to discourage "professional usage", market research companies rarely share detailed information about their online access panels publicly. Hence, the concern about expert users remains with any form of opt-in panels which potentially enable heavy usage.

Furthermore, self-selection into studies is a problem in any study, if the respondents differ significantly from those who do not respond. However, this concern is not limited to online surveys and experiments but also poses an increasing issue with traditional telephone surveys, since the number of people who respond to survey invitations has decreased steadily (Curtin et al. 2005; Mutz 2011: 157). Experimental studies based on convenience samples that are recruited via opt-in panels, student samples, or university employees, often lead to valid results as a recent study has shown (Mullinix et al. 2015). By replicating studies using a population-based sample and a range of varying convenience samples, researchers have found that convenience samples do not automatically lead to false inferences (Mullinix et al. 2015: 111; see also Bieber & Bytzek 2012).[24] Therefore, empirical studies that focus on causal mechanisms and the internal validity can be conducted online with convenience samples at low cost and time expenditure. Such convenience samples might sometimes be the only option to gain some insight into the study of emotion research and emotional responses, for example to test the underlying causal assumptions of emotional contagion in studies that aim to elicit emotional responses within

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24 With an exception of exit poll recruitments, however, further research is needed to explain the diverging effects for exit poll samples (Mullinix et al. 2015: 116).

the participants. Highly incentivized studies might be suited to test effects of emotional contagion by recording facial reactions of viewers or tracking eye movements. For such intrusive research as filming participants on camera, it might not be possible to draw from a representative study, but it could be possible to highly incentivize a small convenience sample.[25] Hence, to study certain topics and theories, (online) convenience samples might be the only way to examine underlying causal mechanisms – such as affective responses or appraisal – systematically.

Large population-based studies, when possible, are preferred because they allow estimating the effect sizes for specific sub-populations and enabling the analysis of heterogeneous treatment effects by providing variance in large samples (Mullinix et al. 2015: 111). This advantage has also been pointed out by Mutz (2011): "It may be well established that X causes Y from laboratory studies, but population-based experiments can tell us that X causes Y with certain kinds of people in certain kinds of situations" (Mutz 2011: 159).

Population-based survey experiments have recently found a widespread application within the social sciences, as they combine the advantages of both experimental and survey research (Mutz 2011), and are easily conducted on the internet. Based on online panels, population-based survey experiments implement an experimental component into a representative or at least large-scale survey. By administering large-scale surveys that incorporate an experimental treatment, the internal as well as the external validity of this approach are potentially high. While the potential benefits for survey experiments are high, researchers need to consider potential pitfalls: "Population-based experiments are not a panacea for all that ails observational and experimental methods" (Mutz 2011: 155). The limitations of experimental research designs need to be considered carefully (Gaines et al. 2007; McDermott 2002).

Several challenges occur when planning and designing an online survey experiment and a researcher needs to evaluate whether and how an online survey experiment might be conducted. Mutz outlines at least two crucial challenges when designing survey-experiments (Mutz 2011: 156–157). First, experimental treatments need to be effective in regard to the causal mechanism that is under scrutiny. In the context of public opinion re-

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25 This is also common practice in market research companies in neuro marketing studies which test the affective impact of advertisements and communication strategies with physiological measurements and eye-tracking studies (e.g., Hamelin et al. 2017).

search, this implies that researchers need to design experiments that have a measurable impact on participants' attitudes. However, survey experiments also need to adhere to ethical standards when emotions are induced. This presents the second challenge, as researchers can not merely aim for the potentially largest effects, if those treatments present any harm to the participants. For example, in emotion induction techniques, researchers have to think critically about the pictures and video clips they present to participants when they aim to induce emotions such as fear or anger. Next to the potential harm that might result from showing disturbing pictures or putting participants in stressful situations, further ethical considerations have to be made regarding informed consent, privacy considerations, and deception (Bryman 2012: 129–155; McDermott 2002).

While it is technically feasible and cost-effective to administer pictures or video clips as experimental treatments in online survey experiments, the experimental design of stimulus and control conditions need careful consideration. When using video treatments, a placebo treatment is ideally administered for the control group. Based on the experimental paradigm, only the emotional expressions of politicians should differ between the treatment and the control group, while all other factors are equal across experimental groups. To estimate the effect of negative emotions such as anger, the emotional expression is best compared to a neutral expression of the same politician in the same contextual setting, conveying the same content except for the politician's verbal, paraverbal or non-verbal emotional expressions. However, this is hardly feasible with real world data and could only be approximated by using video clips taken from similar public appearances which lack any specific emotional expression. For this reason, previous research has often relied on hired actors who played putative politicians (e.g., Dumitrescu et al. 2015; Mutz & Reeves 2005; Mutz 2007).

Building on the potential pitfalls in experimental designs described by Campbell & Stanley (1971), Bryman (2012) identifies seven threats to the internal validity of an experiment as crucial: *history, testing, instrumentation, mortality, maturation, selection, and ambiguity about causality* (Bryman 2012: 52–53, see also: Behi & Nolan 1996; Campbell & Stanley 1971; Rubin & Babbie 2008). Bryman (2012) also points out the possible drawback of *reactive effects* which occur every time participants are aware of the fact that they are taking part in an experiment (Bryman 2012: 54). The results and external validity of the study could be affected if participants behave differently because of their knowledge of the situation. Since participants need to be informed about their involvement in any study due to ethical consideration, reactive effects in experiments cannot be eliminated completely.

While it is not necessarily needed to inform participants about the nature of the experimental study, only a slight amount of deception can be tolerated. Traditionally, studies in psychology and economics differ to the degree in which they allow for deception (McDermott 2002; Dickson 2011); psychological research usually has a higher tolerance for deception, whereas economists are generally more forthcoming with their research aim. In addition, experiments in economics and psychology typically also vary regarding the use of incentives and stylization (Dickson 2011). The following Subchapter 4.3 describes the experimental design of this study and discusses potential threats to the experimental design that could interfere with the study's objective.

4.3 The Experimental Design

This experiment was designed to measure the impact that emotional expressions of politicians have on viewers, their attitudes towards politicians, their evaluation of politicians and further aspects such as political parties and concepts such as political trust among voters.

Due to the focus on attitudes among the general public, a large-scale online survey experiment that facilitates the use of video clips rather than laboratory studies seemed to be the best match regarding the research aim. Detecting the specific causal mechanisms at work was not the main interest of this study. Video clips can be easily incorporated into online surveys compared to telephone or paper-and-pencil questionnaires.

4.3.1 Pre-Test: The Structure of Politicians' Emotion Expressions

The media content analysis analyzed the emotional displays using the circumplex model as its theoretical underpinning. However, before experimental treatment was designed, a pre-test was conducted in July and August 2014 at the University of Koblenz and Landau and the University of Trier, in which eight student coders coded emotional expressions as discrete emotions in a sub-sample of 400 video sequences. This pre-test aimed at measuring the structure of emotions. Previous empirical studies have classified emotions by clustering emotion words (e.g., Schmidt-Atzert 2008; Shaver et al. 1987). Whereas those studies have often been concerned with how participants describe their own feelings, the novelty of the pre-

test can be seen in the new subject – televised emotional expressions by politicians instead of self-reported affective states.

A sample of 200 video sequences was taken from the news broadcasts as well as from the political talk shows of the media sample resulting in a total sample of 400 video sequences. The video sequences were drawn randomly from a pool of pre-coded sequences, which indicated that these clips potentially included an emotional expression.[26] After having received training in the recognition of emotions, each student coder rated half of the sequences according to a list of 17 potential discrete emotions (Ekman & Cordaro 2011) and the other half as open-ended items using their own words. The raters also indicated how certain they were about their rating as well as their perceived strength of the emotional expression.

The sequences that were rated with an open wording approach did not substantially differ from the 17 potential discrete emotions that were used for the other half of the items. Hence, the open-ended coding were later matched to the list of 17 discrete emotions, so that eight ratings were obtained for each video sequence. The prevalence of discrete emotions was determined by setting a criterion that at least four coders had to identify an emotional expression as being a specific discrete emotion within any given video sequence. Coders were instructed to rate more than one discrete emotion per video sequence if they recognized several distinct emotions or had the impression that one discrete emotion was not sufficient. As a result, two or even three discrete emotions frequently appeared within in one video sequence according to the raters (see Table 8).

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26 The research assistants of the project rated the material previously to determine whether the sequence showed an emotional expression. This included two samples of news broadcasts and a random selection of video sequences from talk shows.

Table 8: The Percentages of Discrete Emotions in 400 Video Sequences

	All Video Clips		News		Talk Shows	
	N	Percent	N	Percent	N	Percent
Anger	103	25.75	27	13.5	76	38
Fear	17	4.25	13	6.5	4	2
Surprise	7	1.75	3	1.5	4	2
Sadness	14	3.5	13	6.5	1	0.5
Disgust	0	0	0	0	0	0
Contempt	31	7.7	9	4.5	22	11
Happiness	138	34.5	120	60	18	9
Pride	26	6.5	18	9	8	4
Amusement	64	16	19	9.5	45	22.5
Schadenfreude	15	3.75	6	3	9	4.5
Guilt	7	1.75	6	3	1	0.5
Hope	12	3	9	4.5	3	1.5
Embarrassment (Shame)	16	4	10	5	6	3
Compassion (Being Moved)	2	0.5	1	0.5	1	0.5
Relief	0	0	0	0	0	0
Rejoicing	10	2.5	9	4.5	1	0.5
Indignation	89	22.25	16	8	73	36.5

Note: Frequencies and percentages indicate that at least four out of eight coders recognized the discrete emotion as such within a video sequence. Ratings were observed for 400 video sequences.

As a next step, a cluster analysis was conducted to investigate which discrete emotions appeared together because they were coded within the same video sequence. Based on the circumplex model and the four categories along its two dimensions (valence and arousal), a four cluster solution could be expected, whereby negative-active, negative-passive, positive-active, and positive-passive emotions group together.

The k-means clustering approach is a non-hierarchical clustering approach that is suited to analyze the grouping of observations if the number of expected clusters is predetermined.[27] The following Table 9 shows the results of the cluster analysis for a four-cluster solution. All 17 discrete emotions were considered for each video sequence and had possible values ranging from "not recognized" (0) to "recognized by all coders" (8). The variables were z-transformed before the cluster analysis was conducted. Ta-

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27 This approach uses a random starting point to form initial clusters. To ensure the reproducibility of the presented results, different starting points were chosen and cluster results with several different starting points were compared to the presented results in order to ensure a stable solution.

ble 9 presents the average values for each variable within the four clusters. The first cluster shows the highest average values for positive emotional displays such as happiness (1.01), pride (0.65), rejoicing (0.59) and hope (0.45). Because happiness, pride, and rejoicing co-occur with high arousal, they can be classified as positive-active emotions. Hope, on the other hand, could be classified as a positive-passive emotion due to its low arousal level (Russell 1980: 1167). The first cluster includes both states of arousal. The second cluster exhibits the highest average ratings for negative-active emotions such as anger (0.98), contempt (0.77), and indignation (1.00). According to the mean values of fear (1.56), sadness (1.97), guilt (2.01) and embarrassment (1.39), the third cluster can be interpreted as representing negative-passive emotional displays. The fourth cluster has the highest average ratings for emotional displays of schadenfreude (1.01) and amusement (1.47). These emotions are also positive-active emotions, but their point of reference is likely to be negative; for example, schadenfreude occurs at the misfortune of someone else and amusement could indicate the belittlement of someone else such as another politician in a talk show. Schadenfreude occurs only in 3.8 percent of the analyzed video sequences, while amusement occurs more frequently in 16.0 percent of the 400 video sequences. 76 observations group into this fourth cluster, which is distinct from the other three clusters and might indicate the special communication style of politicians in talk shows, including uncivil behavior in the sense of sneering comments, mockery, and ridicule, rather than another set of emotional expressions.

The cluster sizes also indicate that the majority of observations fell into either positive (131 observations) or negative-active emotional displays (147 observations). The positive emotional displays largely consist of positive-active emotions, such as happiness (34.5 percent), while positive emotions with a lower arousal, such as hope, cluster within this group but are rarely seen on television (3.0 percent). Negative-passive emotions are also less frequently displayed (46 observations) but appear fairly distinct from the other emotions; this impression is also amplified by a multidimensional scaling analysis of the cluster solution.

116

Table 9: Mean Values of the K-Means Clustering for 17 Discrete Emotions

	Cluster			
	1	2	3	4
Anger	-0.75	0.98	-0.29	-0.42
Fear	-0.24	-0.10	1.56	-0.33
Surprise	-0.20	-0.04	-0.25	0.56
Sadness	-0.33	-0.17	1.97	-0.29
Disgust	-0.30	0.40	-0.30	-0.07
Contempt	-0.65	0.77	-0.25	-0.22
Happiness	1.01	-0.77	-0.67	0.15
Pride	0.65	-0.25	-0.51	-0.33
Schadenfreude	-0.35	-0.09	-0.36	1.01
Guilt	-0.26	-0.26	2.01	-0.26
Rejoicing	0.59	-0.29	-0.30	-0.27
Embarrassment (Shame)	-0.21	-0.36	1.39	0.22
Relief	0.42	-0.32	-0.16	-0.02
Indignation	-0.66	1.00	-0.52	-0.49
Hope	0.45	-0.24	-0.20	-0.19
Compassion (Being Moved)	0.27	-0.25	0.43	-0.25
Amusement	-0.10	-0.47	-0.62	1.47

Note: Cell entries display mean values for each variable in each cluster after each variable was z-transformed.

The following Figure 4 presents a multidimensional scaling analysis based on a Euclidean distance matrix for the 400 video sequences. The group membership in this figure is determined by the previously described four-cluster solution of the k-means clustering approach (Table 9). By visually inspecting this graph, it can be seen that the third cluster of negative-passive emotions forms a distinct cluster that is the furthest apart from the other clusters. The vertical dimension divides the clusters along the dimension of arousal and thereby clearly separates the negative-passive cluster from the three other clusters, which include predominantly active or dominant emotions. The horizontal dimension distinguishes positive and negative emotions, as positive emotions have lower values and negative emotions higher values, particularly the negative-active emotions. The Clusters 1 and 2 of positive emotions and negative emotions are well separated. The fourth cluster, which shows the highest average values of schadenfreude and amusement, is located between positive and negative emotions. In many cases it overlaps with the first cluster of positive-active emotions. A few observations also indicate the expression of negative emotions and discrete emotions such as schadenfreude and amusement. Hence, this visual inspection is further indication that the fourth cluster does not represent a category which is completely distinct from positive-active emotions according the circumplex model of emotions, but could also emphasize the im-

117

portance of communication styles, uncivil behavior, and context. These findings are in line with the three-factor model of emotions (Morgan & Heise 1988; Mehrabian 1980; Steenbergen and Ellis 2006), which is proposed as a good empirical fit (2006): "Rather, three dimensions (one of positive affect and two of negative affect) are required in many circumstances" (Steenbergen & Ellis 2006: 111). This also seems to be a fitting model in the context of broadcasted emotional expressions by politicians on television. A mere distinction between positive and negative emotions is not deemed sufficient: "In this view, the two-dimensional model of affect may be insufficient: instead, we may need a three-dimensional model of emotions, encompassing positive affect, and two distinct types of negative affect" (Steenbergen & Ellis 2006: 110).

Figure 4: Multidimensional Scaling of Discrete Emotions
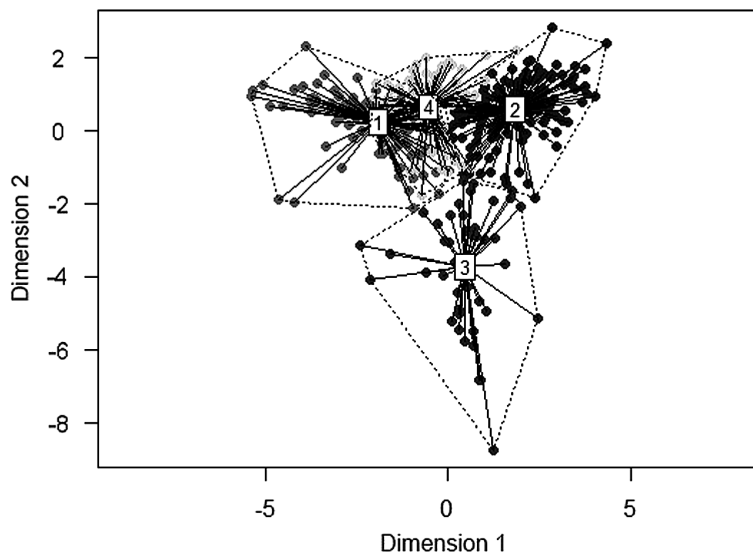
Note: Author's own illustration. The figure shows a multidimensional scaling analysis based on the Euclidean distance matrix. The first cluster shows positive-active emotions, the second negative-active, the third negative-passive and the fourth such emotions as amusement and schadenfreude.

Based on the observed frequencies within this pre-test, the experimental treatment was designed to largely follow the proposed three-factor model (Steenbergen & Ellis 2006) to measure effects of positive-active emotions

(positive), negative-active emotions (aversion) and negative-passive emotions (anxiety) for politicians as social groups.

In addition, the analysis searched for a fourth cluster of positive-passive emotions. However, a distinctive fourth cluster did not occur. The estimated fourth cluster is positioned between positive-active and negative-active emotions because its video sequences included both expressions. These sequences can be described by the concept of incivility – dominant expressions that show negative-active and positive-active emotions such as schadenfreude or amusement to belittle the political opponent. Therefore, the experiment also tests effects of this specific behavior, though it might not be a distinct emotion in itself.

Based on the frequencies within this pre-test, it can also be said that the negative-active emotions predominantly consist of anger and indignation, whereby two-thirds of the political talk show sequences showed anger and indignation. These discrete emotions are commonly displayed in political talk shows. This finding of three distinct clusters is in line with the three-factor model, which emphasizes that it captures the functions of emotions more strongly than the circumplex model (Steenbergen & Ellis 2006: 111):

> "The three-dimensional model brings some of the nuances of functional theories into the circumplex model. It agrees with the circumplex model that emotions can be represented with reasonable accuracy in a small number of dimensions. It also agrees with functional theories, however, in arguing that two dimensions are insufficient to capture the qualities of different emotions." (Steenbergen & Ellis 2006: 111)

Hence, the three-factor model is applied to the experimental design of the study,[28] as it has also found a wide recognition within the field of political communication research (e.g., Sullivan & Masters 1988; Bucy & Grabe 2008; Stewart et al. 2009b; Stewart & Ford Dowe 2013). In this study, the three-factor model of emotional expressions can be implemented with regard to the evaluation of politicians as a social group, while the emotional expressivity of the key political leaders only enables testing specific factors for each politician. Displays of fear/evasion or negative-passive emotions were hardly shown by any of the three political leaders during the time of

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28 When video sequences were selected for the experimental treatment additional attention was paid to the discrete nature of the emotional expressions.

the media content analysis;[29] hence, displays of fear/evasion are not tested for specific political leaders in the following analysis. Display of happiness/reassurance and anger/threat were more frequently displayed by the political leaders. In addition, Sigmar Gabriel is the key political leader whose displays of anger/threat include expressions of incivility. The inclusion of his expressions allows for testing the specific impact of anger/threat displays in conjunction with incivility. In comparison to his expressions, Angela Merkel and Gregor Gysi hardly show any uncivil behavior. In contrast, Gregor Gysi's speech acts often contain concerns of social injustices – regardless of his emotional expressions.

4.3.2 The Procedure

The online survey experiment was conducted over a period of six weeks in Germany, from March 19th to May 4th, 2015. In the span of six weeks, a pre-test was administered, followed by a first post-test at least two weeks later and a second post-test one week later. The participants were invited to the second post-test seven days after they had taken part in the second wave. Due to high response rates, it was not necessary to send out reminders for the second post-test. Participants could answer each questionnaire during a time period of ten days. The first wave was in the field from March 19th to March 29th, the second wave from April 16th to April 26th, and the third wave from April 23rd to May 4th.

Unlike a vast amount of studies in political psychology, this analysis is based on a quota sample from an online panel of the former polling agency Link (now Forsa), which is representative for German internet users aged 18 to 68. Participants for this panel were solely recruited offline, for example participants who were randomly contacted as part of a computer-assisted telephone interview were asked whether they might be interested in joining an online panel to participate in future online surveys at the end of the survey. Only previously contacted participants could have registered into the panel at this stage, not everyone could self-select into the panel via online advertisement. Therefore, self-selection biases are mitigated compared to other online panels to which participants can sign up online.

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29 One exception was a eulogy to Nelson Mandela that Angela Merkel delivered in light of his passing. While such a delivery requires emotional expressions of sadness, the delivery can be seen as act of statesmanship outside the realm of daily politics, and should not induce negative evaluations by viewers.

However, those who respond to the survey invitation might still differ systematically from those who do not. The access panel provider claimed that panel members were only invited to a limited number of studies per year in order to keep response rates and data quality high. By doing so, participants are also less likely to change their response patterns due to frequent participation in research studies.

Nevertheless, online studies are at best only representative for internet users and not the population as a whole. Online samples are typically skewed towards a younger demographic; in regard to political attitudes, supporters of mainstream parties are underrepresented within online samples, while smaller parties such as the Greens usually have a higher number of supporters who use the internet frequently (Forschungsgruppe Wahlen 2015b). To counteract a severe bias in the sample due to heavy internet users and early responders, it was necessary to use a quota for gender and age. Reminders were sent out to participants for each of the three survey waves in order to increase participation rates.

Furthermore, the completion of the first survey was incentivized with an immediately available Amazon voucher of €2. The incentive to participate in first post-test questionnaire was higher to reduce the amount of panel attrition. Participants received an additional €3 voucher for completing the second questionnaire. Participation in the third questionnaire was also incentivized with an Amazon voucher of €2.50.

To ensure the experimental groups were sufficiently large as well as to allow subgroup analysis and the test of moderating variables, the study was outlined to survey 350–400 participants per experimental group. The experimental design consists of a total of nine experimental and five control groups that can be divided into three sub-experiments (*Type 1, Type 2,* and *Type 3*).

In the first wave, 36.8 percent of the invited panelists completed the questionnaire, resulting in 6011 initial responses without correcting for speeders. About 85 percent of the initial respondents also took part in the second wave. After data cleaning, 4840 participants remained who took part in both waves of the survey experiment (80.5 percent). The attrition of participants did not result in major changes regarding participants' demographic characteristics. An additional third wave was conducted to test the longevity of experimental effects. For this third wave, only half of the participants of the second wave were randomly invited to take part; therefore, the sample size was significantly smaller with 2120 initial participants and 2031 participants after data cleaning.

121

The experimental treatment was administered at the beginning of the second wave of the survey and was specific to the experimental groups. Before the video clips were shown, participants were notified about video clips in the subsequent questionnaire and encouraged to turn on their audio settings. The information was followed up with a multiple-choice question in order to test participants' recognition of a short sound bite among other sounds.[30] The experimental treatment was only administered if participants identified the short sound correctly, and the video clips were played one time without offering a repeated playback. An overview of all experimental groups is presented in Table 10.

Table 10: Overview of the Experimental Design

Group	Type	Video Treatment (Post-Test)	Politicians (N)	Video Clips (N)
		Experimental Groups		
EG-1	Type 1	1 Video: Male Politicians, Negative-Active	12	17
EG-2	Type 1	1 Video: Male Politicians, Negative-Passive	11	15
EG-3	Type 1	1 Video: Male Politicians, Positive-Active	22	22
EG-4	Type 1	1 Video: Female Politicians, Negative-Active	18	18
EG-5	Type 1	1 Video: Female Politicians, Negative-Passive	10	15
EG-6	Type 1	1 Video: Female Politicians, Positive-Active	12	19
EG-7	Type 2	2 Videos: Merkel / Gysi, Negative-Active	1/1	9/13
EG-8	Type 2	2 Videos: Merkel / Gysi, Positive-Active	1/1	12/10
EG-9	Type 3	2 Videos: Merkel / Gabriel, Negative-Active / Incivility	1/1	9/8
		Control Groups		
CG-1	Type 1	1 Video: Male Politicians, Neutral Expressions	15	15
CG-2	Type 1	1 Video: Female Politicians, Neutral Expressions	9	16
CG-3	Type 2	2 Videos: Merkel / Gysi, Neutral Expressions	1/1	9/12
CG-4	Type 3	2 Videos: Merkel / Gabriel, Neutral Expressions	1/1	9/8
CG-5	Type 1/2/3	No Video		

Note: The table provides an overview of all experimental groups including the number of displayed videos, politicians, and video clips.

The allocation to the experimental groups was conducted randomly after participants passed the initial quota. Each experimental group had 429 or 430 participants in the first wave; as a result of panel attrition, the number of participants dropped to 346 to 392 per group in the second wave. After data cleaning and deleting speeders from the analysis, the number of par-

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30 In this multiple choice question, a brief sound bite of a bicycle bell was incorporated.

ticipants for both time points decreased slightly further by approximately 20 participants per group, which results in a total number of 328 to 373 participants per group. Only completed interviews were considered for the following analysis. Speeders were deleted from the analysis because they can signal low data quality (Greszki et al. 2015: 472). Participants were identified as speeders if they took less time to complete the questionnaire than a cut-off point that was determined as being 2.5 standard deviations smaller than the median value across all variables which measured the speed.[31] An overview of the number of participants per experimental group can be found in Table 11.

Table 11: Number of Participants in Each Panel Wave (Waves 1 – 3)

Group	W1	W1_WS	W2	W2_WS	W3	W3_WS
EG-1	430	404	373	350	162	156
EG-2	429	408	365	347	166	163
EG-3	429	406	361	340	149	145
EG-4	429	405	356	334	151	141
EG-5	430	412	376	361	162	155
EG-6	430	409	378	358	158	150
EG-7	429	410	359	340	146	139
EG-8	429	407	346	328	130	126
EG-9	429	414	349	336	139	135
CG-1	430	408	372	354	164	160
CG-2	429	405	362	342	152	145
CG-3	429	407	354	333	135	129
CG-4	430	403	366	344	146	137
CG-5	429	410	392	373	160	150
Total	6011	5708	5109	4840	2120	2031

Note: The column names stand for each panel wave (W1 = Wave 1, W2 = Wave 2, W3 = Wave 3). The additional "_WS" indicates the number of participants in each wave without speeders.

The full experiment consisted of three sub-experiments called *Type 1*, *Type 2* and *Type 3* (see Table 10). This study hypothesizes that emotional expressions of politicians have an impact on several dependent variables such as candidate evaluations or trust in the political system. The first type of experimental setup presented video clips of a group of several well-known and lesser well-known male or female politicians to capture effects on attitudes towards politicians in general (see *Type 1* in Table 10). Three different emotional expressions of female and male politicians were shown to

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31 The speeders were identified as such by the access panel provider Link (now Forsa), which hosted the online access panel.

participants: negative-active emotions, negative-passive emotions and positive emotions based on the results of the pretest and the three-factor model (Steenbergen & Ellis 2006). Judging from the frequency distributions it can be said that anger is the predominant discrete emotion within the negative-active material, while joy (happiness) is the predominant emotion within the positive-active material. The negative-passive emotion consists mainly of guilt and sadness. In addition, two control groups that showed neutral appearances of female or male politicians were included in the experimental design.

These three emotional dimensions were chosen based on a pre-test that focused on a subset of video clips in the media content analysis and analyzed these clips according to the discrete emotions that were expressed by politicians (see Subchapter 4.3.1 for more details). This analysis showed that emotional expressions of politicians fell distinctively into one of the three distinct categories: positive-active, negative-active and negative-passive emotions. These clusters could also be described as happiness/reassurance, anger/threat, and fear/evasion or sadness. A fourth cluster emerged in which some dominant positive emotions co-occur with dominant negative emotions, such as amusement and anger. This fourth cluster is likely the result of an uncivil communication style that was present in several political talk shows in the media sample.

The empirical findings of the pre-test largely confirmed the three-factor model of emotions as the underlying theoretical model of the experimental design. In real life situations, discrete emotions are often in a state of flux or accompanied by other emotions; even the concept of compound emotions has been introduced in the literature on emotion research (Du et al. 2014). While some discrete emotions are certainly dominant within each of the experimental treatments, the three-factor model was chosen because the co-occurrence of emotions cannot be eliminated. At the same time, it relates to the social functions of emotions. In these experimental groups, participants saw a number of different politicians and so enough video material was collected for each emotional expression according to the three-factor solution. Besides this practical consideration of implementing the three-factor model with emotional expressions of several male and female politicians, the design enables testing the impact of emotional expressions on the evaluation of politicians in general. The separate experimental groups for male and female politicians allow the testing of gender effects that might occur due to different expectations for each group of male and female politicians regarding their emotional expressions.

The second experiment included emotional expressions of two specific political leaders within the German political system: Chancellor Angela Merkel and a key figure of the opposition Gregor Gysi (former parliamentary leader of the Left in the German Bundestag). By doing so, this design is more similar to previous research that focuses on single politicians and evaluations of them after seeing emotional expressions than the experiment *Type 1* (e.g., McHugo et al. 1985; Grabe & Bucy 2009; Stewart & Ford Dowe 2013). The effects for specific politicians can be expected to be stronger than the effects in experiment *Type 1*, because the evaluation of a specific political leader as a dependent variable is directly related to the experimental stimulus.

The experiment *Type 2* that deals with Angela Merkel and Gregor Gysi consists of experimental conditions that featured positive-active and negative-active emotional expressions by both politicians. In addition, a control group was included that showed neutral emotional expressions of Merkel and Gysi. The experimental condition of negative-passive emotions was not implemented for these two politicians, because neither politician displayed a sufficient amount of negative-passive emotional expressions during the time of media content analysis.[32] Negative-passive emotional expressions are generally expressed less frequently than negative-active and positive-active emotional expressions. Hence, negative-passive emotional expressions by these two politicians were not analyzed.

Further, it has to be noted that within this *Type 2* experiment, participants saw two video clips in total in each experimental group. The order in which participants saw Angela Merkel or Gregor Gysi was randomized. After the participants saw the first video, they were asked whether the politician in the first video clip made an emotional impression on them. Only if they indicated to have recognized any form of emotional expressions, were they further asked which of six discrete emotions they perceived.[33] After that, the second video was administered and only after this second video did the rest of the questionnaire continue, in which participants were asked to evaluate both candidates in more detail. Participants were not asked to evaluate the first politician after the first video, so that the evalua-

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32 The only negative-passive emotional expressions by Angela Merkel occurred when she displayed sadness during a eulogy she delivered shortly after Nelson Mandela's death. Negative-passive emotional displays by Gregor Gysi were not recorded during the media content analysis.

33 The participants could choose one or several emotional expressions from six discrete emotions: happy, sad, outraged, angry, proud, and amused.

tion of the second politician would not be affected by the potential discovery of the research intention. However, because the evaluation of both politicians was only derived at the end of both clips, the effect cannot be clearly attributed to either clip, and it is possible that emotional expressions of one politician affect the ratings of the other politician. Both politicians could be evaluated in contrast to each other.

Finally, to analyze the distinct effect of incivility, a third experimental type was conducted. Participants saw video clips with emotional expressions by Angela Merkel and Sigmar Gabriel. Sigmar Gabriel, then leader of the Social Democrats and Minister for Economic Affairs and Energy, displayed anger and incivility, while the same video clips were used for Angela Merkel as in the experiment *Type 2*. This third type within the experiment aimed at measuring the effects of a specific anger, one that occurs together with uncivil behavior. Next to anger, other discrete emotions such as contempt are also more likely to be part of these clips due to the hostile nature of incivility. This third experiment for Sigmar Gabriel consisted of only two groups: the incivility condition and one neutral control group for comparison. The effects of incivility can then be compared to the negative-active emotions of the two other politicians. Further, the effects for Angela Merkel are replicated within a different context, which can provide additional insights into how much the context of other politicians' emotional expressions shape the impact of her anger. The comparison between Sigmar Gabriel's incivility and Gregor Gysi's anger is particularly interesting, as Gabriel's incivility has a higher amount of contempt due to the verbal attacks directed at other politicians, while the experimental treatment for Gregor Gysi does not include such personal verbal attacks on others and rather, next to anger, features indignation and outrage about policies and social injustices.

4.3.3 The Material

This study uses real-life video material that was aired on TV during the time of the media content analysis. These politicians – Angela Merkel, Gregor Gysi, and Sigmar Gabriel – are well known by the German public; it can be assumed that the participants of the study had already formed an opinion about them and as a result held certain predispositions towards them. Political science research within the context of U.S. politics has previously studied the impact of emotional expressions by former U.S. presidents such as Ronald Reagan (Masters & Sullivan 1989a), George W. Bush

(Stewart et al. 2009a), Bill Clinton (Grabe & Bucy 2009) and Barack Obama (Stewart & Ford Dowe 2013). In contrast to the majority of previous studies, this design does not focus only on incumbents and therefore allows for testing the effects of anger displays when politicians hold different offices within the political system.

While the largest proportion of all video sequences was collected as part of the media content analysis, a few exceptions had to be made for the specific political leaders of the experiment *Type 2* and *Type 3*. For those politicians, only video clips that aired on TV during May 2013 and April 2014 were selected as video sequences. Additional material from the public news channel "Phoenix" was collected on Angela Merkel as well as Gregor Gysi. This was done, to ensure a sufficient number of video clips in each emotional category and could not have been ensured otherwise, as Angela Merkel does not generally appear as a guest in political talk shows. Further video sequences of her were taken from televised party conventions and speeches at the German Bundestag. In contrast to Angela Merkel, appearances of Gregor Gysi and Sigmar Gabriel were hardly selected into the random sample of the media content analysis. Although both appeared as guests during the time of the media content analysis on several occasions (see Table A.1 in the online appendix),[34] none of these talk shows were part of the randomly selected sample; therefore, material from these talk shows was additionally screened for emotional expressions. This turned out to be highly sufficient for both politicians' negative-active emotions. For Gysi's positive emotional displays, coverage of parliamentary debates and interviews that was broadcast on Phoenix was also screened to ensure enough suitable material for the experimental conditions.

Each video clip had a length of approximately 1:30 minutes and consisted of several shorter video sequences that were sampled. Because participants saw two video clips in the sub-experiment *Type 2* and *Type 3*, the video segment lasted in total about three minutes, while the experimental treatments in the sub-experiment *Type 1* were only half as long. The control group that received no video treatment, had a longer questionnaire,

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34 With eight appearances, Gysi qualifies as one of the most frequent talk show guests during May 2013 and April 2014. Only a few politicians appeared in talk shows more often during this time. Sahra Wagenknecht (10 appearances), Katrin Göring-Eckhardt (9 appearances), and four male politicians who belong to parties of the government coalition (SPD and CDU) or are as less well-known politicians (Thomas Oppermann (10 appearances), Wolfgang Bosbach (10 appearances), Armin Laschet (9 appearances), and Wolfgang Kubicki (FDP) (9 appearances) (see Table A.1 in the online appendix).

127

because it served as a baseline comparison and included questions regarding all political leaders and treatment conditions. The length of the video clips was deemed as being sufficiently long to display the emotion and to induce an effect. As the clips consisted of several shorter video sequences, the specific context of each clip might be less important. However, the anger displays by Sigmar Gabriel and Gregor Gysi each have an overall theme. Gregor Gysi's anger mainly targeted social injustices, while Sigmar Gabriel's emotional expressions can be classified as uncivil behavior.

Experimental studies that use real-world material are rare and it is a challenge to find a suitable control group with a placebo treatment of neutral emotions and a similar context. For that reason, several studies within the context of political psychology and political communication deploy actors instead of real-world politicians to analyze appearance or communication style effects and their impact on political trust and candidate evaluations (Dumitrescu et al. 2015; Mutz & Reeves 2005). This approach offers the advantage that an actual placebo treatment can be designed for the control groups that is identical to the experimental treatment except for the factor of interest. In this case, for an ideal placebo to exist, it would consist of identical video clips in the same talk show, with the same verbal content except the emotional expression itself. However, using real-world data as such, a placebo treatment is not feasible and can only be approximated by existing video clips with neutral expressions that are taken from the same talk shows with different wording, or similar wording from different talk show appearances.

Having established that due to heuristic inferences appearances – visually and aurally – can have an automatic impact on the evaluation of politicians, it is advisable to control for the physical appearance and demeanor of politicians by using neutral displays as a baseline comparison. Social psychologists have previously stressed the necessity of including a control group with neutral expressions to avoid any form of misattribution (Hareli et al. 2009: 38). Such a control group with neutral expressions also becomes a necessity when studying attitudes towards real-world politicians. Participants are likely to have already formed opinions about well-known politicians, especially those with a high interest in politics. If they are less familiar with appearances of politicians and their policy preferences, even neutral expressions could cause changes in the attitudes towards them due to mere exposure (Zajonc 1968).

4.3.4 The Sample

Before the study was conducted it was also considered whether the sample size would be sufficient to detect significant effects. The statistical power of an analysis indicates the probability of detecting an effect statistically. Typically, a power of at least 0.8 is required for research studies, which translates to an 80 percent change of detecting an effect. Three factors influence the power of an experimental design: the sample size, the effect size, and the alpha level of significance. A power analysis was conducted which estimated the sample size that is needed to detect a significant effect in a one-way analysis of variance or regression analysis (F-test) at the 5-percent level with a probability of 80 percent and small, medium and large effect sizes. As an indication of previous effect sizes in comparable experiments, the experimental study by Stewart, Waller and Schubert (Stewart et al. 2009a) was considered, which focused on emotional responses of viewers based on former U.S. president George H.W. Bush's facial expressions. Stewart et al. (2009a) reported an effect size that can be considered as a small effect; when Bush's micro-expressions of anger and happiness were removed from a video treatment, participants felt angrier than the control group (Stewart et al.2009a: 129).[35, 36] The experiment is sufficiently large to detect small effect sizes (f = 0.1), as 240 participants per experimental group are needed in experiment *Type 1*, 273 in experiment *Type 2*, and 322 participants in experiment *Type 3*. To detect medium effect sizes between experimental groups and the overall mean, the three sub-experiments need 39, 45, and 52 participants per experimental group depending on the number of experimental groups (five, four or three groups). Hence, the statistical power to detect significant effects for the average treatment effects is not a major concern of this study in regard to determining the main effects of the experimental treatment (F-tests).

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[35] The formula to determine the effect size "f" is the following: $f = \sqrt{\frac{\eta^2}{1-\eta^2}}$ (Cohen 1988: 284). Cohen (1988) further classifies a small effect size as f = 0.1, a medium effect size f = 0.25 and a large effect size f = 0.4 (Cohen 1988: 284–288). Taking the η^2 of the treatment effect of removed anger expressions on viewers' feelings of anger (Stewart et al. 2009a: 129), the effect size is determined as a small to medium effect size: $f = \sqrt{\frac{0.023}{1-0.023}} = 0.15$.

[36] Other studies with a focus on the evaluation of politicians as a dependent variable (e.g., Tiedens 2001; Sullivan & Masters 1988) did not report effect sizes, therefore the study of Stewart et al. (2009a) was chosen as an approximation of the effect size that might be observed in the experimental study.

Further, the heterogeneous sample prevents the results from being mainly based on student samples whose participants form a specific sub-population and their response behavior might not be universal (Henrich et al. 2010). Although the representativeness of online samples for the general population can be questioned, the study is based on a panel that is representative for German internet users. Previous studies have shown that the German internet population differs from the general population and that online studies commonly show certain biases as a result. While most people under the age of 60 use the internet, only one in two elderly citizens use the internet, and elderly women use the internet even less frequently than elderly men – 40 percent vs. 59 percent (Forschungsgruppe Wahlen 2015b: 1).

Regarding their level of education, German citizens above the age of 35 who have obtained only a basic level of education (Hauptschulabschluss) use the internet less frequently (Forschungsgruppe Wahlen 2015b: 2). In addition, citizens who work as blue-collar workers use the internet less frequently (Forschungsgruppe Wahlen 2015b: 2). In terms of party preferences, supporters who regularly vote for the CDU/CSU or SPD use the internet less frequently, while voters of smaller parties, particularly those who vote for the Greens and the AfD, use the internet more often than the average citizen (Forschungsgruppe Wahlen 2015b: 2).

The descriptive statistics in terms of age, gender, education and party preference for this study is displayed in Table 12. Quotas were applied for age and gender. However, slightly more men participated than women. The study provides no information about the provenience or residency of participants on a state level or a regional level, such as East and West Germany (East/West). Hence, no weighting can be applied in this regard, which is an otherwise typical standard procedure in traditional telephone surveys.

Table 12: Descriptive Statistics of the Participants in Wave 1

	Wave 1	Wave 1_WS
Age	44.40 (45)	44.82 (45)
Gender		
Male	3155 (52.5)	2992 (52.4)
Female	2856 (47.5)	2716 (47.6)
Education		
Left School	15 (0.2)	14 (0.2)
Basic Education	765 (12.7)	739 (12.9)
Medium Education	2909 (48.4)	2776 (48.6)
Qualification for University Entrance (Applied Sciences)	553 (9.2)	532 (9.3)
General Qualification for University Entrance	1649 (27.4)	1531 (26.8)
Other	104 (1.7)	100 (1.8)
Pupils	15 (0.2)	15 (0.3)
Party Identification (PID)		
CDU/CSU	1899 (31.6)	1830 (32.1)
SPD	1397 (23.3)	1336 (23.4)
Greens	657 (10.9)	622 (10.9)
The Left	464 (7.7)	440 (7.7)
Other Party	376 (6.3)	350 (6.1)
No Party	1209 (20.1)	1122 (19.7)
Scalometer		
Merkel	6.60 (7)	6.65 (8)
Gysi	4.60 (5)	4.59 (5)
Gabriel	4.75 (5)	4.76 (5)
Ideological Self-Positioning		
Left/Right Cultural	5.57 (5)	5.57 (5)
Left/Right Socioeconomic	4.63 (5)	4.63 (5)
Observations	6011	5708

Note: Cells display mean values and median values in parentheses for metric variables, frequencies and percentages for categorical variables. The first column shows frequencies before data cleaning, while the second column shows frequencies after the data cleaning process. Both columns only consider completed interviews for participants who took part in both surveys. The measurements refer to the questionnaire during the first wave.

Compared with the general population, the sample shows lower percentages for those who have obtained a basic level of schooling (*Hauptschule* or *Volksschule*), larger percentages for those with a medium level of schooling as well as participants who held university entrance level qualifications (specific for applied sciences or general) (see for comparison: Statistisches Bundesamt 2015). Regarding party preferences, a direct comparison to the general public is a challenging endeavor. In telephone surveys that were conducted around the time of the study, participants indicated whether they typically vote for one party. In those weekly surveys, participants are

commonly asked about their hypothetical voting intention if the general election was held next Sunday.[37] Since the vote intention was not measured during this study, only the party identification of the participants can be inspected for comparison. The concept of long-term party identification potentially differs from any short-term vote intention for a party. According to Ohr and Quandt (2012), only 60 percent of the population identifies with a political party (Ohr & Quandt 2012: 189). The participants of this study are more likely to be attached to a political party than the general public. In addition, they might be slightly more likely to vote for the Greens and less likely to vote CDU/CSU compared to the general population (for comparison Forschungsgruppe Wahlen 2015b).

Furthermore, the scalometer ratings in the study can be compared to scalometer ratings that were obtained for the Angela Merkel, Gregor Gysi, and Sigmar Gabriel around the time of the study by the Politbarometer (Forschungsgruppe Wahlen 2017). It has to be noted that with the previous vote intention for political parties, these evaluations are estimates based on telephone surveys and liable to the margin of error. As a result, these estimates can deviate from the true value; nonetheless, a comparison can indicate how strongly the online sample could potentially differ from weighted estimates based on telephone surveys. If the results of the online study are recoded to the scalometer ratings ranging from -5 to +5, the participants of this study hold on average lower opinions of all three politicians (Angela Merkel 1.6 on average vs. 2.8, Gregor Gysi -0.4 vs. 0.3, and Sigmar Gabriel -0.25 vs. 1.3). Looking at the median of Merkel's scalometer rating, the deviance is less severe since her overall evaluation is negatively skewed in this sample. In addition to sampling biases, the differences between both samples could be the result of mode effects. In contrast to a telephone survey, the online survey provided a visual representation of the scale on a screen which could have affected the response behavior.

4.3.5 Potential Threats to the Internal Validity of the Study

Although experiments are well suited to test causal effects, they are not a panacea (McDermott 2002: 340), and can still suffer from poor design choices that are a threat to the causal claim of the experiment. Hence, the

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37 German federal elections are typically held every four years on the next to last or last Sunday in September.

next section focuses on possible threats to the causal claims of this experimental design.

Bryman (2012) considers *testing* to be a potential source of error in experimental designs. If participants are primed by the pre-test, they might be more aware of the experimental treatment as a result and consequently alter their post-test responses (Bryman 2012: 52). Since the first and crucial post-test was conducted a full two weeks after the initial pre-test was conducted, the time span seems sufficiently long enough to ensure that participants will most likely not remember their initial answers to the pre-test. For this reason, severe effects due to the pre-test are not likely to occur. The Solomon four-group design is often advocated as the most suitable experimental design to control for effects of testing (Spector 1981: 60). However, its drawback is that a larger sample size is needed; as a result, simpler designs are often used instead of a Solomon four-group design (Campbell & Stanley 1971: 196). The effects of testing do not seem to be severe in this design due to the two weeks between the pre- and post-test; as a result, a Solomon four-group design has not been implemented. Rather testing several emotional expressions according to the three-factor model were employed instead.

Large parts of the study questionnaire were pre-tested at the University of Stuttgart during the summer term of 2012 with a student sample of 238 students. For this pre-test, the emotional expressions were measured according to the valence model of negative and positive emotions.[38] Pre-tests are an important step in any original large-scale study. They show whether and in which respects the research design might need to be revised. In this case, the underlying structure of emotions was based on the valence model which might have obscured the effects of discrete emotions. In addition, the treatment material could be specified to show stronger emotions and

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38 These expressions were compared to a control group without video treatment. The sample had a mean age of 24.1 years of age (median 23 years of age). Participants saw videos of Sigmar Gabriel (SPD), Angela Merkel (CDU), Claudia Roth (The Greens) and Guido Westerwelle (FDP). The comparison was conducted between and within groups by comparing candidate evaluations before and after the video treatment. Only a few significant group differences could be determined. Participants rated Claudia Roth as less likeable after seeing her negative emotions compared to the group without video treatment (F = 4.16, df = 208, p < 0.05; post hoc test (Tukey HSD Mean Difference = -0.4 (-0.76; -0.03, p < 0.03). They also rated Sigmar Gabriel's leadership skills as lower after being exposed to his positive emotional expressions (F = 4.34, df = 181, p < 0.01; post hoc test (Tukey HSD Mean Difference = -0.52 (-0.94; -0.10, p < 0.01).

include longer video clips which are sufficient to induce responses. Since the focus of this study lies on the specific impact of negative-active emotions, the results of the pre-tests are not considered any further at this point.

The assignment of participants to experimental groups was conducted randomly. In that sense, true randomization occurred, and the control and experimental groups should not differ from each other at the beginning of the study. Nonetheless like any online survey which intends to reach a certain population and is left with those participants who respond to the invitation, the study potentially suffers from a selection bias. As long as the participants are missing at random and did not systematically refuse to participate in the study, concerns regarding the selection processes are not extremely severe. Furthermore, the design is unbalanced due to the panel attrition which led to slightly different numbers of observation for each experimental group. However, these differences can also be considered as missing at random and to not pose a systematic bias to the study.

Furthermore, even experimental designs can suffer from an "ambiguity about the direction of causal influence" (Bryman 2012: 53). Problems of endogeneity are a common concern in observational studies (for example: Allison 1999: 53; Lewis-Beck 2006: 211). They can even occur in experimental studies if the sequential order of the treatment and dependent variable are not clearly untangled and the direction of the causal effect remains unclear (Bryman 2012: 53). While the experimental design prevents problems regarding the temporal order of cause and effect (the treatment clearly precedes the post-test evaluation), the *Type 2* and *Type 3* sub-experiments in fact suffer from an attribution problem. Participants in these experimental groups were exposed to two video clips of political leaders and answered only after seeing both video clips questions about the politicians regarding their specific character traits. Because of this design choice, it cannot be determined whether the evaluation of a politician is solely the result of the emotional expressions displayed by that politician or in fact a result of the comparative evaluation of emotional expressions of both politicians. Strictly speaking, the experimental treatment can only be interpreted as a result of being exposed to video clips with emotional expressions of both politicians. One politician might look better or worse in contrast to the emotional expressions of the other, which is known in survey research as a contrast effect (Kuklinski et al. 1997: 328).

Some ethical concerns are addressed as it is common practice in experimental research to do so. Those who responded to the survey invitation participated voluntarily and they were aware about their participation in a

study regarding "current politics". Therefore, informed consent did exist, although a slight amount of deception was used since participants were not aware of the experimental nature of the study and its aim. This slight deception was justified by the possible impact this information might have had on the participants' behavior. Previous research has shown that participants behave differently when they are aware of the experimental manipulation. Furthermore, the experiment was conducted online and can be considered fairly non-intrusive; the respondents had the opportunity to opt-out at any given time. Nonetheless, video treatments need to be considered more carefully than a mere survey questionnaire, because their content could potentially affect participants' emotional states. The video clips showed emotional expressions of politicians and could potentially induce a certain emotional response. These clips had no disturbing content and therefore should not have induced highly unpleasant emotions for participants. The video clips have been broadcast on television and due to their status as public figures, no privacy rights of the politicians were violated.

After data cleaning, the sample has a sample size of 4840 participants across all 15 experimental and control groups. Hence, the study can still be considered a large-scale study that allows for subgroup analysis due to its size. Heterogeneous treatment effects can be tested for various subgroups of respondents, for example the treatment effects can be analyzed for various party identifiers and non-identifiers. Studies that merely use student samples often lack variance regarding variables such as party identification and political attitudes since college students are likely to identify with liberal parties and liberal attitudes (Henrich et al. 2010; Mutz 2011: 144–146). Therefore, this study offers a rare advantage to test the experimental effects for different party identifiers and political attitudes.

Furthermore, the experimental treatment has to be administered in an exact manner to each participant of the treatment unit, as biases could be introduced into the study if slight variations occur when administering the treatment. With automated online survey experiments, concerns regarding the *instrumentation* can be well tested before the experiment is conducted, and the reliability between iterations is maximized and interviewer effects are minimized (Bryman 2012: 53).

Selection can be a concern if the units of analysis are not truly randomly allocated to treatment and control group (Bryman 2012: 53). In the field of online survey experiments, the allocation to the experimental groups is automated and based on random number algorithms, therefore, the random allocation is not a major concern for this study.

Lastly, *history*, *mortality*, and *maturation* can be identified as potential threats to experiments (Bryman 2012: 52–53). History is a threat to any experiment with pre-test and post-test conditions. *History* subsumes all potential external factors that could influence the participants during the period of the investigation and interfere with the treatment. The threat of *history* increases the longer the study runs. One way to control for possible events that could influence participants' responses to repeated measures is by including control groups without any treatment. Significant changes in these control groups should not occur. The threats of *mortality* and *maturation* are also connected to the duration of an experimental study. *Mortality* refers to the panel attrition and increasing likelihood of participants dropping out of the study. The use of a control group ensures that dropout rates for experimental and control groups will likely be similar, avoiding a systematic bias of the study. The concept of *maturation* refers to the individual changes – improvements or refinements – of personal skills and attitudes. Hence, people can have a change in attitudes simply due to the fact that someone matured during the period of investigation; however, changes that are due to *maturation* should occur at an equal rate within the control group.

While this approach does eliminate direct threats of history, mortality, and maturation, it is also worthwhile to focus on real-life events during the time of the data collection that might affect the response to the stimuli, and in this case to three specific politicians. Any scandal that might have occurred during the time of the experiment could have had a severe impact on the evaluation of the politicians.

Ideally, a media content analysis could have been conducted during the time of the experiment. Data from *Google Trends* can be analyzed as a feasible cost- and time-effective approximation. Google Trends provides access to an (unbiased) sample of google searches;[39] it classifies the volume of searches for any given search term on a hit index, ranging from 0 to 100. For this experiment, the Google Trend data was accessed for the whole year of 2015 when searches from Germany were made for "Merkel", "Gysi", and "Gabriel". Additionally, the full names "Angela Merkel", "Sigmar Gabriel", and "Gregor Gysi" were accessed; however, the results did

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39 For more information on *Google Trends Data* see a description of Google Search Data by Google, available online at: https://medium.com/google-news-lab/what-is -google-trends-data-and-what-does-it-mean-b48f07342ee8 (last accessed: 05 June 2019).

136

not differ substantially, and it seems likely that most people merely google politicians by their last names.

Hence, Figure 5 shows the interest over time for each politician according to Google Trends data. The interest was not unusually high during the time of the data collection, which indicates the absence of any major scandal. One spike occurred for Sigmar Gabriel in early 2015; this spike could have occurred due to the fact that he attended a discussion with some Pegida attendees in Dresden – he was widely criticized for this and the incident gained a lot of media attention.[40] The search index for Gregor Gysi shows a spike in early June 2015, when he decided to step down as chairman of the parliamentary group on June 7, 2015,[41] while keeping his mandate as Member of Parliament. This event was then followed by his highest favorability rating in the history of the Politbarometer until then (Forschungsgruppe Wahlen 2017; see also Figure 1),[42] indicating that it was widely received by the public and not just according to Google Trends data. Fortunately, his withdrawal took place a month after the data collection had already been completed. Lastly, the search index is overall higher for Angela Merkel, which reflects her status as the most important German politician. It can also be seen that spikes occur during the second half of 2015, which are likely related to the refugee crisis and her role in handling the crisis.

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40 See for example an article in the *Süddeutsche Zeitung* (06 February 2015), available online at: http://www.sueddeutsche.de/politik/spd-chef-ueber-pegida-gabriel-es-gibt-ein-recht-deutschnational-zu-sein-1.2336763 (last accessed: 05 June 2019).

41 See for example an article in *Der Tagesspiegel* (07 June 2015), available online at: http://www.tagesspiegel.de/politik/gregor-gysi-tritt-ab-ende-einer-aera-was-wird-aus-der-linkspartei/11881594.html (last accessed: 05 June 2019).

42 For comparison, see the Politbarometer newsletter from June 2015, available online at: https://www.forschungsgruppe.de/Umfragen/Politbarometer/Archiv/Politbarometer_2015/Juni_2015/(last accessed: 05 June 2019).

137

Figure 5: Interest Over Time in Key German Politicians
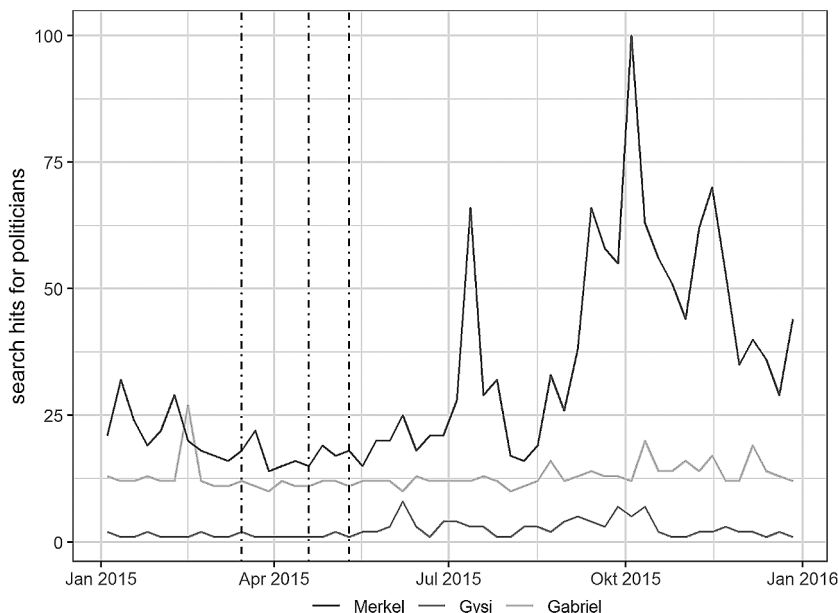
Note: Author's own figure based on Google Trends data accessed via "gtrendsR" (Massicotte & Eddelbuettel 2017).The first two vertical lines indicate the beginning of the first and second panel wave, respectively, while the third vertical line marks the end point of the data collection for the third and final wave.

The next section describes the measurement of key concepts for this study. The independent variables are the experimental treatment groups that have previously been described. Therefore, measurements of the dependent variable, moderating factors and potentially confounding effects are discussed in the next section.

4.4 The Measurement of Key Concepts

4.4.1 Measurements of the Dependent Variable: The Structure of Leadership Evaluations

Several trait assessments have been included in this study and have been measured in all three panel waves. According to the concept of *candidate orientations,* traits such as "likeability" and "trustworthiness" are often clas-

sified as personal factors, while "leadership skills" and "problem-solving skills" are classified as performance-related factors (for example see Gabriel et al. 2009). Hence, the latter variables can be seen as representing a dimension of competence, while likeability and trustworthiness potentially represent one dimension of warmth – or more broadly friendliness and integrity. The wording of the four items for politicians in general was as follows:

> "We have gathered some opinions about politicians in general. How much do you agree with the following opinions? - (A) Most politicians have strong leadership skills. (B) Most politicians are likeable people. (C) Most politicians are able to solve political problems. (D) Most politicians are trustworthy."

Besides the four items of candidate orientation, two items of external efficacy were also included in the questionnaire matrix for politicians in general (Beierlein et al. 2012). The two items generally measure how caring politicians are perceived to be, by asking participants on a 5-point Likert scale how caring and in close contact with the people politicians are. Therefore, these items are of similar quality to the items of candidate orientation, and often similar items are used to study candidate qualities and relate more specifically to the integrity of politicians (Hayes 2005: 921; Brettschneider & Gabriel 2002: 145). These items could also be interpreted as political empathy (Kinder 1986: 241). In this study the items were measured according to the Political Efficacy Short Scale (Beierlein et al. 2012):

> "(E) Politicians care about what ordinary people think. (F) Politicians seek a close contact with the people."

And for the three leading politicians items of candidate orientation were measured as follows:

> "And to what extent do the following characteristics apply to [Angela Merkel/ Gregor Gysi/ Sigmar Gabriel]? - (A) [He/She] has strong leadership skills. (B) [He/She] is a likeable person. (C) [He/She] is able to solve political problems. (D) [He/She] is trustworthy."

In addition to these four frequently used items of candidate orientation, which were measured with a 5-point Likert scale ranging from totally disagree (0) to totally agree (4), this study also included a set of character traits on semantic differential scales. The semantic differential scales included five pairs of character traits for each of the leading politicians, ranging from emotional to rational, polite to impolite, relaxed to agitated (tense, excited), aggressive to peaceful (amicable), and arrogant to modest

139

(humble).[43] For the politicians in general two additional sets of items were included in the questionnaire. Participants also rated politicians in general from decisive to unassertive and from resilient to overstrained. These items are linked to gender stereotypical expectations and were adjusted from the German Extended Personal Attributes Questionnaire (GEPAQ) to measure gender stereotypical evaluations (Runge et al. 1981; Renner 2019). "Decisive" and "resilient" can be attributed to male stereotypes, while being "unassertive" and "overstrained" are stereotypically linked to female behavior (Renner 2019).

These semantic differentials were introduced with the following question:

> "How typical are the following characteristics for [name of politician/ most politicians]. Please use the following word pairs to answer. The middle categories can be used to specify your opinion gradually. - [Most politicians/ Angela Merkel/ Gregor Gysi/ Sigmar Gabriel] are... [emotional... rational / polite... impolite / relaxed... agitated / aggressive... peaceful / arrogant... modest / decisive... unassertive / resilient.... overstrained]."

Lastly, a measurement of an overall summary score was also included in the study. This measurement used an 11-point Likert scale ranging from -5 to +5 in the questionnaire. This summary score for personality impressions of a politician adheres to the common phrasing of this score in German surveys on politics and politicians and has been occasionally applied by Gallup in the context of U.S. politics (e.g., Forschungsgruppe Wahlen 2017; Rattinger et al. 2017; Saad 2012). For politicians in general and the three political leaders the questions were administered as follows:

> "All in all, what do you think about politicians in Germany? - I have a very low opinion of them (-5); I have a very high opinion of them (+5)." / "Please, tell us, what you think of some leading politicians [Name of Politician]. - I have a very low opinion of her/him (-5); I have a very high opinion of her/him (+5)."

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43 In addition, one item measured evaluations ranging from attractive to unattractive. Since this last pair of personal characteristics focuses on the appearance of political leaders rather than their personality traits, the item is excluded from the following analysis, which focuses on the structural relationship of personality traits rather than physical attractiveness.

The use of these questions can be interpreted as a favorability measure comparable to the use of a feeling thermometer, which is more commonly applied in English language surveys and has been used in the study of emotional expressions and evaluations of politicians (e.g., ANES 2010; Stewart & Ford Dowe 2013); however, due to the well-tested phrasing of the item in German questionnaires, the scalometer was chosen for this study. Such an overall score is often interpreted as a summary score, which is frequently updated by voters as a running online-tally and stored in their memory, while the event that had led to the evaluation is forgotten. Such a running tally of negative and positive affect simply describes information processing as keeping count of positive and negative evaluations of a politician (Laustsen & Petersen 2017; Lodge & Taber 2013) and represents an overall impression which most strongly reflects the warmth-dimension instead of the competence-dimension (Laustsen & Bor 2017).

The next section investigates the underlying dimensions of the politicians' trait evaluations based on exploratory factor analyses. Exploratory factor analyses aim at discovering underlying dimensions of latent variables or factors. In contrast to a confirmatory factor analysis, the number of factors and specific items belonging to an underlying factor are not predetermined by theoretical assumptions. Exploratory factor analysis is more suitable for finding a factor structure and particularly so before any confirmatory factor analysis is conducted (Patil et al. 2008: 166). Hence, an exploratory factor analysis appears to be a good starting point to examine the underlying structure of candidate evaluations.[44] The following analysis empirically tests whether an underlying structure between the items can be identified for each of the three key politicians as well as politicians in general; to do this, the variables were taken from the pre-test condition (Wave 1) before any experimental manipulation had occurred.

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44 Based on the strongest theoretical evidence a two-factor solution can be expected with two latent factors of warmth and competence or integrity and leadership. A confirmatory factor analysis, however, requires at least three items per factor, since the model is otherwise underspecified. If the overall summary score of the scalometer is counted towards the dimension of warmth, then this requirement is only fulfilled for the dimension of warmth and not for the dimension of competence. Furthermore, focusing merely on the four or five items regarding the concept of candidate orientation, a confirmatory factor analysis for the four items of candidate orientation is not feasible. Only if at least the summary score and potentially the semantic differentials are included in the analysis is a confirmatory factor analysis statistically feasible.

One concern lies in the measurement of the available items. The four items measuring the concept of candidate orientation differ structurally from the semantic differentials. The item wording of the semantic differentials did not include statements that were made up of complete sentences, instead only two opposing adjectives were displayed. Therefore, not only did the items differ syntactically, the semantic differentials could have also evoked a stronger link towards specific personality traits compared to broader concepts of warmth and competence or even leadership and problem-solving skills. Leadership and problem-solving skills seem to be more complex evaluations compared to specific character trait evaluations such as being emotional or rational.

Even if character traits might not be related to the competence dimension at first sight, more character traits could be interpreted as well as being important for both dimensions. A competent actor has to be rational in decision-making tasks and demonstrate social skills to succeed in social interactions. This can be done in more than one way. While the dimension of competence might also be interpreted as dominance dimension – for example a leader who demonstrates his dominance in negotiations – leadership can be practiced very differently and show more characteristics of compromise, consensus, and therefore agreeableness rather than dominance. So, even problem-solving skills could be interpreted as one dominant decision made by a political leader, or it could be interpreted as skill that includes thoughtful, tactful, and consensual behavior.

It is also worth mentioning that these semantic differentials are potentially stronger related to the experimental treatment – they were designed with the experimental treatment in mind and adapted from previous measures of impression formations in regard to politicians' negativity and incivility (Mutz & Reeves 2005: 14). Mutz and Reeves' (2005) main focus lies on the effects incivility has on political trust; however, they use semantic differentials as manipulation check for "perceived levels of incivility" (Mutz & Reeves 2005: 14).[45] In that sense, these semantic differentials show candidate impressions more directly compared to the more abstract evaluations of certain characteristics such as the candidate orientation.

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45 The manipulation check by Mutz & Reeves (2005) was measured by the following semantic differentials: "emotional–unemotional", "quarrelsome–cooperative", "friendly–hostile", "rude–polite", "calm–agitated" (Mutz & Reeves 2005: 14).

142

Before a factor analysis is considered a meaningful endeavor, sufficient bivariate correlations should occur between the variables.[46] Hence, correlation matrices are inspected as a first attempt to gain some insight into the underlying factor structure (see Figure 6; Figure 7; Figure 8; Figure 9). Analyzing the correlation matrix, it can be seen that moderate to strong correlations occur for the overall rating (scalometer) and the four items of candidate orientation. Leadership skills are slightly less correlated with overall ratings and likeability scores for the three politicians as well as politicians in general, for example the correlation between Merkel's likeability ratings and leadership assessment is only moderate ($r = 0.47$). The semantic differentials are noticeably less correlated with each other as well as the overall ratings and the candidate orientation items. The item "emotional–rational" is not correlated with the other items for each politician and politicians in general. The item "calm–agitated" shows a weak negative correlation with the other variables. For the subsequent factor analysis, the items "calm–agitated" and "emotional–rational" were reverse coded for all models. Also reverse coded were the additional semantic differentials of being "decisive–unassertive" and "resilient–overstrained" that were measured only for politicians in general, which show negative correlations with the other variables.

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46 A rule of thumb is generally that metric and quasi-metric variables should correlate at least moderately with each other (Pearson's $r = 0.3$ to 0.4).

Figure 6: Correlation Matrix of Leadership Trait Evaluations for Angela Merkel
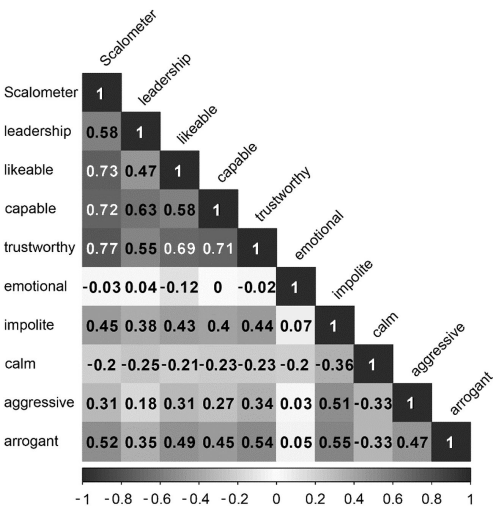
	Scalometer	leadership	likeable	capable	trustworthy	emotional	impolite	calm	aggressive	arrogant
Scalometer	1									
leadership	0.58	1								
likeable	0.73	0.47	1							
capable	0.72	0.63	0.58	1						
trustworthy	0.77	0.55	0.69	0.71	1					
emotional	-0.03	0.04	-0.12	0	-0.02	1				
impolite	0.45	0.38	0.43	0.4	0.44	0.07	1			
calm	-0.2	-0.25	-0.21	-0.23	-0.23	-0.2	-0.36	1		
aggressive	0.31	0.18	0.31	0.27	0.34	0.03	0.51	-0.33	1	
arrogant	0.52	0.35	0.49	0.45	0.54	0.05	0.55	-0.33	0.47	1

-1 -0.8 -0.6 -0.4 -0.2 0 0.2 0.4 0.6 0.8 1

Note: The figure displays the lower half of a full correlation matrix. Cells show correlation coefficients. The diagonal line displays eigenvalues.

Figure 7: Correlation Matrix of Leadership Trait Evaluations for Gregor Gysi
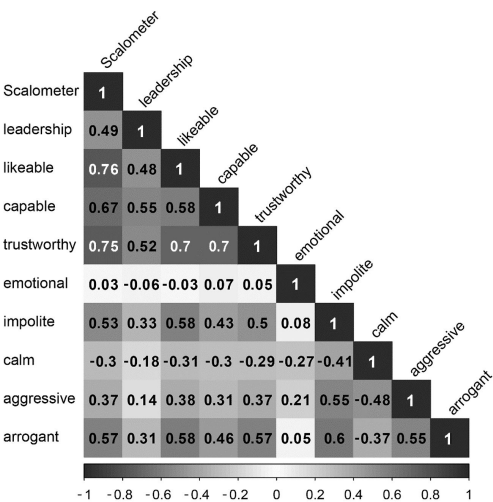
	Scalometer	leadership	likeable	capable	trustworthy	emotional	impolite	calm	aggressive	arrogant
Scalometer	1									
leadership	0.49	1								
likeable	0.76	0.48	1							
capable	0.67	0.55	0.58	1						
trustworthy	0.75	0.52	0.7	0.7	1					
emotional	0.03	-0.06	-0.03	0.07	0.05	1				
impolite	0.53	0.33	0.58	0.43	0.5	0.08	1			
calm	-0.3	-0.18	-0.31	-0.3	-0.29	-0.27	-0.41	1		
aggressive	0.37	0.14	0.38	0.31	0.37	0.21	0.55	-0.48	1	
arrogant	0.57	0.31	0.58	0.46	0.57	0.05	0.6	-0.37	0.55	1

-1 -0.8 -0.6 -0.4 -0.2 0 0.2 0.4 0.6 0.8 1

Note: The figure displays the lower half of a full correlation matrix. Cells show correlation coefficients. The diagonal line displays eigenvalues.

144

Figure 8: Correlation Matrix of Leadership Trait Evaluations for Sigmar Gabriel

	Scalometer	leadership	likeable	capable	trustworthy	emotional	impolite	calm	aggressive	arrogant
Scalometer	1									
leadership	0.51	1								
likeable	0.66	0.45	1							
capable	0.65	0.64	0.57	1						
trustworthy	0.71	0.54	0.68	0.68	1					
emotional	0.01	0.04	-0.05	0.05	-0.01	1				
impolite	0.45	0.29	0.48	0.37	0.49	0.09	1			
calm	-0.24	-0.18	-0.29	-0.22	-0.29	-0.13	-0.39	1		
aggressive	0.3	0.12	0.32	0.19	0.33	0.13	0.59	-0.44	1	
arrogant	0.51	0.27	0.52	0.41	0.53	0.02	0.55	-0.26	0.47	1

-1 -0.8 -0.6 -0.4 -0.2 0 0.2 0.4 0.6 0.8 1

Note: The figure displays the lower half of a full correlation matrix. Cells show correlation coefficients. The diagonal line displays eigenvalues.

Figure 9: Correlation Matrix of Leadership Trait Evaluations for Politicians in General

	Scalometer	leadership	likeable	capable	trustworthy	caring	contact	emotional	impolite	calm	aggressive	arrogant	decisive	resilient
Scalometer	1													
leadership	0.34	1												
likeable	0.41	0.25	1											
capable	0.54	0.45	0.34	1										
trustworthy	0.63	0.34	0.48	0.54	1									
caring	0.48	0.31	0.31	0.43	0.48	1								
contact	0.44	0.3	0.31	0.38	0.42	0.54	1							
emotional	-0.04	0.05	-0.07	0.02	-0.06	-0.05	-0.08	1						
impolite	0.3	0.21	0.26	0.26	0.29	0.24	0.21	0.08	1					
calm	-0.11	-0.1	-0.12	-0.12	-0.12	-0.05	-0.05	-0.12	-0.2	1				
aggressive	0.2	0.07	0.18	0.17	0.2	0.11	0.1	0.1	0.39	-0.26	1			
arrogant	0.42	0.21	0.31	0.34	0.42	0.38	0.33	-0.06	0.38	-0.12	0.31	1		
decisive	-0.24	-0.26	-0.18	-0.26	-0.24	-0.23	-0.27	0.08	-0.11	0.08	-0.02	-0.21	1	
resilient	-0.4	-0.38	-0.24	-0.41	-0.37	-0.33	-0.3	-0.03	-0.26	0.18	-0.14	-0.33	0.35	1

-1 -0.8 -0.6 -0.4 -0.2 0 0.2 0.4 0.6 0.8 1

Note: The figure displays the lower half of a full correlation matrix. Cells show correlation coefficients. The diagonal line displays eigenvalues.

145

As a first step in undertaking an exploratory factor analysis, it has to be considered whether a factor analysis is indeed a suitable approach. To do so, the Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test of sphericity are typically required measurements to judge the adequacy of a factor analysis (Patil et al. 2008: 166). Regarding the Kaiser-Meyer-Olkin measure, the application of a factor analysis seems suitable in respect to all three politicians and politicians in general.[47] The overall measure of sampling adequacy (MSA) ranges from 0.89 for Gabriel, Merkel, and politicians in general to 0.90 for Gysi and therefore suggests an adequate sampling base for factor analysis, as values closer to 1 indicate a better adequacy (Field 2009: 647).

As a second measure, Bartlett's test of sphericity, is commonly analyzed.[48] Bartlett's test indicates that an exploratory factor analysis is an appropriate analysis for each of the three politicians and also for politicians in general in accordance with the previously conducted correlation analyses. All four Bartlett tests are highly significant, however, given the large sample sizes in contrast to the relatively small number of variables, the significant tests might not be surprising (Field 2009: 648). Nevertheless, the first two requirements to model an exploratory factor analysis have been fulfilled. In addition, another requirement for factor analysis is the ratio between the number of observations and number of variables.[49] The sample sizes are sufficiently large in all instances of this study.

Another requirement for factor analysis is an appropriate distribution of variables. The variables have to be roughly normally distributed (Field 2009: 650). This requirement is particularly challenging to fulfill with Likert scale variables. Investigating the distribution by inspecting Quantile-Quantile plots for each variable (graphics not shown here), some deviations from normal distribution can be observed; however, the overall im-

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47 The Kaiser-Meyer-Olkin measure is based on the ratio of correlations among variables in the dataset to the partial correlation of variables within the dataset (Field 2009: 647).

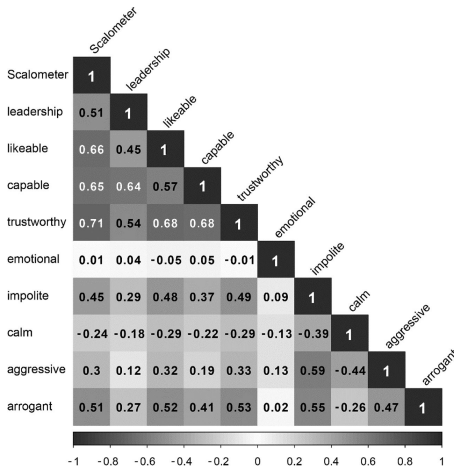48 This procedure tests whether the underlying matrix is an identity matrix, in which all variables do not correlate with each other (Field 2009: 648). Hence, a highly significant result is a desirable outcome as it indicates correlations among variables.

49 In general, it is advisable that at least 20 observations exist per variable. In this analysis, the number of observations range from each dataset between 1223 observations (Sigmar Gabriel) to 1629 observations (Gregor Gysi), 2446 observations (Angela Merkel) to 5695 observations (politicians in general).

pression is an acceptable approximation of normal distribution for the variables.

The number of factors that are retained can be determined by various measurements. Kaiser's eigenvalue-greater-than-one rule is one such widespread measure; however, it has also been widely critiqued over the last four decades and even more so in recent years (Patil et. al 2008; Zwick & Velicer 1982; Field 2009: 641). The general idea behind this measure is that one variable has an eigenvalue of one, and therefore a factor should capture at least as much variance as a single variable (Field 2009: 641).

The main critique regarding this measure is its tendency to over-extract factors and thereby fails to present parsimonious solutions (Patil et al. 2008: 163) and even worse, generates misleading factor solutions (Patil et al. 2008: 163).

One alternative or additional criterion to Kaiser's rule is the use of scree plots to determine the number of factors that are retained. The scree plot plots the eigenvalues of factors or components (y-axis) in relation to the number of factors (x-axis). A stark decline in the plot indicates the appropriate number of factors. However, while this measure is a preferable addition (Patil et al. 2008), the graphical interpretation can appear as a subjective decision in certain cases rather than a scientific endeavor (Patil et al. 2008: 164; Turner 1998).

A superior and certainly more scientific approach to the interpretation of a scree plot is facilitated by parallel analysis as introduced by Horn (1965) (Field 2009: 641; Patil et al. 2008; Sakaluk & Short 2017).[50] The scree plots with parallel analysis are shown in the online appendix for all politicians (see Figure A.1, Figure A.2, Figure A.3 and Figure A.4 in the online appendix). The analysis shows that a three-factor solution is sufficient for all specific politicians based on the factor analysis approach. When extracting principal components instead of factors, the principal component approach indicates that two components capture the variance within the variables for the three politicians – Angela Merkel, Gregor Gysi, and Sigmar Gabriel.

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50 In a parallel analysis a scree plot is fitted to the data, while another scree plot is fitted to a dataset with random variables that are equivalent to the researcher's dataset in terms of the number of variables and number of observations. Typically, the process is iterated at least 100 times and the eigenvalues of the 95th percentile of the simulated data are displayed to avoid random biases in the simulated data.

147

The number of variables that were introduced into the factor analysis for politicians in general is slightly higher, because four additional variables were introduced – two items that relate to the external efficacy as well as two additional items on a semantic differential scale. For this model the number of suggested factors according to the parallel analysis is five factors or three components. In addition, it must be noted that parallel analysis tends to "overfactor" in samples with large sample sizes (Warne & Larsen 2014: 118-119). Therefore, another highly recommended approach is considered when determining the number of factors to retract is Velicer's Minimum Average Partial Factor Retention Method (MAP) (Patil et. al 2008). This method determines the number of factors to retract "by separating the common and unique variance and retaining only those factors that consist primarily of common variance" (Garrido et al. 2011: 553). This procedure can be slightly biased when ordinal scale variables are analyzed (Garrido et al. 2011).

According to the Minimum Average Partial Factor Retention Method, two factors should be retained for each politician – the same number of factors as the parallel analysis based on principal components. One main difference to the parallel analysis occurs for the politicians in general. According to the Minimum Partial Factor Retention Method, one factor is sufficient for the politicians in general, contrary to the three components that were suggested by parallel analysis. Trying to avoid over extracting of factors, the subsequent analysis focuses on two factors for each politician and a one-factor solution for politicians in general. Because the aim in this analysis is to find an underlying latent structure, a factor analysis instead of a principal component analysis is estimated as the next step. The exploratory factor analyses are estimated based on a maximum likelihood approach with an oblimin rotation that allows the factors to be correlated.

The following Table 13 presents the results of the factor analysis for each politician and politicians in general. The factor loadings indicate for each politician that the overall rating of the scalometer as well as the four items for candidate orientation form the first factor. The overall scalometer rating shows the highest factors loadings. The semantic differentials built a second factor, but the factor loadings are lower for this second factor. For politicians in general, a one-factor solution shows mostly acceptable factor loadings. The items "emotional–rational" and "calm–agitated" show the smallest factor loadings (0.04 and 0.19). Particularly, the item "emotional–rational" does not seem to belong to this one underlying construct.

Table 13: Parsimonious Factor Solutions for the Evaluation of Politicians

	Politicians in General	Angela Merkel		Gregor Gysi		Sigmar Gabriel	
	1	1	2	1	2	1	2
Scalometer	0.758	0.918		0.867		0.781	
Strong Leader	0.500	0.654		0.696	-0.164	0.740	-0.153
Likeable	0.538	0.757		0.779		0.687	0.162
Capable	0.692	0.820		0.782		0.861	
Trustworthy	0.762	0.840		0.849		0.797	0.112
Emotional-Rational		0.172	-0.216	0.167	-0.323		-0.162
Impolite-Polite	0.427		0.697	0.310	0.532	0.206	0.660
Calm-Agitated	0.185		0.539		0.563		0.474
Aggressive-Peaceful	0.283		0.735		0.852		0.842
Arrogant-Modest	0.565	0.242	0.564	0.371	0.491	0.348	0.461
Decisive-Unassertive	0.367						
Over-strained-Resilient	0.550						
Caring	0.644						
Contact Seeking	0.595						
Sum of Squared Loadings	3.997	3.332	1.686	3.442	1.710	3.188	1.687
Proportion of Variance	0.285	0.333	0.169	0.344	0.171	0.319	0.169
Cumulative Variance		0.333	0.502	0.344	0.515	0.319	0.487
Observations	5,695	2,446		1,629		1,223	

Note: Factor loadings are based on a maximum likelihood estimation with oblimin rotation.

Although the exploratory factor analysis has mostly yielded in two-factor solutions, these two dimensions did not clearly distinguish the two underlying dimensions of warmth and competence. Rather, it reflects the two sets of measurements of candidate orientation as specific attributes and semantic differentials of more direct personal and observable attributions. Since some indicators, such as the parallel analysis, pointed towards three

underlying factors, exploratory three factor models are displayed in the following two tables (Table 14 and Table 15).

Table 14 shows that within a three-factor solution for politicians in general, the first two factors indicate two underlying factors of warmth and one of competence. The first factor has high ratings for the likeability and trustworthiness of politicians in general as well as their overall evaluation according to the scalometer rating. The two items measuring external efficacy also loaded onto the first factor as it could have been expected if the external efficacy is interpreted as political empathy (Kinder 1986: 241), which typically belongs to the dimension of warmth. Politicians' competence is reflected by the second factor which shows high values for leadership skills and problem-solving skills. In addition, two items that reflect performance-related evaluation such as decisiveness and resilience loaded onto this second factor. The third factor consists of several semantic differentials, which could reflect the politicians' level of arousal and their communication style. Compared to the two-factor solution, this three-factor solution has hardly improved the amount of cumulative variance that is accounted for by the three factors compared to a two-factor solution. While this three-factor solution indicates a fit that is more in line with theoretical expectations for politicians in general, the three-factor model for Angela Merkel shows a different factor pattern. Similar to the two-factor solution, the first factor shows the highest factor loadings regardless of whether items could theoretically be interpreted as belonging to the dimension of warmth or competence. Hence, the distinction between warmth and competence seems less pronounced for the evaluation of Angela Merkel.

150

Table 14: A Three-Factor Solution for Politicians in General and Angela Merkel

	Politicians in General			Angela Merkel		
	1	2	3	1	2	3
Scalometer	0.724			0.889		
Strong Leader		0.582		0.668		-0.311
Likeable	0.546			0.746		0.255
Capable	0.434	0.332		0.829		-0.207
Trustworthy	0.791			0.815		
Emotional–Rational	0.307	-0.215	-0.205	0.171	-0.221	0.286
Impolite–Polite	0.117	0.128	0.500	0.106	0.682	
Calm–Agitated	-0.162	0.231	0.365		0.546	-0.219
Aggressive–Peaceful			0.694		0.727	
Arrogant–Modest	0.438		0.284	0.244	0.569	
Decisive–Unassertive		0.431				
Resilient–Overstrained		0.603				
Caring	0.634					
Contact Seeking	0.577					
Sum of Squared Loadings	2.710	1.136	1.029	3.255	1.677	0.356
Proportion of Variance	0.194	0.081	0.074	0.325	0.168	0.036
Cumulative Variance	0.194	0.275	0.348	0.325	0.493	0.529
Observations	5,695			2,446		

Note: Factor loadings are based on a maximum likelihood estimation with oblimin rotation.

Table 15 examines the factor loadings for Gregor Gysi and Sigmar Gabriel. For Gregor Gysi, the factor loadings of a three-factor solution are similar to the three-factor solution that could be obtained for Angela Merkel. The first factor shows the highest loadings for the variables of candidate orientation and the highest values for competence. While some cross-loadings exists, the second factor could indicate an aroused communication style, while the third factor further exemplifies the underlying dimension of warmth with the high loadings for likeability. When estimating a three-factor solution, the evidence for two underlying factors is stronger for Sigmar Gabriel. The first factor shows high loadings for warmth, whereby the third factor shows high loadings for competence. The second factor captures the semantic differentials. Hence, these three-factor solutions partially support the notion of two underlying dimensions of warmth and competence, while the evidence is more ambiguous for Angela Merkel and Gregor Gysi. Furthermore, an additional third factor hardly increases the amount of explained variance across the models.

Table 15: A Three-Factor Solution for Gregor Gysi and Sigmar Gabriel

	Gregor Gysi			Sigmar Gabriel		
	1	2	3	1	2	3
Scalometer	0.521	0.109	0.392	0.603		0.265
Strong Leader	0.618	-0.112	0.111			0.746
Likeable	0.290	0.167	0.586	0.718		
Capable	0.931		-0.115	0.184		0.722
Trustworthy	0.643	0.103	0.229	0.590		0.293
Emotional–Rational		-0.325	0.336	0.385	-0.291	-0.261
Impolite–Polite		0.578	0.272	0.236	0.605	
Calm–Agitated	0.113	0.585	-0.137		0.528	0.174
Aggressive–Peaceful		0.871			0.836	
Arrogant–Modest	0.103	0.541	0.278	0.542	0.338	
Sum of Squared Loadings	2.056	1.897	0.862	1.770	1.550	1.352
Proportion of Variance	0.206	0.190	0.086	0.177	0.155	0.135
Cumulative Variance	0.206	0.395	0.481	0.177	0.332	0.467
Observations	1,629			1,223		

Note: Factor loadings are based on a maximum likelihood estimation with oblimin rotation.

While the assumptions for a factor analysis were largely fulfilled, the inclusion of semantic differential scales with dual endpoints could have impacted the factor solutions. One way to circumvent the use of these semantic differential scales is by conducting binary network models.

Recently, the use of network models has been suggested to model candidate evaluations (Dalege et al. 2016). In recent years, psychological networks have become a popular tool in psychology research to model attitude structures (Epskamp et al. 2018: 195). When fitting a network model, the variables are presented as nodes within a network graph, while the edges indicate the relationship between the variables (van Borkulo et al. 2014). Previous research has applied network models to the structure of attitudes and candidate evaluations regarding American politicians such as Ronald Reagan and his opponent in the election in 1984, Walter Mondale, using ANES survey data (Dalege et al. 2016). By doing so, Likert scale variables were recoded into dichotomous variables; therefore, violations against the requirement of normally distributed variables are not a concern for network models that are estimated by Ising Models, which are popular network model estimated by pairwise Markov Random Fields (Epskamp et al. 2018: 198). The Ising Model is appropriate and suitable for binary data (Dalege et al. 2016; Epskamp et al. 2018: 198; van Borkulo et al. 2014).

Since this procedure has been previously successfully applied to the field of candidate evaluations and concerns regarding the normal distributions

of each variable are diminished, a network model appears to be a worthwhile fit to the attitudes regarding German politicians. Furthermore, such network models do not only allow investigating of the structure of all variables, they also enable the researchers to detect changes in the relationships among variables that occur over time (Epskamp et al. 2018). In the case of this experiment, network models can also be estimated after the experimental treatment had occurred, to examine if and how the variables are related differently to each other once participants were exposed to the politicians in the video clips.

One requirement for the fit of a network model is a sufficient sample size. With each additional variable that is entered into the network model, the number of parameters that need to be estimated increases.[51] Contrary to most research in psychology, the sample size of this study is large enough so that the number of parameters that need to be estimated is not concerning. The large sample sizes have another advantage of improved estimations: "With increasing sample size, the parameters will be more accurately estimated from data" (Epskamp et al. 2018: 196).

The following network models mostly adheres to the model specifications proposed by Dalege et al. (2016) for the evaluation of presidential candidates. It is adjusted slightly to indicate the communities to which each variable belongs, similar to a latent class, underlying dimension or cluster (e.g., Bell & O'Driscoll 2018). As suggested by Dalege et al. (2016), the Likert scale variables are transformed into binary variables. The specific items of candidate orientation are coded in a way that they indicate the positive attribution of a characteristic: If participants indicated that they agreed or strongly agreed with a statement, the variable was coded as "1" and otherwise as "0". The semantic differentials were recoded so that the two highest or lowest end points, respectively, were coded as "1" and otherwise as "0" to indicate the presence of a certain attribution. For the overall rating (scalometer), the four highest values on an 11-point Likert scale

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51 To give an example, in the case of fifteen variables that are estimated within a 15-node-network model for each of the three politicians, 120 parameters have to be estimated: 15 threshold parameters + 15 x 14/2 pairwise association parameters (see Epskamp et al. 2018: 198). In the case of politicians in general, the number of estimated parameters is noticeably higher. Within a 21-node-network model, 231 parameters need to be estimated: 21 threshold parameters + 21 x 20/2 pairwise association parameters.

are chosen as indication of a positive overall evaluation of each politicians and politicians in general.[52]

The following section displays network graphs for the three politicians and politicians in general. The models are fitted using the recommended Ising Model (van Borkulo et al. 2014). The network models for Angela Merkel, Sigmar Gabriel, and Gregor Gysi show similar network structures. The communities based on a spinglass community algorithm and the median number of clusters after 1000 repetitions indicate three communities within the networks for political leaders (see also Bell & O'Driscoll 2018; Fried 2016). The first community consists of the four items that measure the candidate orientations traditionally as well as the overall rating (scalometer). The next two communities, or latent classes, exist within the subgroup of semantic differentials, whereby positive evaluations such as calmness, modesty, and politeness form one community and their negations form the second cluster as they co-occur. By inspecting the edges between the nodes, the strength and nature of the relationship between the variables can be investigated. The stronger the edge, the stronger the association between both variables. A green edge indicates a positive association, red edges indicate negative relationships. The divide is partially a result of measuring specific character traits as semantic differentials instead of using unidimensional Likert scales. The associations between semantic differentials and items that measure candidate orientation are weak; however, for Angela Merkel; it is noticeably that arrogant evaluations are linked to overall evaluations and evaluations of trustworthiness, problem-solving and leadership skills (see Figure 10). The absence of arrogance and evaluation of modesty is positively linked to trustworthiness, overall ratings and likeability.

For Gregor Gysi, the same amount of communities occurs (see Figure 11). A strong link between his overall ratings and likeability occurs, while his leadership skills and likeability indicate only a weak positive relationship. Focusing on the link between semantic differentials and items of candidate orientations, evaluations of modesty and politeness relate most strongly to the candidate orientation. Positive evaluations of politeness and

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52 The network models are based on the pre-test (Wave 1). In a later step, network models were also fitted for the anger condition of the post-test survey – the coding scheme had to be altered slightly in singular instances because not enough observations had occurred in the single experimental group. In these cases, a third answer category from the end point of the semantic differential scale closer was also coded as indication of a certain characteristic.

likeability co-occur, while a positive evaluation of his modesty is associated with a favorable overall rating and a favorable evaluation of his trustworthiness.

For Sigmar Gabriel, the same amount of communities occurs (see Figure 12). The semantic differentials that are particularly linked to his more general evaluation are his arrogance, politeness and calmness. Evaluations of arrogance have a negative relationship with overall ratings, trustworthiness, and problem-solving skills. Those participants who perceive him as being polite are also more likely to perceive him as being trustworthy, likeable, and favor him more strongly overall. Furthermore, evaluations such as calm have a positive relationship with his trustworthiness.

For politicians in general, the structure is slightly different (see Figure 13). The two items that measure external efficacy did not connect to the other variables, and correlated only weakly with them based on this binary specification. Hence, communities could only be calculated for the connected items, which resulted in a solution with two communities. The rest of the network model shows weak correlations that are weaker compared to the previous three models. In addition, semantic differentials and candidate orientations do not cluster together into two separate clusters; instead, two communities occur, whereby positive and negative evaluations can be distinguished from each other.

155

Figure 10: Network Graph of Angela Merkel's Character Traits Assessments
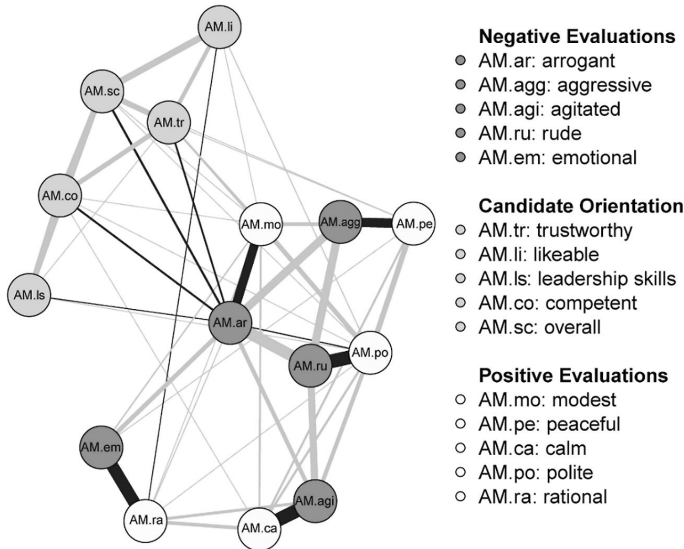
Negative Evaluations
- AM.ar: arrogant
- AM.agg: aggressive
- AM.agi: agitated
- AM.ru: rude
- AM.em: emotional

Candidate Orientation
- AM.tr: trustworthy
- AM.li: likeable
- AM.ls: leadership skills
- AM.co: competent
- AM.sc: overall

Positive Evaluations
- AM.mo: modest
- AM.pe: peaceful
- AM.ca: calm
- AM.po: polite
- AM.ra: rational

Note: Positive associations between items are displayed in light gray, while negative associations between items are displayed in dark gray.

Figure 11: Network Graph of Gregor Gysi's Character Traits Assessments
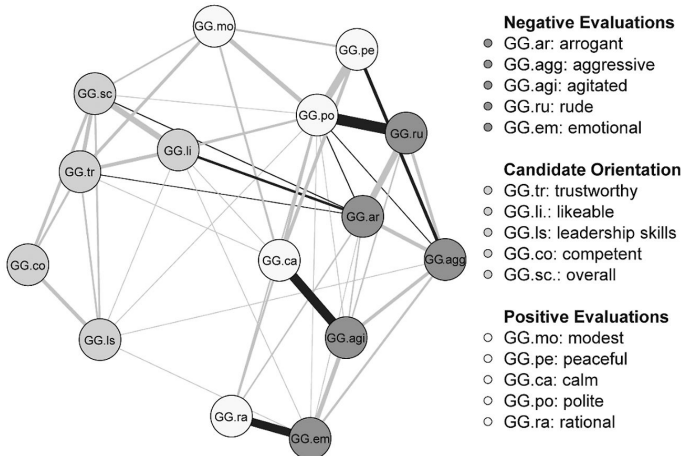
Negative Evaluations
- GG.ar: arrogant
- GG.agg: aggressive
- GG.agi: agitated
- GG.ru: rude
- GG.em: emotional

Candidate Orientation
- GG.tr: trustworthy
- GG.li.: likeable
- GG.ls: leadership skills
- GG.co: competent
- GG.sc.: overall

Positive Evaluations
- GG.mo: modest
- GG.pe: peaceful
- GG.ca: calm
- GG.po: polite
- GG.ra: rational

Note: Positive associations between items are displayed in light gray, while negative associations between items are displayed in dark gray.

Figure 12: Network Graph of Sigmar Gabriel's Character Traits Assessments

Negative Evaluations
- SG.ar: arrogant
- SG.agg: aggressive
- SG.agi: agitated
- SG.ru: rude
- SG.em: emotional

Candidate Orientation
- SG.tr: trustworthy
- SG.li.: likeable
- SG.ls: leadership skills
- SG.co: competent
- SG.sc: overall

Positive Evaluations
- SG.mo: modest
- SG.pe: peaceful
- SG.ca: calm
- SG.po: polite
- SG.ra: rational

Note: Positive associations between items are displayed in light gray, while negative associations between items are displayed in dark gray.

Figure 13: Network Graph of Politicians' Character Traits Assessments

Negative Evaluations
- PG.ar: arrogant
- PG.gg: aggressive
- PG.agi: agitated
- PG.ru: rude
- PG.em: emotional
- PG.un: unassertive
- PG.ov: overstrained

Positive Evaluations
- PG.mo: modest
- PG.pe: peaceful
- PG.ca: calm
- PG.po: polite
- PG.ra: rational
- PG.de: decisive
- PG.re: resilient
- PG.tr: trustworthy
- PG.li: likeable
- PG.ls: leadership skills
- PG.co: competent
- PG.sc: overall

External Efficacy
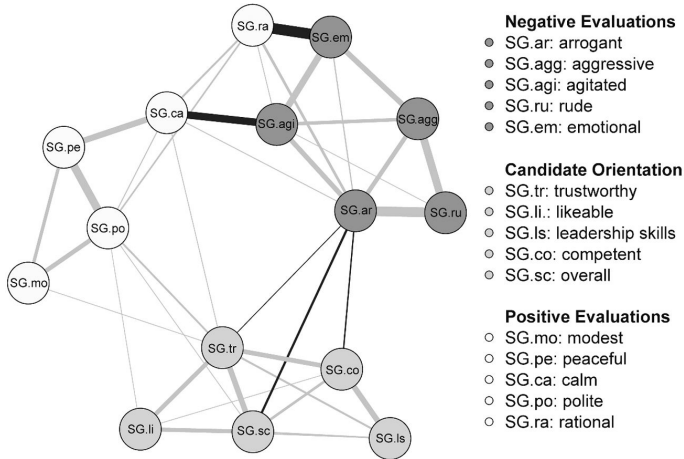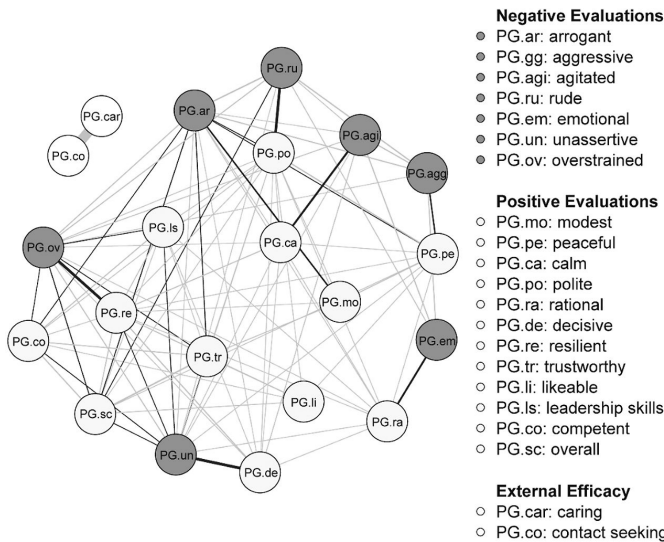- PG.car: caring
- PG.co: contact seeking

Note: Positive associations between items are displayed in light gray, while negative associations between items are displayed in dark gray.

4.4.2 Measurements of Covariates and Moderating Variables

This section presents the measurement of moderating variables which are tested in the following analysis to test heterogeneous treatment effects.[53] Based on the previously discussed theoretical assumptions, the impact of the experimental treatment could potentially be moderated by a range of variables. A moderation effect implies that the experimental treatment effect has a heterogeneous impact on the viewers, whereby the treatment effect varies by subgroups, which means that the treatment effect might be stronger or even only occurring for participants with a set of certain characteristics, such as sociodemographic properties or individual attitudes. These moderating effects can be analyzed by using interaction terms between the independent variable (the experimental treatment) and the moderating variable.[54] Because most of the tested moderator variables rely on self-reports, additional control variables are also taken into consideration to test for potential confounding factors.

Previous research has found that principles of homophily guide individual perceptions of political candidates. In general, voters tend to favor political candidates who are more similar to themselves in regard to age, gender, facial features, and ethnicity (Bailenson et al. 2008; Masters 1994; McDermott 1998). An individual's ethnicity cannot be considered for this study, since the survey questionnaire did not include a relatable question.[55] This analysis, however, controls for the gender and age of participants. Age

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53 A mediation analysis, which could test whether the impact of the experimental effects is mediated by individual characteristics has not been conducted. Mediation analysis can introduce biases into the analysis if the mediating variable is not manipulated (Gerber & Green 2012: 321). The problem of attributing causality to factors that have not been randomly manipulated has also been expressed by Holland (1986) with his famous motto "no causation without manipulation" (Holland 1986: 959). Due to this skepticism towards the use mediating variables within the social sciences, a mediation analysis is not conducted.

54 Ideally, instead of using moderating variables, it is advisable to adjust the experimental design by using techniques such as blocking, if strong theoretical or empirical evidence exists (Gerber & Green 2012: 109–115).

55 Ethnicity is a sensitive topic in German surveys and not frequently measured in surveys unlike in English-speaking countries, such as the United Kingdom and the USA (e.g. British Social Attitudes Survey or the General Social Survey). Both of these countries are ethnically diverse. In a module for the International Social Survey Programme (ISSP), German participants were asked whether they identified with a "population group" instead of asking them about their race or ethnicity more directly (ISSP 2013/2014, ALLBUS 2014 (GESIS 2015)).

is measured as a mean-centered variable (M = 44.82, SD = 14.65). In addition to age and gender, an individual's party identification is controlled for, since it has been shown that party identification is a crucial category in the perception of political candidates (Rahn 1993).

In addition, some research has pointed out that particularly uninformed or less sophisticated voters rely on candidate appearances as heuristics (Lau & Redlawsk 2001). The political interest is used as an approximation of political sophistication. Hence, this study also controls for individual levels of political interest, whereby this 5-point Likert scale (ranging from "0" – not at all" to "4 – very strongly") is used as a mean-centered variable (M = 2.16; SD = 0.90 in Wave 1).

Education is not used to approximate sophistication for the models that are reported in the following. Education was measured only in relation to schooling without regard to college-education. Hence, education could only be used as a categorical variable of basic, medium and high levels of schooling in accordance with the three-tiered German school system.[56] However, education is not included in the presented models due to constraints based on the low number of participants, if party identification for the Left is also taken into consideration. Nonetheless, all models have also been conducted while controlling for educational level. These models did not indicate that the level of education acted as a confounding variable that changed the relationship between the experimental treatment, moderating factors, and changes in the assessment of political leaders measured as gain scores. An example can be found in the appendix (see Table A.31, Table A.32, Table A.33). Subsequently, the following variables are tested as moderating variables: party identification, personal predispositions and the order of video clips.

First, the order in which the politicians were seen is explored, since this factor was implemented by the experimental design as a random rotation of the order in which the two video clips (Merkel/Gysi and Merkel/Gabriel) were seen. This measurement is followed by individual predispositions such as party identification and further individual characteristics such as ideological beliefs, and personality factors. Party identification was measured by a standard question of German electoral research (for com-

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56 A basic level of education stands for a certificate after nine years of schooling ("Hauptschulabschluss"), a medium level of education stands for a certificate after ten years of schooling ("Realschulabschluss") and a high level of education equals a German university entry-diploma ("Abitur") after twelve or thirteen years of schooling.

parison see Falter 1977; Rattinger et al. 2017), which can be translated as follows:

> "In Germany, many people lean towards a certain political party over time, although they occasionally vote for a different party. What about you: Generally speaking – do you lean towards one particular party? If so, which one?"

Participants could answer with one of the four parliamentary parties at the time – CDU/CSU, SPD, the Greens, and the Left – an open-ended response as well as checking "no party". Instead of further differentiating the strength of party identification, a dichotomous approach has been chosen for this study, whereby participants who identify with one party are coded as identifiers (1) and all other participants, whether they identified with any other party or no party at all, were coded as non-identifiers (0).

In this study, the ideological self-positioning was measured via two items which represent the cultural and socioeconomic dimensions of left and right. This study did not include an item which indicates self-positioning on an explicit left-right continuum. Both items were measured by an 11-point Likert scale, as is common (e.g., Rattinger et al. 2017). The cultural dimension was measured with an item reflecting support for immigration ranging from "immigration for foreigners should be made easier" (1) to "immigration for foreigners should be made more difficult" (11). The socioeconomic dimension of left and right was measured with an item focusing on participants' attitudes towards and support of taxation, ranging from "less taxes, even if it results in less social benefits" (1) to "more social benefits, even if it results in more taxes" (11). For the analysis, both items were rescaled so that they ranged from 0 to 10. Furthermore, the socioeconomic item was recoded so that it reflected the left-right scale with lower values for more social benefits and higher values for less taxation. After rescaling both items only correlated weakly ($r = 0.24$); similarly, Cronbach's alpha showed a low construct validity (alpha = 0.37). Hence, this following analysis only focused on a single item regarding the socioeconomic dimensions of the left-right scale, as this dimension has traditionally been the origin of left and right.

Two personality factors – neuroticism and extraversion – were measured with two items each according to a Big Five Short Scale (Rammstedt et al. 2013). The items were measured on a 5-point Likert scale and partially recoded before mean indices were computed, whereby high values represent

high values for neuroticism and extraversion, respectively. The items ranged from "completely agree" (4) to "completely disagree" (0).[57]

When moderation effects are considered as part of the analysis, the dependent variable of an overall assessment (scalometer) as well as two indices of warmth and competence were considered. Warmth and competence were measured as two mean indices, whereby likeability and trustworthiness measure warmth and strong leadership and political capabilities measure competence. The mean indices were then divided by the respective number of items each. The following Table 16 shows Cronbach's alpha values for each pairing based on measurements in the pre-test condition. Overall, Cronbach's alpha is mostly acceptable in all instances, given that it was calculated based on only two items. Only the reliability measures for politicians as a social group are less than desirable.

Table 16: Overview of Reliability Measures Based on Cronbach's Alpha

	Politicians in General	Angela Merkel	Gregor Gysi	Sigmar Gabriel
Warmth	0.64	0.82	0.82	0.81
Competence	0.62	0.77	0.71	0.78
Observations	5,704	2,450	1,631	1,226

Note: Cronbach's alpha is calculated based on the pre-test measurements in the first wave.

4.5 Manipulation Checks of the Experimental Treatment

This chapter presents manipulation checks of the experimental treatment and considers the external validity of this study. The first section looks at the self-reported elicited emotions and perceptions of the emotions expressed by the politician; thereafter, the external validity of the treatment conditions is analyzed by determining these conditions more thoroughly regarding the emotional expressions as well as a more in-depth analysis of their verbal contents.

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57 Neuroticism was measured by the following two items: "I see myself as someone who is relaxed, handles stress well." (-) and "I see myself as someone who gets nervous easily." (+); the first item was recoded. Extraversion was measured by the following items: "I see myself as someone who is outgoing, sociable." (+) and "I see myself as someone who is reserved." (-); the second item was recoded.

4.5.1 Self-Reported Affective and Cognitive Responses

Cognitive and affective responses are two potential mechanisms which can have a simultaneous and interactive impact on the processing of political information such as emotional expressions by politicians (Redlawsk & Pierce 2017: 425). In the following sections, cognitive responses, such as conscious perceptions, and conscious affective responses are considered.

4.5.1.1 Perceptions of Emotional Expressions

Previous studies have found that self-reports of feelings as well as emotional expressions of others suffer severely from measurement errors in surveys (Scherer 2005; Siegert et al. 2011; Marcus et al. 2017). The problem of relying on self-reported emotional responses after experimental treatments of emotional expression by politicians has been noted before (Sullivan et al. 1991: 201). This concern in survey research is further amplified by the theoretical assumption that respondents do not necessarily have to be consciously aware of the emotion expression in order to form an impression, since these judgements and inferences can be made rapidly and automatically, and pre-consciously (Todorov et al. 2005, Brader & Marcus 2013: 171–174; Fiske & Taylor 2017: 70). Despite these concerns, this section presents the manipulation checks that were administered directly after each video clip regarding the perceptions of emotional expressions.

The perception of emotional expressions was designed as a treatment check that was administered as a first set of questions immediatelyafter the experimental treatment – the video clips – were administered. First, participants were asked whether they had the impression that the displayed politician(s) showed feelings, followed by a multiple choice question in which participants could choose among up to six different discrete emotions as possible impressions they had gained. The item wording of these discrete emotions was designed as adjectives to facilitate the self-report of emotions, as previous research in psychology has used adjectives rather than nouns to measure such self-reports, for example the Positive and Negative Affect Schedule (PANAS) (Watson et al. 1988; Krohne et al. 1996). Adjectives might be closer to everyday language than nouns and therefore potentially aided the measurement of emotional expressions. Furthermore, scholars have suggested to at least use two to three synonyms when measuring emotions (Brader & Marcus 2013: 188), however, for reasons of parsimony in online surveys, the measurement was restricted to one adjective

per discrete emotion. Out of the six discrete emotions three emotions had a positive valence, and three emotions a negative valence in order to avoid any biases: anger, sadness, happiness, pride, indignation, and amusement.

The following Table 17 shows the percentages of participants who perceived anger and/ or indignation within the experimental treatment conditions that featured male and female politicians. Within the negative-active treatment conditions more than six out of ten participants recognized anger and/or indignation as such for male and female politicians. A few participants also recognized these emotional expressions within the neutral condition – 14.4 percent out of those participants who saw male politicians and 9.1 percent of participants who saw female politicians. However, the percentages are particularly low for those who saw positive emotional displays – 0.6 percent and 1.5 percent, which by and large indicates a positive outcome of this treatment check.

Table 17: Percentages of Perceived Discrete Emotions for Politicians as Social Groups

Politicians	Treatment	Discrete Emotions				
		Anger		Indignation		
		Percent	N	Percent	N	N(Group)
Male Politicians						
	Positive	1.47	5	2.35	8	340
	Negative-Active	62.86	220	64.00	224	350
	Negative-Passive	21.33	74	11.82	41	347
	Neutral	14.41	51	14.12	50	354
Female Politicians						
	Positive	0.56	2	0.56	2	358
	Negative-Active	62.87	210	65.27	218	334
	Negative-Passive	27.98	101	30.75	111	361
	Neutral	9.06	31	11.11	38	342

Note: Cells display frequencies and percentages of perceived expressions of anger and indignation for each experimental treatment group.

Table 18 displays the results for the three political leaders. An equal number of participants recognized Gregor Gysi's anger (61.5 percent), while almost three quarters of participants recognized his indignation. The experimental treatment for Angela Merkel was recognized by roughly more than a third of participants as anger (35.0 percent; 33.6 percent), with slightly higher percentages for her negative-active expressions as indignation (37.7 percent; 36.9 percent). Sigmar Gabriel's expressions of negative-active emotions were also only perceived as anger by slightly more than a third of par-

ticipants (36.3 percent) and hardly perceived as indignation by roughly more than a quarter of the participants (28.6 percent). Indignation as an emotional expression is more strongly related to moral anger compared to incivility, hence, this finding could be explained by the different sides of anger (Hess 2014).

Table 18: Percentages of Perceived Discrete Emotions for Political Leaders

Politicians	Treatment	Discrete Emotions				
		Anger		Indignation		
		Percent	N	Percent	N	N (Group)
Merkel						
With Gysi	Positive	0.61	2	0.30	1	328
With Gysi	Negative	35.00	119	37.65	128	340
With Gabriel	Negative	33.63	113	36.90	124	336
With Gysi	Neutral	3.00	10	6.61	22	333
With Gabriel	Neutral	4.07	14	4.07	14	344
Gysi						
	Positive	2.13	7	2.74	9	328
	Negative	61.47	209	74.41	253	340
	Neutral	24.32	81	26.13	87	333
Gabriel						
	Negative	36.31	122	28.57	96	336
	Neutral	4.07	14	5.23	18	344

Note: Cells display frequencies and percentages of perceived expressions of anger and indignation for each experimental treatment group.

In addition to the perception of emotional expressions, participants also indicated whether they felt affected in any way by the experimental treatments. The next section covers whether further differences between the anger conditions can be discovered.

4.5.1.2 Affective Responses Based on Emotional Expressions

Since emotional expressions can potentially evoke an affective response within others, this section describes the self-reported affective impact that the video clips had on viewers. The affective response towards the video clips was measured at the end of the questionnaire in the last question that asked whether participants felt emotionally affected by the video clip. Participants could answer this question with a simple yes/no followed by a 5-point Likert scale that assessed the strength of the affective response; however, the valence of the affective response was not measured.

164

Table 19 presents the percentages and frequencies of those participants within each experimental condition who felt an affective reaction towards the videos. The experimental groups that focused on politicians as social groups show overall low levels of affective responses. For the groups with male politicians almost one in five participants (18.9 percent) and almost one in four participants for the group with female politicians (24.3 percent) felt an emotional reaction due to the anger conditions. Similarly, only slightly more than one in five participants (22.9 percent) felt affected by the video clips of Angela Merkel's and Sigmar Gabriel's negative-active expressions. In contrast, almost half of the participants who saw Merkel's and Gysi's negative-active expressions reported an affective response (48.5 percent). The percentage is equally high for those who saw their positive emotions (45.7 percent) and a small percentage of participants even felt an emotional reaction due to the neutral displays of both politicians (17.7 percent).

Table 19: Percentages of Affective Responses to Anger Expressions

Politicians	Treatment			
		Percent	N	Group(N)
Male Politicians				
	Positive	17.35	59	340
	Negative-Active	18.86	66	350
	Negative-Passive	11.24	39	347
	Neutral	4.52	16	354
Female Politicians				
	Positive	29.05	104	358
	Negative-Active	24.25	81	334
	Negative-Passive	17.17	62	361
	Neutral	4.09	14	342
Treatment E2/ E3				
Merkel/Gysi	Positive	45.73	150	328
Merkel/Gysi	Negative-Active	48.53	165	340
Merkel/Gabriel	Negative-Active	22.92	77	336
Merkel/Gysi	Neutral	17.72	59	333
Merkel/Gabriel	Neutral	9.88	34	344

Note: Cells display frequencies and percentages of self-reported affect for each experimental treatment group.

Despite the difficulties in measuring self-reported emotions and perceptions of emotional expressions these treatment checks indicate that Gregor Gysi's anger had been noticeably perceived by a larger number of participants in the negative-active treatment conditions, as participants reported a higher affective response towards his (and/or Merkel's) expressions of

anger and indignation. The failure to replicate a similar number of participants who recognized Merkel's emotional expressions when also seeing Sigmar Gabriel illustrates that these differences can be attributed to Gysi's displays of anger and indignation. These differences could reflect the varying quality of the real-world video material, whereby politicians have individually varying levels of expressivity. In order to assess the differences in emotional expressivity for each anger condition, the next chapter presents findings from a classification attempt of facial micro expressions.

4.5.2 The Facial Expressions of Anger

The first section discusses the validity of the emotional expressions and thereby the internal validity of the experimental design. For this study, emotional expressions were defined as being expressed either verbally, facially, gesturally, or vocally. While emotions can be expressed in various ways, strong emotional expressions should be expressed via more than one channel. Anger is expressed by a vocal intensity of a raised voice, gestures, possibly verbal expressions, and corresponding facial expression. Previous studies that have focused on the impact of emotional expressions, particularly in non-verbal communication, have first and foremost focused on facial expressions. This comes as no surprise, considering the dominant role of facial expressions in interpersonal communication: "Faces are intrinsically the focus of attention in any social interaction" (Fiske & Taylor 2017: 65). Therefore, a vast majority of studies have adhered to Ekman's Facial Action Coding System (FACS) to determine the emotional valence of facial expressions (e.g., Stewart & Ford Dowe 2013; for an overview: Stewart et al. 2009b).

For this study the emotions within the experimental treatment were coded by the researchers of the research project, who decided unanimously that anger expressions were displayed within the selected video clips (see also Subchapter 4.3). Since the researchers were highly involved within the processes of data collection and emotion recognition, it seems worthwhile to assess the validity of this researchers' coding externally. Recent developments in machine learning have led to algorithms that can detect discrete emotions within facial expressions due to training data and decision rules such as Ekman's FACS (e.g., Microsoft Cognitive Services).[58]

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58 The algorithm built by Microsoft Cognitive Services was accessed via an API. For further information on the available Microsoft algorithms for face detections and

In order to classify the facial expressions within the experimental treatment, the following detection of emotional expressions is based on the algorithm built by Microsoft Cognitive Services. The video clips for each experimental treatment were classified by video frames, whereby each second of the videos resulted in 24 frames. When analyzing the video clips for Angela Merkel, Sigmar Gabriel, and Gregor Gysi, those frames that showed other politicians were not included in the analysis. Some of the frames could not be classified because the algorithm could not detect faces from certain angles. This number of misclassified frames was higher in the experimental groups with several politicians. 9.1 percent of frames with female politicians and 15.0 percent of frames with male politicians could not be classified, compared to the videos of political leaders – only 3.3 percent of frames could not be classified for Merkel, 2.0 percent for Gysi, and 0.1 percent for Gabriel. The algorithm detected the following emotions: anger, contempt, disgust, fear, happiness, sadness, and surprise as well as neutral expressions.[59] The number of frames per video clip ranged from 2303 to 2854 for the five different groups (for summary statistics of each experimental group see Table A.2, Table A.3, Table A.4, Table A.5, Table A.6 in the online appendix).

The classification of emotional expressions across all frames for each anger treatment is presented in the following Figure 14, which displays grouped boxplots for the classification of eight emotional expressions within each anger treatment. The grouped boxplots show that in each experimental condition, the vast majority of expressions were most likely neutral expressions. The x-axes show the classification of emotions ranging from 0 to 1, which can be interpreted as the estimated probability for each emotion (multiplied by 100).

From a theoretical standpoint, the classification of anger expressions is of the highest interest. Based on the interquartile ranges (or the boxes), three-quarters of the frames were classified with very low probabilities for

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emotion classifications see the description by Microsoft Cognitive Services, online available at: https://azure.microsoft.com/en-us/services/cognitive-services/ (last accessed: 09 January 2020).

59 Microsoft Cognitive Services provide more information, available online at: https://docs.microsoft.com/en-us/dotnet/api/microsoft.azure.cognitiveservices.vision.face.models.emotion?view=azure-dotnet (last accessed: 04 May 2020). When accessing the algorithm via an API, the classifications of disgust and contempt were labelled as being under development. Since contempt and disgust were still in the experimental development stage, their respective classifications are not discussed in further detail.

facial expressions of anger. All boxplots show that high probabilities for anger expressions were outliers; therefore, only a few frames within the anger expressions were classified as likely showing anger based on the politicians' facial expressions. This is not necessarily unexpected in longer video clips, which also show frames leading up to an expression of anger. Furthermore, this finding might partially reflect the discourse in German politics at the time of the data collection, which has been at times described as tame and consensual (e.g., Tenscher 2013; Zimmermann 2014), and could be seen as less emotionally driven and more rational in a cross-cultural comparison.

Figure 14: *External Classification of Facial Expressions Within the Anger Conditions*
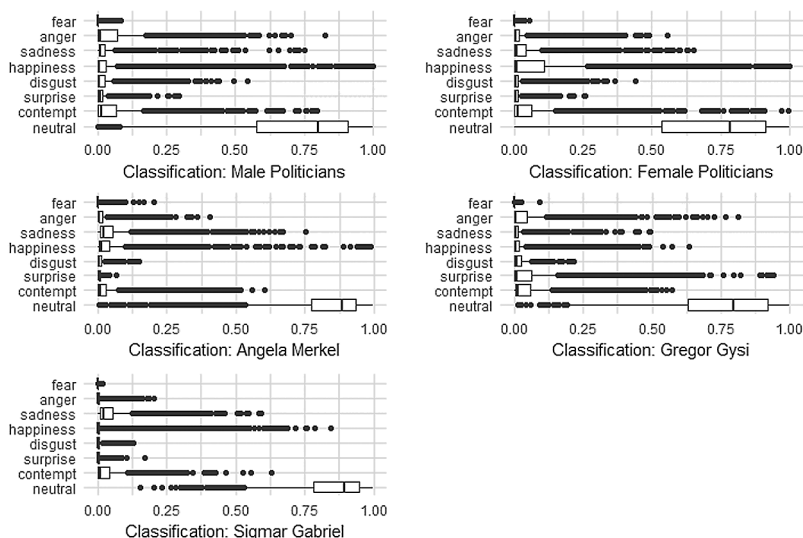
Note: Figure based on author's own illustration. Each boxplot displays the classifications of video frames as probabilities for emotion expressions ranging from 0 to 1. *Source*: Microsoft Cognitive Services API.

Nonetheless, the experimental anger conditions for male politicians and Gregor Gysi contained 22 and 26 frames, respectively, for which displays of anger were predicted with an above 50 percent probability. Only one frame within the experimental treatment condition for female politicians had a likelihood of displaying anger above 50 percent and no frames with

such a high probability were classified for Angela Merkel or Sigmar Gabriel. Then Finance Minister Wolfgang Schäuble (CDU), at 82.3 percent, displayed the highest classification for the experimental group showing male politicians. Within the group of female politicians, a frame showing Rebecca Harms (the Greens) had the highest prediction of showing anger at 55.6 percent. Judging from the maximum of predicted anger, the expressions of the three leading politicians differ: Gregor Gysi had the highest prediction at 81.1 percent, while Angela Merkel's maximum prediction for anger reached 40.6 percent, and anger was only predicted with a chance of 20.3 percent for Sigmar Gabriel's displays of anger. This could indicate differences in their emotional expressiveness, at least based on the selected video material (see Figure 15).

Figure 15: *Strongest Anger Expression Within the Experimental Groups of Male Politicians, Female Politicians, Angela Merkel, Gregor Gysi, and Sigmar Gabriel*

Note: The figure shows the frames with the highest anger expressions within the experimental treatment condition of male politicians (Wolfgang Schäuble), female politicians (Rebecca Harms), Angela Merkel, Gregor Gysi and Sigmar Gabriel (from top left to bottom right).

4.5.3 Political Issues and Anger Expressions

In order to investigate differences that might have occurred due to different verbal expressions of anger and related political issues or other politicians, the verbal content of the video clips has been transcribed. Since anger is an emotion that highly depends on its context (Hess 2014, Knutson 1996: 177–179), the topics mentioned within the video clips should be considered in order to assess varying effects. If anger is assessed as appropriate, for example in cases in which anger is directed towards injustices or less than ideal states of affairs, it has a positive connotation of change that is intended by the person who addresses the underlying issues. The negative side of anger emerges if individuals are attacked personally and uncivil behavior occurs. This kind of anger can be perceived as inappropriate. Based on the theoretical assumptions about the two sides of anger (Hess 2014), the content of the experimental treatment is investigated in more detail. This in-depth analysis of the experimental anger conditions can shed some light on the hypothesis H3 that the political messages of the treatment present a crucial contextual factor for the evaluation of politicians' anger expressions.

All video clips had a length of roughly 1.5 minutes. All video clips showing negative-active emotions shared a similar amount of words (see Table 20). After cleaning each corpus by deleting the most common words within a language, such as articles and pronouns, with a low informational value, the number of words ranged from 99 (for female politicians) to 116 (Gysi and Gabriel) per video clip.

Table 20: Number of Words Within the Negative-Active Treatment Conditions

Politicians	Number of Words Without Stop Words	Number of Words with Stop Words
Female Politicians	99	281
Male Politicians	109	291
Angela Merkel	100	270
Gregor Gysi	116	323
Sigmar Gabriel	116	340

Note: Frequencies are based on author's own calculations according to transcriptions of the video clips.

To gain some further insight into potential differences between the video clips, the topics within the negative-active treatment were coded according to categories implemented by Rattinger et al. (2015d) in the GLES media campaign study, as shown in Table 21. Before going into detail about the

topics mentioned in each video clip, it can be seen that the experimental groups that saw video clips of male and female politicians saw a higher number of shorter video sequences compared to the groups that saw political leaders. This difference is particularly visible for the groups of female and male politicians, which had twice as many video sequences as the group that featured Sigmar Gabriel and almost twice as many as the group featuring Angela Merkel. The number of sequences within a video clip for Gregor Gysi falls between those extremes with 13 sequences. In general, shorter sequences are likely to contribute less context, while longer-lasting sequences provide more context, which could be used for an appraisal of the scene.

Table 21: Number of Topics Mentioned Within the Negative-Active Treatments

Politician	Treatment	Topics	Number of Topics Mentioned
Gysi	Negative -Active		
		Election Campaign	1/13
		Social Policies	6/13
		Labor Market Policy	3/13
		Fiscal Policy	3/13
Merkel	Negative -Active		
		EU Politics	1/9
		Rule of Law	1/9
		Labor Market Policy	2/9
		Economic Policy	2/9
		Fiscal Policy (Euro Crisis)	2/9
		Election Campaign	1/9
Gabriel	Negative -Active		
		Fiscal Policy	2/8
		Labor Market Policy	1/8
		Economic Policy	1/8
		Social Policy	1/8
		Election Campaign (Party Politics)	3/8

Politician	Treatment	Topics	Number of Topics Mentioned
Male Politicians	Negative -Active		
		Economic Policy	2/17
		Infrastructure	2/17
		Not Identifiable	3/17
		Fiscal Policy	2/17
		Election Campaign (Party Politics)	6/17
		Social Policy	1/17
		International Conflicts	1/17
Female Politicians	Negative -Active		
		Fiscal Policy	5/18
		Social Policy	2/18
		Defense Policy	2/18
		Election Campaign (Party Politics)	2/18
		Environmental Policy	1/18
		Social Policy	3/18
		EU Policy	1/18
		Infrastructure	2/18

Note: The last column indicates the number of video sequences that mentioned a topic within the video clips. One topic is coded per video sequence. The codings are based on transcriptions of the video clips.

In addition to the topics within the anger condition, the most frequent words with a frequency larger than two are displayed in the next section (see Figure 16). Overall, the politicians only mention a few words more than once;[60] nonetheless, differences occurred between the politicians. Most noticeably, Gregor Gysi's focus on social policies becomes apparent even from a few words, which focused on education and ensuring an equal education across the sixteen German federal states. Furthermore, his anger was directed towards unequal tax burdens across the social strata by pointing out a perceived societal mismatch between "rich managers who earned billions" and the working class,[61] while a minimum wage had not been

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60 This refers to the root of a word, since the word clouds were produced after stemming and then completed for the word clouds to the most frequent realization of the stemmed word.

61 "Aber es is bei uns doch völlig maßlos geworden. Der braucht keine Milliarde, das ist doch albern. Aber andere wissen nicht, wovon sie sich die nächste Speise kaufen sollen. Das geht einfach nicht."

172

implemented in Germany at the time of the data collection.[62] He also added that he could not understand why the current tax system favored him as a member of parliament and other civil servants in regard to retirement payments for social security compared to ordinary employees. That was something he disagreed with and could not explain to "any cashier at Lidl".[63] Therefore, his anger was even directed at a policy that was not disadvantageous to him personally.

In a stark contrast, social policies were less frequently mentioned by Sigmar Gabriel. Although he mentioned issues such as the potential loss of workplaces and a proposition to increase the highest taxation rate, the most frequent words signal personal attacks – even when talking about these political issues.[64] In one video sequence, he said to Ursula von der Leyen, CDU, "to be less over-excited" and questioned whether she had behaved that way because she "smoked something" prior to the show.[65] Furthermore, he asked in several clips to be listened to without interruptions, while he described himself as "well-behaved" and someone who listened to others. The frequent use of words such as "Mrs" and "folks" further underlines that he addressed other politicians often directly.[66] Furthermore, he attacked other politicians with colloquialisms, in order to imply that they were too afraid to implement certain policies, or were not telling the truth.[67]

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62 "Also stimmt an vielen Gesetzen bei uns was nicht. Wir haben keine Steuergerechtigkeit. Wir haben keinen flächendeckenden gesetzlichen Mindestlohn. Was soll denn 'ne Frisörin in Thüringen mit 3,50 € Brutto anfangen."

63 "Ich kann das keiner Lidl-Kassiererin erklären, warum Sie die Mütterrente bezahlt und ich nicht. Es tut mir leid, ich finde diesen Ansatz falsch."

64 "Sondern lass uns das verbinden mit der Erhöhung des Spitzensteuersatzes, und davor hatten Sie Schiss."

65 "Das heißt junge Leute nach guter Ausbildung und Studium finden zur Hälfte neue Arbeitsplätze vor, die befristet oder Leiharbeit sind; Ich sage Ihnen, Sie können das Kindergeld vervierfachen. Hören Sie doch einfach mal zu; Sie scheinen immer, sind aufgedreht, sind aufgedreht, als hätten Sie vorher etwas geraucht. Ich glaube, das ist nicht so; Nein, das ist doch gar nicht so schwer. Ich höre Ihnen doch auch die ganze Zeit zu. Lassen Sie mich doch wenigstens einmal den Satz ausreden; Das kann doch nicht so schwer sein. Selbst für jemanden wie Sie kann das doch mal drin sein."

66 "Ich halte es nicht… ; Ich halte es nicht… [unverständlich/ incomprehensible], Frau Klöckner. Ich bin einfach dafür, dass wir uns gegenseitig zuhören und uns dann sagen, warum der andere Unrecht hat. Ich finde es… ."

67 "Ich bin nicht sauer darüber, was bei den Grünen passiert, sondern dass Frau von der Leyen hier so, sagen wir mal, relativ unverfroren die Unwahrheit sagt."

173

Angela Merkel's anger expressions focused more strongly on the polity dimension of political life with a focus on the law, and shared European values.[68] Nonetheless, she also mentioned the importance of caring and benefiting companies and creating jobs while "others just talk".[69, 70] Because she made some of her appearances at party conventions, she addressed her fellow party members as "dear friends"[71] and mentioned the "Christian Democratic Union" by its full name to emphasize the values and ideological position of the party.[69]

Figure 16: Word Clouds Based on the Experimental Treatments

Note: Author's own illustration. The word clouds are based on word stems with a frequency of at least two occurrences within the treatment conditions.

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68 „Aber ich sage auch, das Recht des Stärkeren kann nicht über das Recht stehen und deshalb müssen wir uns auch für das Recht einsetzen, sonst sind alle unsere Sonntagsreden leere Worthülsen."

69 "Wir Mitglieder der Europäischen Volkspartei und der Christlich Demokratischen Union werden [bei] einer Arbeitsteilung nicht mitmachen. Die einen kümmern sich darum, dass Arbeitsplätze entstehen in Unternehmen und die anderen kümmern sich ums Verteilen."

70 "Nein, wir wissen doch aus Deutschland, dass die soziale Marktwirtschaft uns stark gemacht hat. Erst muss etwas erarbeitet werden und deswegen müssen wir gute Bedingungen für die kleinen und großen Unternehmen auf unserem Kontinent haben."

71 "Und ich möchte zu den Fehlern der Vergangenheit nicht zurückkehren. Das hat mein Vorgänger gemacht und was daraus geworden ist, haben wir gesehen mit der Euro-Krise. Das darf sich nicht wiederholen, liebe Freunde."

5 The Impact of Anger Expressions on Leadership Evaluations

The analysis of the experimental data is divided into three subchapters and followed by a discussion of the experimental findings. The first subchapter deals with the average treatment effects that occurred after participants received the experimental treatment. The second subchapter looks at moderating effects that shaped how respondents reacted to the video clips. Characteristics on the individual level such as party identification and personality traits are considered in this subchapter. Lastly, the third subchapter considers the relevance of the findings in light of some broader considerations, such as the longevity of the average treatment effects, potential spillover effects, and the response time of participants. By analyzing the response time as an indication of underlying mechanisms further insights into the occurrence of treatment effects can be discerned. Spillover effects in regard to the evaluation of the respective political parties are investigated in order to determine the broader relevance of anger expressions. Experimental studies often focus solely on immediate short-term effects. To counteract this shortcoming, the third subchapter focuses on the longevity of the treatment effects by analyzing evaluations of political candidates in the third wave of the panel design. The following subchapter deals with the average treatment effects and begins with a brief introduction into the statistical analysis that is chosen to analyze the experimental data, after which the analyses of the results are presented.

5.1 The Average Treatment Effects

Several strategies to analyze experimental data are discussed within the literature on experimental design. Since the 1960s and Lord's paradox (Lord 1967), statisticians have debated over the correct approach to experimental data. Lord's paradox revolves around the question whether to analyze experimental data based on a gain score analysis in a simple regression framework or as a multiple regression with the post-test measures as dependent variable, the treatment as independent variable, and the initial score of the dependent variable as covariate. A gain score analysis focuses on the occurring change between conditions by subtracting the initial pre-test score from the final post-test score after the treatment was administered.

175

Both variations can lead to varying conclusions about the statistical association. It has been pointed out that both approaches are suitable to answer slightly different research questions. In the context of experimental data, the choice between a gain score analysis and an analysis with covariates depends on the underlying research question. According to Hand (1994) and Wright (2006), both approaches answer different questions. The gain score analysis answers the question, "whether the average gain in score is different for the two groups" (Wright 2006: 666); the analysis of covariance shifts the focus from differences between the experimental groups to individuals with the same baseline values, by asking the question, "whether the average gain, partialling out pre-scores, is different between the two groups" (Wright 2006: 666). Focusing on the research question of this study, it seems most appropriate to start with a gain score analysis without any covariates to focus on changes that occurred between the experimental groups.

Imbens and Rubin (2015) explain the suitability of regression methods for analyzing completely randomized experiments (Imbens & Rubin 2015: 113–140). It can be implemented to estimate the (local) average treatment effect and they can easily be extended to include control and moderating variables. In this subchapter, the experimental results are presented without any covariates as a first step; in the following analysis of moderating effects, the previously discussed control variables will be used in addition to the moderating factors of interest.

Differences between several experimental and control groups can be determined by fitting either a regression model or an analysis of variance. In order to analyze experimental data, research in psychology commonly uses an analysis of variance, while regression models are traditionally more frequently applied in economics. The distinction and separation between both approaches is the result of varying research traditions within the fields of economics and psychology. Previously, researchers have stressed the differences between both approaches instead of emphasizing their great similarities. The analysis of variance can even be interpreted as a special case of a regression analysis (Field 2009: 349).[72]

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72 In a simple regression model, which only includes the treatment variable as independent variable, the F-test is identical to the F-test of a one-way ANOVA. If the experimental groups differ in their means, the F-test is statistically significant and accounting for the means of each experimental group leads to a better overall fit to the dependent variable rather than taking the overall mean. The one-way ANOVA usually requires an additional investigation of the group means or further post hoc tests for comparing the significant differences. The regression analy-

Like post hoc tests after significant ANOVA tests, regression models can be adjusted to control for multiple testing. A Bonferroni adjustment can be incorporated into the framework of a regression analysis. Considering the experimental design that involves groups of male and female politicians, coefficients of four contrasts or dummy variables are estimated. Consequently, a Bonferroni adjustment for four simultaneous comparisons due to the four dummy variables results in an alpha level that should be four times smaller than the initial 5 percent threshold. Therefore, the adjusted threshold to determine significance for any of the four comparisons should be $p < 0.0125$ ($0.05/4 = 0.0125$). If the significance is estimated based on the Bonferroni adjustment, the statistical significance for each dummy-variable should fall below this adjusted threshold of $p < 0.0125$, which equals a type I or alpha error rate of 1.25 percent for each comparison against the reference category. By doing so, the initial significance level of 5 percent remains as threshold for the analysis, i.e., a treatment effect of the experimental video clips. Likewise, the Bonferroni adjustment for three comparisons – used in models that focus on Merkel and Gysi – results in an adjusted threshold of $p < 0.0167$ ($0.05/3 = 0.0167$) for each comparison, and the models which analyze Merkel and Gabriel should have a Bonferroni adjustment of $p < 0.025$ ($0.05/2 = 0.025$). In multiple comparisons, the Bonferroni adjustment is a common procedure to adjust for multiple testing and is known as a family-wise error rate.[73] In this analysis the alpha level is adjusted accordingly.[74]

Dummy codings are a widespread convention for treating categorical variables in regression models across the social sciences and therefore, make the results easily interpretable compared to the use of user-specified contrasts. Using the experimental treatment that showed negative-active emotions as a reference category and therefore as a constant (intercept) in the

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sis typically provides the estimated coefficients and a dummy coding is used as default for investigating experimental treatments, whereby one variable is set as a baseline category to which the other variables are compared. However, different contrasts such as Helmert contrasts or user-defined contrasts can be also conducted within a regression model. In addition, the reference category can also be changed to facilitate the interpretation of the model and allow for multiple comparisons.

73 As the critical t-values for the corrected p-values depend on the degrees of freedom, the t-values are adjusted to the respective sample sizes of the experimental subtypes 1,2, and 3.

74 Alternatively, the observed p-values could have been multiplied by the number of comparisons while adhering to the 5-percent level.

regression models illustrates the results, since all four comparisons of interest are conducted simultaneously. Although it might be less conventional to use the variable of interest as a reference category, this approach offers an additional advantage. By using the experimental treatment of anger expressions as a reference category, not only is the coefficient easily interpretable as the estimated mean for the negative-active experimental group, but from gauging its significance it can be easily seen whether an overall change between pre- and post-test measures occurred within the anger conditions.[75] If the constant is not significant, this can be interpreted as an indication that no substantial change occurred within the group itself. The overall F-test of the regression models shows whether the group means differ from the overall mean – or to put it differently, whether the experimental treatment groups improve the prediction of individual scores, compared to the overall mean as a predictor for each single score (Field 2009: 201–204).

The following section focuses on the average treatment effect of negative-active emotions. Dependent variables such as overall evaluations, candidate orientation, and semantic differentials are analyzed separately for each sub-experiment and politician. The variables under consideration are largely suited for the analysis. The gain scores of these Likert-scale variables as dependent variables approximately follow a normal distribution. Since the experimental treatments are the main independent variables, and only a few moderating and control variables are considered at a later stage, multicollinearity among the independent variables is not a major concern of this analysis. The observations are statistically independent of each other. The underlying assumptions of regression analyses are largely met for the following analysis.[76] It begins with the overall opinion of each politician and politicians in general; more specific items of candidate orientations follow, and it continues by focusing on the evaluations according to semantic differentials. The last section of Subchapter 5.1 summarizes and discusses the average treatment effects.[77]

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75 In the following, the experimental treatment groups (conditions) in which participants were exposed to politicians' anger expressions are referred to as anger conditions (for comparison see Valentino et al. 2008; Ryan 2012), or negative-active conditions.

76 This includes the statistical independence of the observations as well as the homoscedasticity and approximated normal distribution of the residuals.

77 All statistical models were fitted using the statistical software R Version 3.4.1 (R Core Team 2017). In addition, the following R packages were used: "ggthemes" (Arnold et al. 2017), "gridExtra" (Auguie & Antonov 2017), "questionr" (Barnier

5.1.1 The Evaluation of Overall Favorability Ratings

Table 22 shows the changes in the evaluation of overall opinions for those participants who saw several male or female politicians in sub-experiment *Type 1* (Models 1 and 2), Angela Merkel and Gregor Gysi in sub-experiment *Type 2* (Models 3 and 4), as well as those participants who saw video clips of Angela Merkel and Sigmar Gabriel in sub-experiment *Type 3* (Models 5 and 6).

Evaluations in Sub-Experiment Type 1 (Politicians in General)

Starting with the two models that focused on the evaluation of politicians in general (Models 1 and 2), the overall F-test of both models indicate significant differences between the experimental groups. Focusing on the experimental groups in which male politicians were seen in the experimental treatment, it can be seen that the constant – and therefore negative-active emotions – have no significant effect on the evaluation of overall opinions about politicians. The significant effects have occurred because participants in other experimental groups rate politicians as more favorably in the post-test condition. This significant change also occurs in the control group without video treatment, which is contrary to the initial assumptions of the experimental design. However, in this light, the absence of improved ratings only within the negative-active treatment group could imply that negative-active emotions might not necessarily lead to lower ratings on an individual level, but they could have prevented an increase in overall favorability. The adjusted R^2 of this model indicates that only 0.4

2017), "GPArotation" (Bernaards & Jennrich 2015), "pwr" (Champely et al. 2017), "igraph" (Csardi 2017), "xlsx" (Dragulescu 2015), "qgraph" (Epskamp et al. 2017), "tm" (Feinerer et al. 2017), "wordcloud" (Fellows 2013), "car" (Fox et al. 2017a), "effects" (Fox et al. 2017b), "Hmisc" (Harrell 2017), "stargazer" (Hlavac 2015), "quantreg" (Koenker et al. 2017), "statnet.common" (Krivitsky et al. 2017), "gtrendsR" (Massicotte & Eddelbuettel 2017), "vegan" (Oksanen et al. 2017), "psych" (Revelle 2017), "XML" (Temple Lang & CRAN-Team 2017), "IsingFit" (van Borkulo et al. 2016); "NetworkComparisonTest" (van Borkulo 2016), "corrplot" (Wei 2016), "reshape2" (Wickham 2017), "ggplot2" (Wickham et al. 2016), "haven" (Wickham et al. 2017a), "dplyr" (Wickham et al. 2017b), "httr" (Wickham & RStudio 2017a), "stringr" (Wickham & RStudio 2017b), "devtools" (Wickham et al. 2017c).

percent of the variance within the dependent variable can be explained by the experimental treatment. Therefore, the effect size of the experimental treatment is very small. Furthermore, it has to be noted that the difference for the effect of negative-active emotions compared to the neutral control group and the positive experimental group is only significant at the 5-percent level.

The next model analyzes the impact displays of negative-active emotions shown by female politicians have on the overall ratings of politicians (Model 2). The effect of negative-active emotional displays is statistically significant only at a 5-percent level in comparison to the group without video treatment as well as in comparison to the group that received negative-passive emotional expressions of female politicians. As before, compared to the negative-active treatment, the overall rating of politicians increased slightly in the no video condition and negative-passive experimental group. No significant difference occurs between the groups that showed angry and neutral expressions of female politicians, while a significant difference at a 0.1-percent level occurred when comparing the effect of expressions of anger to a positive video treatment. In this case, participants in the anger condition did not judge politicians less favorably over time per se, as no significant change occurred within the experimental group. Only in comparison to positive emotions are they rated 0.5 points lower on average. According to the adjusted R^2 of this model, only 0.7 percent of variance within the dependent variable can be explained by the model – slightly higher than the previous model but still very low.

Evaluations in Sub-Experiment *Type 2* (Merkel and Gysi)

The next two models are based on the sub-experiment *Type 2*, in which participants were exposed to Angela Merkel and Gregor Gysi (Models 3 and 4). Only once participants saw both videos did they evaluate Angela Merkel and Gregor Gysi. The model which measures changes in Angela Merkel's overall assessment can explain 1.4 percent of variance within the dependent variable. In this model, two comparisons are significant at the 1-percent level. Participants evaluated Angela Merkel on average -0.35 points lower, if they received her negative-active emotional displays as the experimental treatment. Compared to the control group without video treatment, participants evaluated her on average 0.33 points lower than before they received the video treatment. In addition, participants who were exposed to the anger condition also rated her on average 0.48 points lower

than participants who were exposed to her positive expressions. There is, however, no significant difference between the effects, which her anger and neutral emotional expressions have on participants' overall evaluations of her. Both conditions led to lower ratings in this sub-experiment.

Looking at the evaluation of Gregor Gysi, participants' overall opinions of him changed more drastically. In this model, almost 5 percent of variance can be explained within the dependent variable of Gregor Gysi's overall ratings (adj. R^2 = 0.049). While this model still does not explain much of the variance, it is a noticeable increase compared to the previous models which ranged from less than half a percent to slightly more than the one percent of the explained variance. This increase in the effect size is also reflected in larger coefficients within this model. All comparisons are highly significant at the 0.1-percent level. The strongest effect occurs when comparing changes in Gregor Gysi's overall ratings between the control group without video treatment and anger. Compared to participants who saw no video, participants in the anger condition evaluated Gysi on average 1.16 points more favorably. This positive effect of Gysi's displays of anger is also significantly different from those groups that were exposed to other emotional expressions. Although the effects are cut in half, participants in the anger condition still rated Gysi more favorably after having been exposed to anger compared to neutral expressions, by 0.57 points on average; and even by 0.68 points on average in comparison to those who were exposed to Gysi's positive emotional expressions. While this analysis indicates that participants formed a more positive impression of Gregor Gysi, once they were exposed to him in either video treatment, displays of anger differed significantly from effects of his other appearances and resulted in the highest positive changes of his overall evaluation. This finding contradicts the occurrence of a mere exposure effect due to the visual exposure. Instead it supports the importance of emotional communication because his anger expressions make an additional difference in his overall evaluation.

Evaluations in Sub-Experiment *Type 3* (Gabriel and Merkel)

Sigmar Gabriel's displays of anger led to a decrease of his overall impression ratings, both comparisons are significant at the 5-percent level and also significant according to the Bonferroni adjusted significance level of 2.5 percent, since both t-values exceed the critical t-value of 2.24 (-0.309/0.134 = 2.31 and -0.331/0.137 = 2.42). On average, participants in the anger condition evaluated Sigmar Gabriel -0.31 points lower than

those who received no video; compared to participants who saw Sigmar Gabriel's neutral emotions, it was on average -0.33 points lower. No significant change occurred within the experimental group that saw his negative-active emotional displays (see Table 22). The adjusted R^2 indicates that a variance of only one half a percent (adj. $R^2 = 0.005$) within the dependent variable can be explained by the experimental treatment (Model 5).

An additional model measured Merkel's overall assessment when participants were exposed to her and Sigmar Gabriel instead of Gregor Gysi (Model 6). Although the sub-experiment *Type 2* found significant differences for the overall ratings of Merkel when comparing participants who saw anger with those who received either no video or positive emotions in a video treatment, the findings could not be replicated when participants were also exposed to Sigmar Gabriel. In this instance, the overall F-test is not significant and significant differences cannot be obtained between the experimental treatments. When participants were also exposed to Sigmar Gabriel, Angela Merkel's expressions of anger did not have a negative impact on her evaluation, as they had when Gysi was seen (Model 3). This is an indication of a contrast effect that might have occurred within both sub-experiments (see the middle and bottom row in Figure 17).

Table 22: Changes in the Overall Evaluation of Politicians

	Male Politicians (1)	Female Politicians (2)	Merkel (E2) (3)	Gysi (E2) (4)	Gabriel (E3) (5)	Merkel (E3) (6)
	Dependent Variable: Scalometer					
Negative-Passive	0.389** (0.131)	0.262* (0.128)				
Neutral	0.308* (0.131)	0.162 (0.130)	0.125 (0.110)	-0.567*** (0.139)	0.331b (0.137)	-0.179 (0.110)
No Video	0.334** (0.129)	0.260* (0.127)	0.331** (0.107)	-1.161*** (0.136)	0.309b (0.134)	0.017 (0.108)
Positive	0.302* (0.132)	0.508*** (0.129)	0.484*** (0.111)	-0.682*** (0.140)		
Constant	-0.020 (0.093)	0.054 (0.093)	-0.347*** (0.078)	1.182*** (0.098)	-0.113 (0.097)	-0.033 (0.078)
Observations	1,764	1,768	1,374	1,374	1,052	1,051
Adjusted R^2	0.004	0.007	0.014	0.049	0.005	0.002
F Statistic	2.726*	4.131**	7.580***	24.696***	3.692*	2.018

Note: [*]$p < 0.05$; [b]$p <$ Bonferroni adjusted; [**]$p < 0.01$; [***]$p < 0.001$. The reference category is the negative-active condition. Cells display OLS-estimates and standard errors in parentheses.

Figure 17: Changes in the Overall Evaluations of Politicians
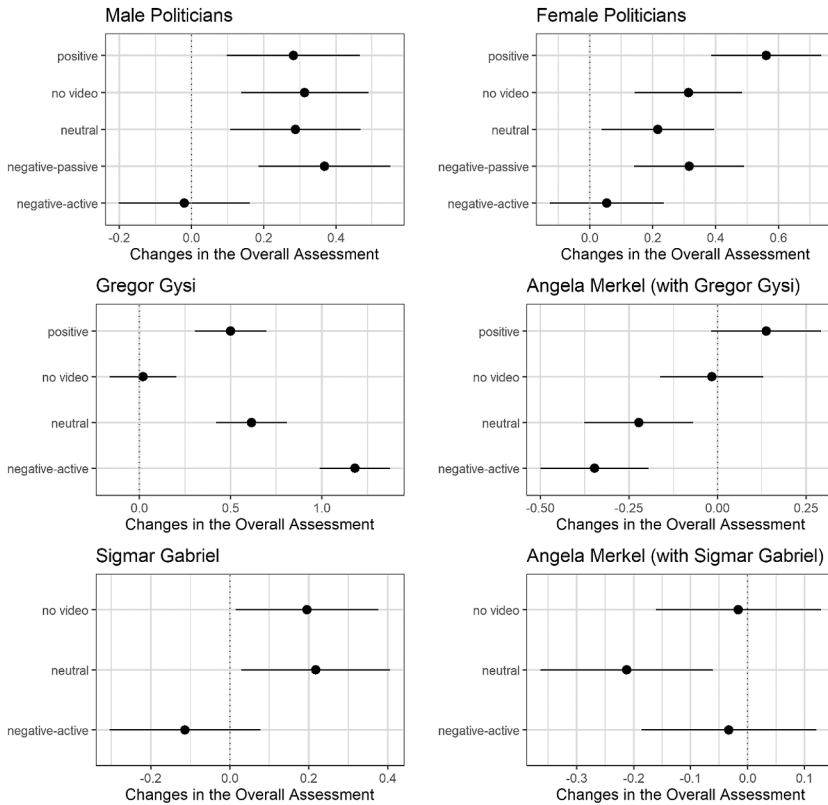
Note: Figure displays coefficient plots with 95-percent confidence intervals.

To sum up, the effects on the scalometer ratings were very small or negligible for male and female politicians as well as for Sigmar Gabriel – and partially also for Angela Merkel. However, the impact of Gregor Gysi's anger expressions differed in two regards: they induced positive evaluations and had a stronger impact on the overall evaluation. In addition, the exposure to Gregor Gysi potentially affected Angela Merkel's ratings. Participants rated her on average more negatively after they had seen negative emotional displays by her and Gregor Gysi, whereas a third experiment in which participants were exposed to Angela Merkel and Sigmar Gabriel failed to replicate these negative effects on Merkel's evaluations. Therefore, it seems that the evaluation of politicians depends on the context of other politicians and their emotional expressions. Politicians might have been evaluat-

ed in relation to other politicians and a *contrast effect* could have occurred (Kuklinski et al. 1997: 328). This finding could also indicate the use of an anchor or sequential heuristic (Tversky & Kahneman 1974: 1128), if the evaluation was dependent on the sequence in which the participants saw the videos. Hence, the sequential order will be considered later as a moderating factor.

5.1.2 The Evaluation of Warmth

Next, the dimension of warmth is considered as the dependent variable. According to theoretical assumptions, two items – likeability ratings and evaluations of trustworthiness – can be considered as representing the dimension of warmth. While an overall rating is often considered as a summary score and most closely connected to the dimension of warmth (Laustsen & Bor 2017), both indicators give a more precise measure of two more distinct aspects. The following section considers effects of anger that appear when likeability ratings are chosen as the dependent variable (see Table 23 and Figure 18).

5.1.2.1 The Evaluation of Likeability Ratings

Treatment: Sub-Experiment Type 1 (Politicians in General)

When considering the impact anger expressions of male politicians have on the likeability ratings of politicians in general, the overall F-test of the model reveals that no significant effects between the experimental groups can be determined (Model 1). Hence, politicians' likeability ratings in general were not affected by negative emotional expressions – or by any emotional displays from male politicians (see Figure 18 for illustration).

When participants saw female politicians in the experimental condition, anger again did not lead to a significant change in the evaluation (neither positive nor negative). However, one individual predictor indicates that negative-active displays differ significantly at a 5-percent level from positive emotional expression of female politicians, which led to higher likeability ratings.

Treatment: Sub-Experiment Type 2 (Gysi and Merkel)

When analyzing likeability ratings, only the models for Angela Merkel and Gregor Gysi show significant results. Angela Merkel's negative-active emotional displays resulted in lower likeability ratings when compared with the impact of her positive expressions and the no video condition. Her angry and neutral emotional expressions did not differ significantly. Her negative emotional displays decreased her likeability ratings on average by 0.17 points, while no substantial change occurred for the control group without video treatment (-0.01 = -0.168 + 0.162) and a slight positive change in likeability ratings can be observed, for the experimental group which received positive emotional stimuli (0.16 = -0.168 + 0.327). The adjusted R^2 indicates that in the case of Angela Merkel only 1.9 percent of variance can be explained; for Gysi, the amount of explained variance is twice as much – but still only a mere 3.8 percent."

Comparing these effects to the impact of Gregor Gysi's displays of anger, a different pattern emerged. The mean of the experimental groups which saw his displays of anger and were not exposed to any emotional expressions show a highly significant difference of their mean likeability ratings at a 1-percent level. His displays of anger result on average in an increase of 0.4 points in his likeability ratings; the group without video treatment showed no substantial change between the evaluation of Gysi's likeability between the first and second panel wave (-0.08 = 0.400 - 0.478). Furthermore, Gysi's displays of anger differ only at a 5-percent level from his neutral expressions (failing to meet the Bonferroni adjusted p-value), whereby his negative-active emotions led to more favorable ratings compared to his neutral emotions. His anger expressions did not differ significantly from his positive emotional expressions, which also have a positive impact on his ratings. Overall, this pattern could indicate an overall exposure effect, whereby Gregor Gysi's likeability seems to be rated more favorably regardless of the emotions he expresses. His negative-active emotional displays were significantly more beneficial than his neutral expressions for his likeability ratings at the 5-percent level, however, this difference falls slightly short of the Bonferroni adjusted significance level.

Treatment: Sub-Experiment Type 3 (Gabriel and Merkel)

Regarding the sub-experiment that showed video clips of Sigmar Gabriel and Angela Merkel, no significant differences occurred between the experi-

mental groups, when participants were asked to evaluate Sigmar Gabriel's and Angela Merkel's likeability. Once again, this finding could indicate that Angela Merkel's likeability was at least partially affected by the second video that respondents saw, leading to significant effects of her anger expressions in one instance, while they did not occur in another setting.

Table 23: Changes in the Evaluation of Likeability

	Dependent Variable: Likeability					
	Male Politicians (1)	Female Politicians (2)	Merkel (E2) (3)	Gysi (E2) (4)	Gabriel (E3) (5)	Merkel (E3) (6)
Negative-Passive	0.072 (0.058)	-0.031 (0.057)				
Neutral	-0.034 (0.057)	0.025 (0.058)	0.114 (0.061)	-0.157* (0.068)	0.115 (0.070)	-0.096 (0.060)
No video	0.093 (0.057)	0.022 (0.057)	0.162** (0.059)	-0.478*** (0.067)	0.023 (0.069)	-0.014 (0.059)
Positive	0.067 (0.058)	0.128* (0.057)	0.327*** (0.061)	-0.122 (0.069)		
Constant	-0.023 (0.041)	0.048 (0.041)	-0.168*** (0.043)	0.400*** (0.048)	-0.071 (0.050)	0.009 (0.043)
Observations	1,764	1,766	1,373	1,372	1,051	1,053
Adjusted R^2	0.002	0.003	0.019	0.038	0.001	0.001
F Statistic	1.780	2.290	9.851***	19.027***	1.535	1.526

Note: *p < 0.05; ^{b}p < Bonferroni adjusted; **p < 0.01; ***p < 0.001. The reference category is the negative-active condition. Cells display OLS-estimates and standard errors in parentheses.

Figure 18: Changes in the Evaluation of Likeability
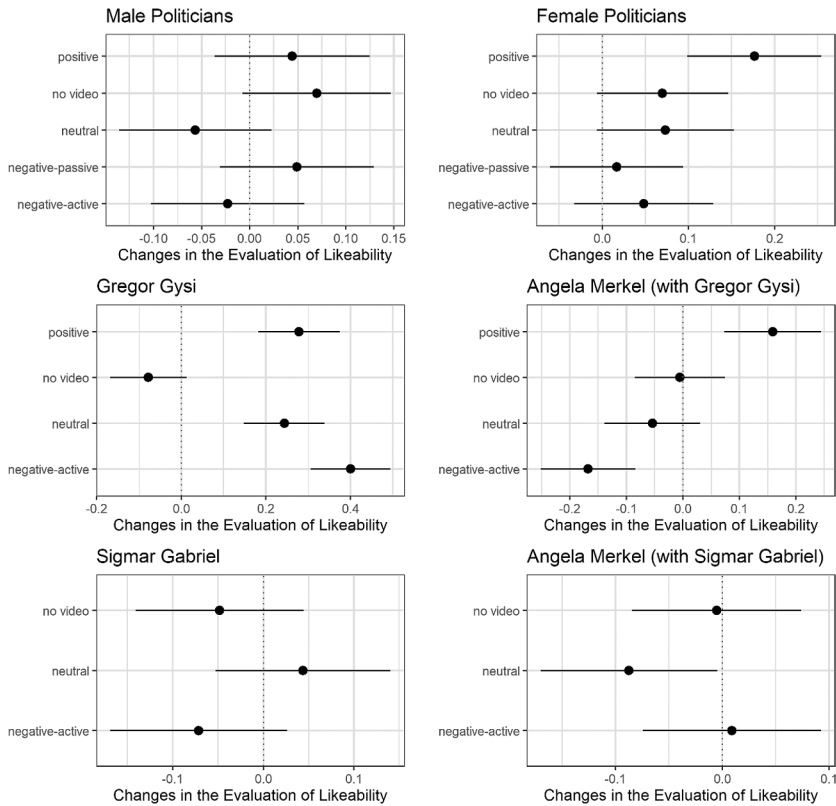
Note: Figure displays coefficient plots with 95-percent confidence intervals.

5.1.2.2 The Evaluation of Trustworthiness

While trustworthiness is considered to belong to the dimension of warmth by some scholars (e.g., Fiske et al. 2002; Cuddy et al. 2008), others argue that trustworthiness represents a unique quality of integrity (e.g., Ohr & Oscarsson 2011). Compared to the previously analyzed likeability ratings, the evaluation of trustworthiness follows a similar pattern. Only the regression models for the sub-experiment that showed Angela Merkel and Gregor Gysi are statistically significant (Models 3 and 4 in Table 24; Figure 19). According to the adjusted R^2-values, the amount of variance in their trustworthiness ratings that can be explained by the experimental condi-

187

tions is very small. In the case of Angela Merkel, only 0.5 percent of variability can be attributed to the experimental treatment, while in Gregor Gysi's case, 3.6 percent of variability in the dependent variable (changes in the evaluation of trustworthiness) can be accounted for by the experimental treatment.

When analyzing Angela Merkel's trustworthiness, displays of negative-active emotions led on average to lower ratings of trustworthiness by 0.130 points. In comparison to the control group which received no video treatment, this difference is highly significant at a 1-percent level, while the mean for the control group is 0.03 (0.03 = -0.126 + 0.156). Compared to the positive treatment condition in which no change occurred, the difference is significant at a 5-percent level. Compared to neutral emotional expressions, no significant difference can be observed.

Regarding the evaluation of Gregor Gysi's trustworthiness (Model 4), it can be seen that Gysi's anger expressions had a positive impact and resulted in an average increase of his trustworthiness ratings by 0.4 points. The mean of the negative-active experimental condition differed significantly from any other treatment and control group at a 0.1 percent level. Anger had the strongest positive effect on Gysi's trustworthiness ratings compared to all other emotional expressions. While it is possible that an exposure effect occurred, the anger condition differed significantly from the neutral control group that has a mean of 0.16 (0.16 = 0.400 - 0.237), which is 0.24 points lower than the mean for the experimental group that was exposed not only to Gregor Gysi's appearance but to his negative-active emotional displays as well. Likewise, participants who saw his anger rated him on average 0.28 points more trustworthy than those participants who saw his positive emotional expressions. Participants within the positive treatment condition evaluated him on average only 0.12 points more trustworthy when receiving the positive experimental treatment.

Table 24: Changes in the Evaluation of Trustworthiness

	Male Politicians (1)	Female Politicians (2)	Merkel (E2) (3)	Gysi (E2) (4)	Gabriel (E3) (5)	Merkel (E3) (6)
	Dependent Variable: Trustworthiness					
Negative-Passive	0.055 (0.056)	-0.051 (0.056)				
Neutral	0.068 (0.056)	0.022 (0.057)	0.075 (0.054)	-0.237*** (0.059)	0.117 (0.063)	-0.055 (0.055)
No Video	0.137* (0.055)	0.083 (0.056)	0.156** (0.053)	-0.413*** (0.057)	0.050 (0.062)	0.056 (0.054)
Positive	0.050 (0.057)	0.041 (0.056)	0.126* (0.054)	-0.281*** (0.059)		
Constant	-0.003 (0.040)	0.051 (0.040)	-0.126*** (0.038)	0.400*** (0.041)	-0.048 (0.045)	-0.027 (0.039)
Observations	1,762	1,764	1,374	1,372	1,052	1,053
Adjusted R^2	0.001	0.002	0.005	0.036	0.001	0.002
F Statistic	1.599	1.665	3.307*	17.848***	1.748	2.145

Note: *$p < 0.05$; [b]$p <$ Bonferroni adjusted; **$p < 0.01$; ***$p < 0.001$. The reference category is the negative-active condition. Cells display OLS-estimates and standard errors in parentheses.

Figure 19:   Changes in the Evaluation of Trustworthiness
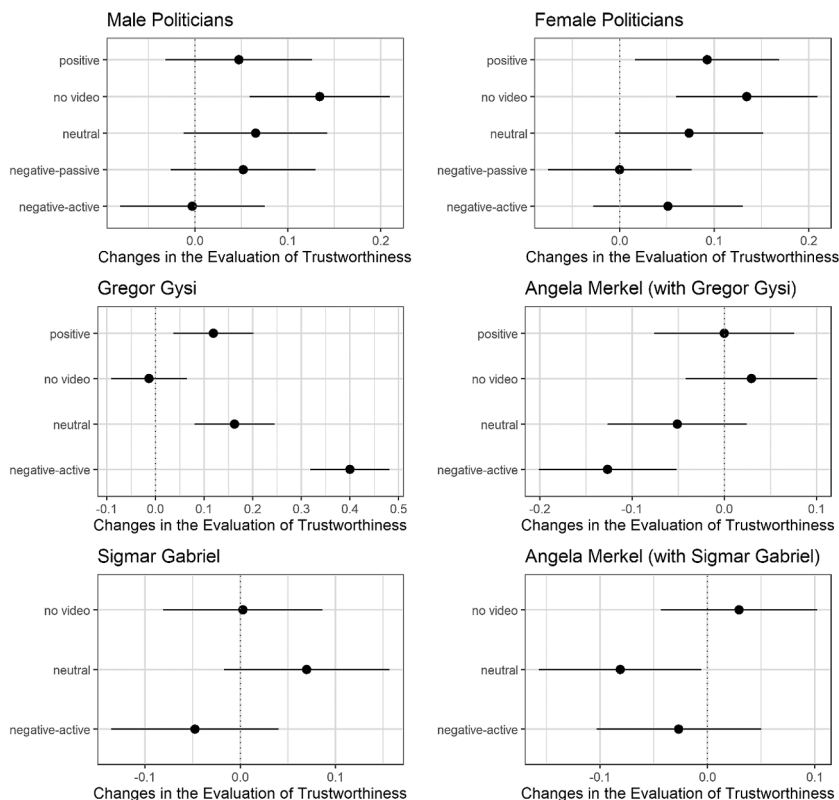
Note: Figure displays coefficient plots with 95-percent confidence intervals.

5.1.3 The Evaluation of Competence

The dimension of competence includes individual traits that are related to the concepts of performance and capability of fulfilling the requirements of a political office – problem-solving and leadership skills. A politician's capability to solve political problems could take several forms and shapes, as problems could be solved by different paths and negotiating styles. Hence, it is worthwhile to distinguish between problem-solving and leadership skills. Leadership skills more strongly require a dominant behavior than problem-solving skills. The reliability of both items as a measure of competence is merely adequate (see Table 16). Measuring the underlying

190

structure with correlation and factor analysis as well as network models showed that leadership skills were less strongly correlated with items belonging to the warmth dimension than were problem-solving skills (see Subchapter 4.4.1).

5.1.3.1 Problem-Solving Skills

Similarly to the evaluation of politicians' warmth, negative-active emotional displays have only significant effects on the evaluation of problem solving-skills for the sub-experiment *Type 2*, in which participants saw videos of Angela Merkel and Gregor Gysi. However, the overall F-test is only significant for the evaluation of Gregor Gysi (see Table 25).

The overall model for Angela Merkel is not significant at a 5-percent level in the sub-experiment *Type 2*, only at a 10-percent level ($F(3, 1370) = 2.44$, $p = 0.063$), indicating that the means between the experimental groups hardly differ from each other. Keeping this limitation in mind, participants who received Angela Merkel's negative-active emotional expressions rated her problem-solving skills on average 0.11 points lower after having seen the video treatment. This effect is significant at a 1-percent level, and compared to those participants who received no video treatment significant at a 5-percent level – failing, however, to meet the Bonferroni adjusted p-value. No other significant differences could be obtained for Angela Merkel's problem-solving skills, highlighting the overall absence of differences between the groups. Therefore, the adjusted R^2 of this model is very small, with a mere 0.3 percent of explained variance in the dependent variable. The potential negative effect of anger expressions by Angela Merkel cannot be replicated when participants were also exposed to Sigmar Gabriel.

For Gregor Gysi the effect is still very small but slightly stronger and significant. In Model 4, at least 1.3 percent of variance in the dependent variable can be explained by the model (see Table 25). This occurring pattern is similar to the previous impressions based on models which analyzed Gysi's character traits. In this instance, the evaluation of his problem-solving skills also increased after participants saw a video of his anger, which is a highly significant effect at the 1-percent level compared to the no video and neutral conditions. In addition, in this instance negative-active emotional expressions increased the evaluation of problem-solving skills by 0.32 points on average. This effect is significant even compared to the effect of positive emotional displays according to the Bonferroni adjusted p-

191

value (t = 2.5). Hence, this positive effect cannot be simply described as a mere exposure effect due to his physical appearance or general attributes (see also Figure 20). The next section focuses on the assessment of leadership skills after the experimental treatment occurred.

Table 25: Changes in the Evaluation of Problem-Solving Skills

	Dependent Variable: Problem-Solving Skills					
	Male Politicians (1)	Female Politicians (2)	Merkel (E2) (3)	Gysi (E2) (4)	Gabriel (E3) (5)	Merkel (E3) (6)
Negative-Passive	0.087 (0.058)	0.098 (0.061)				
Neutral	0.062 (0.057)	0.088 (0.062)	0.010 (0.059)	-0.194** (0.065)	0.039 (0.064)	-0.027 (0.057)
No Video	0.087 (0.057)	0.116 (0.061)	0.125* (0.057)	-0.285*** (0.063)	-0.081 (0.063)	-0.013 (0.056)
Positive	0.033 (0.058)	0.099 (0.062)	0.103 (0.059)	-0.162^{b} (0.065)		
Constant	0.020 (0.041)	-0.009 (0.044)	-0.112** (0.041)	0.318*** (0.045)	0.089* (0.045)	0.027 (0.041)
Observations	1,764	1,766	1,374	1,372	1,052	1,053
Adjusted R^2	-0.0003	0.0002	0.003	0.013	0.002	-0.002
F Statistic	0.849)	1.101	2.436	7.089***	1.940	0.109

Note: *p < 0.05; ^{b}p < Bonferroni adjusted; **p < 0.01; ***p < 0.001. The reference category is the negative-active condition. Cells display OLS-estimates and standard errors in parentheses.

Figure 20: Changes in the Evaluation of Problem-Solving Skills
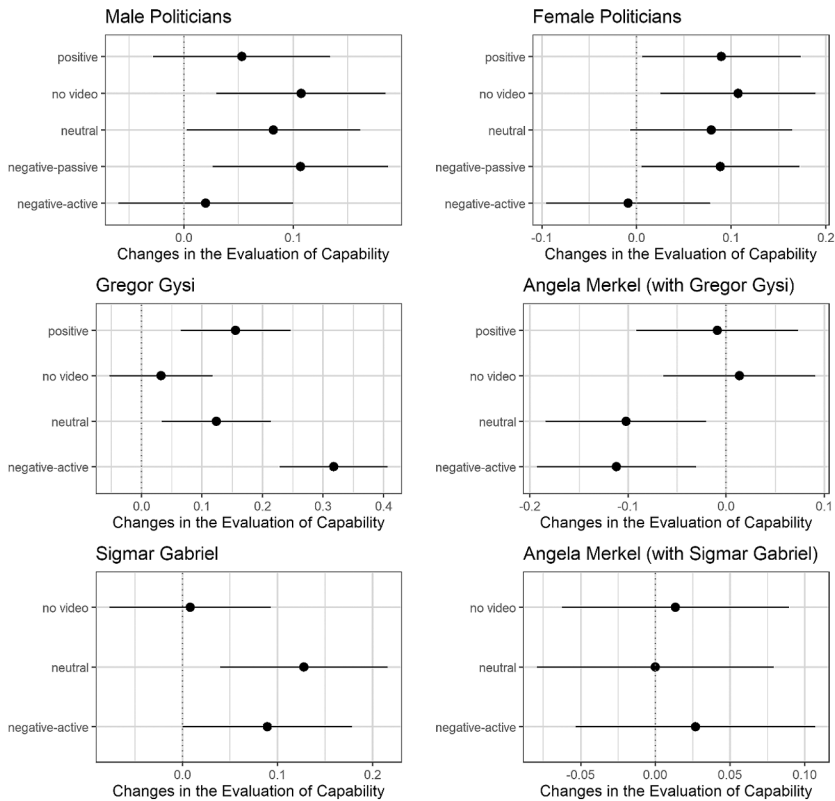
Note: Figure displays coefficient plots with 95-percent confidence intervals.

5.1.3.2 Leadership Skills

In line with the previous models, no significant effect occurred for the evaluation of politicians in general, regardless of whether participants saw several female or male politicians (see Table 26 and Figure 21). In contrast to the previous findings regarding the dimension of warmth, no significant effect occurred when participants evaluated Angela Merkel's leadership skills. The F-tests of Model 3 and Model 6 are not significant, as the experimental conditions did not deviate from the overall mean. For the evaluation of leadership skills, the experimental treatment has only a significant impact for the two leading male politicians – Gregor Gysi and Sig-

mar Gabriel (Models 4 and 5). The amount of explained variance is very small in both instances, a change of 0.8 percent in the evaluation of Gregor Gysi's leadership skills and only a change of 0.4 percent in the evaluation of Sigmar Gabriel's leadership skills can be attributed to the experimental treatment.

Both models indicate a positive effect of anger displays on the evaluation of leadership skills for the respective male politician (Models 4 and 5). In Gregor Gysi's case, anger had a positive effect on his leadership skill evaluations, which is only significant at the 5-percent level in comparison to participants who received no video treatment. The experimental group that received anger displays did not differ significantly from the other experimental and control conditions of positive and neutral emotional expressions.

Sigmar Gabriel's displays of anger have a positive impact on his leadership skill evaluations according to the Bonferroni adjusted p-value. Compared to the evaluation of his other character traits, such a positive effect had not occurred regarding any other of his evaluations. In this instance, displays of anger increased his leadership ratings on average by 0.12 points and differed significantly from the control group, which received no video treatment and has an overall mean of -0.05 (-0.048 = 0.119 - 0.167). Sigmar Gabriel's leadership skill ratings did not differ significantly between the experimental condition that received angry displays and the control group which received neutral emotional expressions. Hence, the positive impact might be linked to his general appearance and conversation style.

Table 26: Changes in the Evaluation of Leadership Skills

	Male Politicians (1)	Female Politicians (2)	Merkel (E2) (3)	Gysi (E2) (4)	Gabriel (E3) (5)	Merkel (E3) (6)
	Dependent Variable: Leadership Skills					
Negative-Passive	0.090 (0.063)	0.057 (0.065)				
Neutral	0.084 (0.063)	0.092 (0.066)	-0.015 (0.057)	0.046 (0.069)	-0.046 (0.068)	-0.003 (0.068)
No Video	-0.005 (0.062)	-0.008 (0.064)	-0.079 (0.055)	-0.147[*] (0.068)	-0.167[b] (0.067)	-0.112[*] (0.058)
Positive	0.092 (0.064)	0.134[*] (0.065)	0.039 (0.057)	0.095 (0.070)		
Constant	0.043 (0.045)	0.045 (0.047)	-0.012 (0.040)	0.182[***] (0.049)	0.119[b] (0.049)	0.021 (0.041)
Observations	1,763	1,766	1,374	1,373	1,052	1,053
Adjusted R^2	0.001	0.002	0.001	0.008	0.004	0.003
F Statistic	1.287	1.775	1.595	4.811[**]	3.358[*]	2.592

Note: [*]$p < 0.05$; [b]$p <$ Bonferroni adjusted; [**]$p < 0.01$; [***]$p < 0.001$. The reference category is the negative-active condition. Cells display OLS-estimates and standard errors in parentheses.

Figure 21: Changes in the Evaluation of Leadership Skills
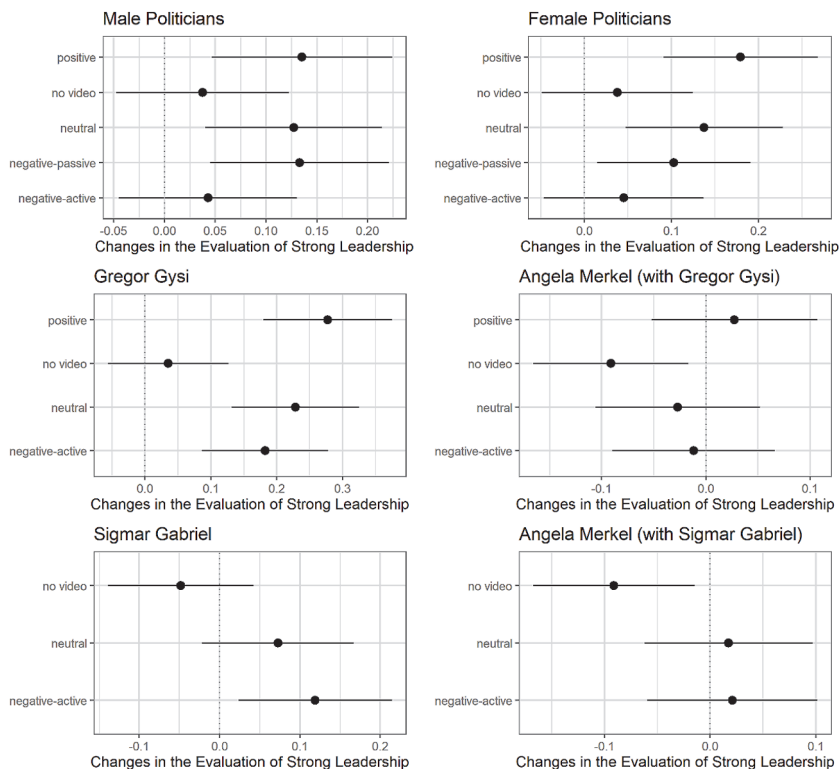
Note: Figure displays coefficient plots with 95-percent confidence intervals.

5.1.4 The Evaluations of Specific Candidate Impressions

In addition to these four classic items of candidate orientation, a range of individual attributes was measured by five semantic differential scales. These semantic differentials are also analyzed based on their gain scores, the differences between the first and second panel wave. These measurements of impression formations are potentially stronger related to the experimental treatment, as similar measures have been used as treatment checks for displays of incivility (Mutz & Reeves 2005: 14). The following section describes the impact the experimental treatment has on the impression formations according to the range of semantic differentials.

5.1.4.1 Evaluations of Emotionality

A significant effect occurred for all politicians and groups of politicians (see Table 27, see also Figure A.5 in the online appendix). The strongest effects occurred for Gysi and Gabriel with approximately 5 percent of explained variance for each model (adjusted R^2 = 0.044 and adjusted R^2 = 0.053). All politicians were assessed as being more emotional than rational by the participants after the experimental treatment. This effect is highly significant in almost all instances, regardless of whether the other participants saw no video or videos with neutral and positive emotional content – with the exception of Angela Merkel. Her negative-active emotional expressions differed only significantly from the condition without video treatment and not her neutral or positive expressions in sub-experiment *Type 2*.

Table 27: Changes in the Evaluation of Emotionality

	Male Politicians (1)	Female Politicians (2)	Merkel (E2) (3)	Gysi (E2) (4)	Gabriel (E3) (5)	Merkel (E3) (6)
	Dependent Variable: Emotional–Rational					
Negative-Passive	0.886*** (0.106)	0.357*** (0.106)				
Neutral	0.730*** (0.105)	0.358*** (0.108)	0.161 (0.109)	0.852*** (0.124)	0.852*** (0.110)	0.273[b] (0.116)
No Video	0.941*** (0.104)	0.657*** (0.105)	0.415*** (0.106)	0.859*** (0.120)	0.431*** (0.108)	0.606*** (0.114)
Positive	0.439*** (0.106)	0.356*** (0.106)	-0.048 (0.109)	0.632*** (0.124)		
Constant	-0.718*** (0.075)	-0.434*** (0.077)	-0.351*** (0.077)	-0.864*** (0.087)	-0.423*** (0.078)	-0.542*** (0.083)
Observations	1,761	1,766	1,372	1,370	1,049	1,052
Adjusted R^2	0.056	0.019	0.015	0.044	0.053	0.025
F Statistic	27.317***	9.712***	7.816***	21.885***	30.116***	14.296***

Note: *p < 0.05; [b]p < Bonferroni adjusted; **p < 0.01; ***p < 0.001. The reference category is the negative-active condition. Cells display OLS-estimates and standard errors in parentheses.

5.1.4.2 Evaluations of Politeness

Politicians' emotional expressions have an impact on the assessment of their politeness, since all F-tests indicate significant differences between the experimental conditions (Table 28, see also Figure A.6 in the online ap-

pendix). Compared to the previous measurements on candidate orientation, this analysis shows that a slightly larger portion of the variance in the dependent variable can be explained by the experimental treatment. Overall, the amount of explained variance is still very small and ranges in most instances from 0.4 percent (for male politicians) to 1.1 percent for Gregor Gysi, with one exception: The adjusted R^2 for Sigmar Gabriel explains 7.7 percent of variability in the change of his politeness score. This is in line with the expectations, since his incivility should have affected evaluations of politeness more strongly than mere displays of negative-active emotions that are not necessarily linked to impolite behavior towards others. Nevertheless, politicians in general as well as Sigmar Gabriel and Angela Merkel in particular were assessed as being more impolite after participants saw their negative-active emotional displays. Only the participants who saw Gregor Gysi's negative-active expressions did not evaluate him as being more impolite after having seen his displays of anger and indignation. The mean for this experimental group did not differ significantly from zero or the no video condition. However, a difference in means occurred compared to the negative-active treatment group, as he was evaluated as being more polite by participants who were in the neutral and positive treatment conditions.

Table 28: Changes in the Evaluation of Politeness

	Dependent Variable: Impolite–Polite					
	Male Politicians (1)	Female Politicians (2)	Merkel (E2) (3)	Gysi (E2) (4)	Gabriel (E3) (5)	Merkel (E3) (6)
Negative-Passive	0.181	0.286**				
	(0.096)	(0.098)				
Neutral	0.189*	0.230*	0.062	0.237**	0.819***	0.207[b]
	(0.095)	(0.099)	(0.079)	(0.090)	(0.093)	(0.081)
No Video	0.296**	0.346***	0.181*	-0.075	0.686***	0.260**
	(0.094)	(0.097)	(0.076)	(0.088)	(0.092)	(0.080)
Positive	0.204*	0.412***	0.195[b]	0.220[b]		
	(0.096)	(0.098)	(0.079)	(0.090)		
Constant	-0.178**	-0.228**	-0.195***	0.086	-0.676***	-0.274***
	(0.068)	(0.071)	(0.055)	(0.063)	(0.066)	(0.058)
Observations	1,762	1,765	1,372	1,370	1,049	1,052
Adjusted R^2	0.004	0.009	0.004	0.011	0.077	0.009
F Statistic	2.586*	5.134***	2.937*	6.252***	44.519***	5.842**

Note: *p < 0.05; [b]p < Bonferroni adjusted; **p < 0.01; ***p < 0.001. The reference category is the negative-active condition. Cells display OLS-estimates and standard errors in parentheses.

5.1.4.3 The Evaluation of Agitation

Again, all models are highly significant (Table 29, see also Figure A.7 in the online appendix). All politicians are rated as being more agitated after participants saw their negative-active emotional expressions. This effect is highly significant and occurred in all instances in comparison with the no video-condition, except for Sigmar Gabriel. In all instances the effect also occurred in comparison to the experimental groups that received neutral emotional expressions. Throughout the models the adjusted R^2 values are very small ranging from an explained variance of 0.7 percent for female politicians to 3.8 percent for Gregor Gysi.

Table 29: Changes in the Evaluation of Agitation

	Dependent Variable: Calm–Agitated					
	Male Politicians (1)	Female Politicians (2)	Merkel (E2) (3)	Gysi (E2) (4)	Gabriel (E3) (5)	Merkel (E3) (6)
Negative-Passive	-0.517***	-0.149				
	(0.102)	(0.103)				
Neutral	-0.271**	-0.323**	-0.473***	-0.699***	-0.674***	-0.466***
	(0.102)	(0.104)	(0.094)	(0.112)	(0.111)	(0.098)
No Video	-0.577***	-0.379***	-0.580***	-0.542***	-0.129	-0.570***
	(0.100)	(0.102)	(0.091)	(0.109)	(0.109)	(0.096)
Positive	-0.297**	-0.237*	-0.441***	-0.759***		
	(0.103)	(0.103)	(0.094)	(0.112)		
Constant	0.486***	0.287***	0.563***	0.566***	0.226**	0.554***
	(0.072)	(0.074)	(0.066)	(0.079)	(0.079)	(0.070)
Observations	1,761	1,766	1,372	1,370	1,049	1,052
Adjusted R^2	0.021	0.007	0.030	0.038	0.037	0.034
F Statistic	10.258***	4.248**	15.256***	19.161***	21.000***	19.441***

Note: *p < 0.05; [b]p < Bonferroni adjusted; **p < 0.01; ***p < 0.001. The reference category is the negative-active condition. Cells display OLS-estimates and standard errors in parentheses.

5.1.4.4 The Evaluation of Aggressiveness

An overall pattern emerged when looking at the impact the experimental treatment of anger has on the evaluations of politicians as being aggressive versus peaceful (Table 30, see also Figure A.8 in the online appendix). All models show significant effects in the same direction: Politicians in general, Angela Merkel, Sigmar Gabriel and Gregor Gysi are rated as being more aggressive and less peaceful when participants received their negative-ac-

tive emotional displays. Model 5 deals with Sigmar Gabriel and shows the largest R^2 with explained variance of 6.1 percent, followed by the models for Angela Merkel which have an R^2 of 4.2 percent when participants also see Sigmar Gabriel and 2.2 percent when participants also see Gregor Gysi. The models regarding politicians in general can hardly explain any variance. The evaluation of Gregor Gysi can be seen as a slight exception to this overall pattern. The effect of his negative-active emotions is not significantly different from the no video condition, it only differs significantly from his neutral and positive emotional displays, in which conditions he was rated as more peaceful.

Table 30: Changes in the Evaluation of Aggressiveness

	Dependent Variable: Aggressive–Peaceful					
	Male Politicians (1)	Female Politicians (2)	Merkel (E2) (3)	Gysi (E2) (4)	Gabriel (E3) (5)	Merkel (E3) (6)
Negative-Passive	0.243[b] (0.097)	0.157 (0.097)				
Neutral	0.325*** (0.096)	0.179 (0.099)	0.244** (0.084)	0.400*** (0.095)	0.753*** (0.091)	0.553*** (0.087)
No Video	0.325*** (0.095)	0.223* (0.097)	0.406*** (0.082)	0.159 (0.093)	0.477*** (0.089)	0.484*** (0.085)
Positive	0.213* (0.097)	0.240* (0.098)	0.391*** (0.084)	0.495*** (0.096)		
Constant	-0.390*** (0.068)	-0.287*** (0.070)	-0.425*** (0.059)	-0.189** (0.067)	-0.565*** (0.064)	-0.503*** (0.062)
Observations	1,763	1,766	1,372	1,370	1,049	1,052
Adjusted R^2	0.006	0.002	0.020	0.022	0.061	0.042
F Statistic	3.851**	1.886	10.252***	11.214***	35.228***	24.264***

Note: *$p < 0.05$; [b]$p <$ Bonferroni adjusted; **$p < 0.01$; ***$p < 0.001$. The reference category is the negative-active condition. Cells display OLS-estimates and standard errors in parentheses.

5.1.4.5 The Evaluation of Arrogance

A similar overall trend occurred in the six models that analyze changes in the evaluation of arrogance versus modesty (Table 31, see also Figure A.9 in the online appendix). The overall model in which participants saw female politicians is not significant (Model 2). When participants were exposed to male politicians a treatment effect of anger expressions took place; participants rated politicians in general on average as being more modest in comparison to the control group without video treatment

(Model 1). A negative effect did occur however in the models for Angela Merkel and Sigmar Gabriel, whereby they were both evaluated as being more arrogant due to their anger expressions (Models 3,5, and 6).

In contrast to Angela Merkel and Sigmar Gabriel, Gregor Gysi was not evaluated as being more arrogant, since the negative emotional displays did not lead to an unfavorable evaluation in his case (Model 4). On the contrary, participants in the anger condition considered him even as more modest or less arrogant on average after they received the experimental treatment. This effect differs from the control group without video treatment and is also significantly different from his positive appearances; however, it does not differ significantly from his neutral appearances. Because his positive emotional displays did not lead to more modest evaluations, mere exposure effects cannot fully explain the occurrence of these positive effects.

Table 31: Changes in the Evaluation of Arrogance

	Male Politicians (1)	Female Politicians (2)	Merkel (E2) (3)	Gysi (E2) (4)	Gabriel (E3) (5)	Merkel (E3) (6)
	Dependent Variable: Arrogant–Modest					
Negative-Passive	0.184*	-0.027				
	(0.081)	(0.078)				
Neutral	0.196*	-0.067	0.202 [b]	0.015	0.679***	0.238**
	(0.080)	(0.080)	(0.082)	(0.083)	(0.085)	(0.080)
No Video	0.221**	0.007	0.259**	-0.349***	0.489***	0.204**
	(0.079)	(0.078)	(0.079)	(0.081)	(0.083)	(0.079)
Positive	0.150	0.088	0.427***	-0.287***		
	(0.081)	(0.079)	(0.082)	(0.084)		
Constant	-0.106	0.108	-0.277***	0.268***	-0.527***	-0.223***
	(0.057)	(0.057)	(0.058)	(0.059)	(0.060)	(0.057)
Observations	1,762	1,766	1,373	1,369	1,049	1,052
Adjusted R^2	0.003	0.0002	0.018	0.021	0.059	0.008
F Statistic	2.416*	1.067	9.234***	10.695***	34.036***	5.176**

Note: *$p < 0.05$; [b]$p <$ Bonferroni adjusted; **$p < 0.01$; ***$p < 0.001$. The reference category is the negative-active condition. Cells display OLS-estimates and standard errors in parentheses.

5.1.4.6 The Evaluation of Gender Stereotypical Attributes

Two more semantic differentials are considered which measured attributes that are closely linked to gender stereotypical expectations. These items were only measured in the sub-experiment *Type 1*, which focused on the

201

evaluation of politicians as a social group. Hence, the following section only concerns politicians in general.

5.1.4.6.1 The Evaluation of Decisiveness

According to the nonsignificant F-tests of both models, no differences in means occurred across the experimental conditions regarding the dependent variable that measured changes in the evaluation of decisiveness (see Table 32). Emotional expressions of anger and indignation by female as well as male politicians did not affect the assessment of decisiveness for politicians in general in the experiment.

Table 32: Changes in the Evaluation of Decisiveness

	Dependent Variable: Decisive–Unassertive	
	Male Politicians	Female Politicians
	(1)	(2)
Negative- Passive	0.100	-0.018
	(0.102)	(0.101)
Neutral	0.113	-0.012
	(0.101)	(0.102)
No Video	0.022	-0.021
	(0.100)	(0.100)
Positive	-0.057	-0.044
	(0.103)	(0.101)
Constant	-0.172[*]	-0.129
	(0.072)	(0.073)
Observations	1,762	1,766
Adjusted R^2	-0.0001	-0.002
F Statistic	0.964	0.052

Note: [*]$p < 0.05$; [b]$p <$ Bonferroni adjusted; [**]$p < 0.01$; [***]$p < 0.001$. The reference category is the negative-active condition. Cells display OLS-estimates and standard errors in parentheses.

5.1.4.6.2 The Evaluation of Resilience

Looking at the second set of attributes that relate to gender stereotypes, the F-test of model 1 indicates a significant difference between the means of the experimental groups after participants saw the video treatments of male politicians (see Table 33). However, only the control group without video treatment differed from the group which showed displays of negative-active emotions significantly at a 1-percent level; this effect was ob-

tained because a positive change occurred within the control group, while no change was induced in the experimental group. Hence, this significant finding might not be substantially related to the display of negative emotions. Furthermore, the effect sizes were very small (adjusted R^2 = 0.003). To sum up, the effects emotional displays – more specifically anger – have on the evaluation of politicians in general are negligible in this instance. Assessments of politicians as a social group, such as their decisiveness and resilience, which are related to gender stereotypes of males and females were not affected substantially by politicians' anger expressions. A more direct effect might have occurred if instead of measuring assessments of politicians in general, participants had evaluated female and male politicians separately before and after the treatment occurred.

Table 33: Changes in the Evaluation of Resilience

	Dependent Variable: Resilient–Overstrained	
	Male Politicians	Female Politicians
	(1)	(2)
Negative- Passive	0.184[*]	-0.027
	(0.081)	(0.078)
Neutral	0.196[*]	-0.067
	(0.080)	(0.080)
No Video	0.221[**]	0.007
	(0.079)	(0.078)
Positive	0.150	0.088
	(0.081)	(0.079)
Constant	-0.106	0.108
	(0.057)	(0.057)
Observations	1,762	1,766
Adjusted R^2	0.003	0.0002
F Statistic	2.416[*]	1.067

Note: [*]$p < 0.05$; [b]p < Bonferroni adjusted; [**]$p < 0.01$; [***]$p < 0.001$. The reference category is the negative-active condition. Cells display OLS-estimates and standard errors in parentheses.

5.1.4.7 The Evaluation of External Efficacy

In addition, to these two semantic differentials, the concept of external efficacy was also measured for politicians in general. These items were linked to the warmth of politicians as the items regard how interested politicians seem in ordinary people, whether they care and seek close contact. The experimental treatment of negative-active emotional displays had no effect on the evaluation of politicians' external efficacy, as can be seen in

the following models in Table 34. Therefore, the construct of external efficacy is not influenced by anger expressions of groups of male and female politicians. The next section summarizes the overall effects.

Table 34: Changes in the Evaluation of External Efficacy

	Dependent Variable:			
	Contact Seeking		Caring	
	Male Politicians (1)	Female Politicians (2)	Male Politicians (3)	Female Politicians (4)
Negative-Passive	0.026 (0.060)	-0.014 (0.058)	0.063 (0.059)	-0.003 (0.056)
Neutral	0.040 (0.059)	0.071 (0.059)	0.012 (0.058)	0.023 (0.057)
No Video	-0.005 (0.059)	0.034 (0.058)	0.082 (0.058)	0.023 (0.056)
Positive	0.065 (0.060)	0.209[***] (0.058)	0.002 (0.059)	0.053 (0.056)
Constant	0.000 (0.042)	-0.039 (0.042)	-0.023 (0.041)	0.036 (0.040)
Observations	1,762	1,767	1,760	1,766
Adjusted R^2	-0.001	0.009	-0.0003	-0.002
F Statistic	0.473	4.887[***]	0.867	0.333

Note: [*]$p < 0.05$; [b]$p <$ Bonferroni adjusted. The reference category is the negative-active condition. Cells display OLS-estimates and standard errors in parentheses.

5.1.5 Summary of the Main Effects

The following Table 35 shows the nature of each significant effect that anger has on the evaluation of the respective politician(s). The items that measure the general favorability of a politician as well as more specific character traits measured by the candidate orientations are overall minimally affected by the experimental treatment. Only the experiment *Type 2*, in which participants saw Angela Merkel and Gregor Gysi, show consistent effects. Gregor Gysi was generally rated more favorably in every regard, while Angela Merkel was rated less favorably, when participants also saw Gregor Gysi's negative-active emotions. However, her negative emotional displays did not affect the evaluation of her leadership skills. In contrast, Sigmar Gabriel's leadership skills were the only characteristic that was positively affected by his displays of anger and incivility.

   This finding supports the first hypothesis about varying effects of anger expressions according to their position within the political system and more specifically the hypothesis H1$_a$, whereby displays of anger can lead to

higher ratings for politicians of the opposition. The hypothesis H1$_b$ about negative emotional expressions of incumbents is only partially supported – less favorable evaluations of Angela Merkel only occurred when participants also saw Gregor Gysi.

The hypothesis H4 assumed that anger expressions had the strongest effects on the assessment of politicians in comparison to the other expressions; however, the empirical findings do not indicate a consistent pattern. Gregor Gysi's anger expressions had the strongest effects compared to positive or neutral appearances, in certain – but not all – instances, such as his overall assessment and ratings of trustworthiness. Hence, at least based on these two instances the hypothesis H4 about the strength of anger expressions is partially supported by the experiment.

Furthermore, the inspection of the average treatment effects presents insights about the evaluations of warmth and competence. The evaluation of warmth and competence are in fact affected differently as stated in hypothesis H2$_{(a-b)}$. The hypothesis H2$_a$ is supported by the findings for Gregor Gysi and Sigmar Gabriel, whereby their competence was assessed more positively after the experimental treatment was administered. However, the hypothesis H2$_b$ about negative effects on the politicians' warmth is hardly supported by the empirical evidence.

By focusing on the four typical items to assess candidate appearance effects, it can be seen that the perception of politicians as a social group was minimally affected by the experimental treatment of anger expressions. Hence, this finding supports the hypothesis H11, whereby politicians as a social group are less strongly affected by the experimental treatment than the evaluation of individual political leaders, although they are well-known public figures.

The candidate evaluations that are measured by semantic differentials and are therefore closely related to the experimental treatment show more consistent effects for all three sub-experiments. Displays of negative-active emotions appeared to impact the evaluation of politicians negatively according to the semantic differentials – except for Gregor Gysi. Unlike the other politicians and politicians in general, he is neither rated as being more arrogant nor as being more impolite by participants who were exposed to his negative-active emotions. On the contrary, he was seen as being more modest (and less arrogant) by those who saw his negative-active emotional displays.

These differences occurred according to the semantic differential scales and point to the fact that Gregor Gysi's emotional expressions can be seen as an exception. These positive evaluations highlight that the evaluation of

anger expressions might strongly depend on the context – and in this case the political message. So far, it strengthens the assumption that the positive side of anger as moral outrage can have positive effects on the evaluation of a politician, exemplified by Gregor Gysi's anger about social injustices. This finding is in contrast to the effects of uncivil behavior, as it was shown by Sigmar Gabriel. By comparing these two politicians as two case studies, hypothesis H3 about the political message as contextual factors gains support (see Subchapter 4.5.3 for further discussions on the political messages).

Table 35: *Overview of Treatment Effects According to the Change in Each Variable from Pre- to Post-Test*

	Male Politicians	Female Politicians	Angela Merkel (E2)	Gregor Gysi (E2)	Sigmar Gabriel (E3)	Angela Merkel (E3)
Scalometer	ns	ns	-	+	ns	ns
Likeability	ns	ns	-	+	ns	ns
Trustworthiness	ns	ns	-	+	ns	ns
Problem-Solving Skills	ns	ns	-	+	ns	ns
Leadership Skills	ns	ns	ns	+	+	ns
Emotional-Rational	-	-	-	-	-	-
Rude-Polite	-	-	-	ns	-	-
Calm-Agitated	+	+	+	+	+	+
Aggressive-Peaceful	-	-	-	(-)	-	-
Arrogant-Modest	(-)	ns	-	+	-	-

Note: The table shows significant effects at least at a 5-percent level, if the coefficient for negative-active emotions as well as the difference-in-difference comparison between the anger condition and the control condition without video treatment is significant. Brackets indicate that only one criterion is met at the 1-percent level, "-" indicates negative effects, "+" indicates positive effects, and the abbreviation "ns" stands for "not significant".

The effects on the additional items that were measured within the experiment *Type 1* which focused on the gender stereotypical evaluation of politicians in general are summarized in Table 36 below. The evaluation of politicians' decisiveness and resilience remained unaffected by the experimental treatment of negative-active emotions of male and female politicians.

The external efficacy was also not affected by the experimental treatment of negative-active emotions. It has to be noted that any of these effects would technically be spillover effects from the specific politicians in the

video material that participants were exposed to on politicians in general. It might be more likely to detect effects when it comes to the three political leaders, because they appeared within the video clips and their evaluations were measured directly.[78] Since the effects on the evaluation of specific politicians show larger effects overall, it might be worthwhile to analyze external efficacy in the future after anger expressions of specific politicians.

Table 36: Overview of Effects of Additional Variables for Politicians in General

	Female Politicians	Male Politicians
Resilient-Overstrained	ns	ns
Unassertive-Decisive	ns	ns
Caring	ns	ns
Contact Seeking	ns	ns

Note: The table shows significant effects at least at a 5-percent level, if the coefficient for negative-active emotions as well as the difference-in-difference comparison between the anger condition and the control condition without video treatment is significant. Brackets indicate that only one criterion is met at the 1-percent level, "-" indicates negative effects, "+" indicates positive effects, and the abbreviation "ns" stands for "not significant".

As previously mentioned in Subchapter 4.4.1, network structures of candidate evaluations can be used to assess attitudes towards candidates. Network structures can be compared between time points to detect changes in the network structures (Dalege et al. 2017). The largest treatment effects occurred in regard to the evaluation of Gregor Gysi, whereas the effects for the other two leading politicians and politicians in general had only a minor impact on attitudes towards them in a few instances. If these treatment effects led to changes in the relationship between the evaluations, the network structure could reflect such shifts between variables. Those changes in the network structure are most likely to have occurred for Gregor Gysi compared to the other cases, which hardly showed substantial variances in the evaluations before and after the treatment. Hence, the case of Gregor Gysi can be seen as a most-likely case for the analysis of changes in the network structure and was therefore analyzed.

A network comparison test was conducted in order to detect significant changes between the pre-test and post-test condition (Dalege et al. 2017;

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78 The items for external efficacy were not measured for the three individual politicians due to the length of the questionnaire.

van Borkulo 2016). This test was based on 340 participants who took part in both panel waves, were exposed to Gysi's anger expressions and answered all 15 items under consideration. The network comparison test indicated that both models did not differ significantly regarding the structure in variance of the evaluations after conducting 1000 permutations (M = 1.58, p = 0.381). Since no invariance could be detected between the networks, a further test for invariances of edges between two nodes was not considered necessary (for comparison see: van Borkulo et al. 2017). In addition, significant changes in the global strength between network models did not occurred (S = 0.35, p = 0.921). Therefore, it can be concluded that Gregor Gysi was evaluated more positively across all characteristics without changing the structure between the attitudes towards him. Since no changes in the network structure could be obtained for Gregor Gysi, it appears unlikely that the network structure of other politicians would have changed as a result of the experimental treatment.

The average treatment effects of anger expressions showed varying effects for Angela Merkel in experiment *Type 2* and *Type 3*. These differences of contrasting videos could have been further impacted by the order in which politicians were seen. Hence, the order of the video clips can be considered in the following subchapter. In addition to the order of the video clips, individual predispositions can be tested in regard to their moderating effect on the evaluation.

5.2 Overview of Potential Moderating Factors

This subchapter presents an overview of the moderating effects that were tested for the experimental treatment. The corresponding tables and figures can be found in the online appendix. The additional consideration of moderating factors showed only minor differences for varying subgroups compared to the average treatment effect. An overview of the effects is presented in Table 37. As dependent variables, gain scores of the scalometer ratings were used as overall summary scores as well as warmth and competence ratings. In each model, effects of age, gender, party identification, and political interest were controlled for as possible confounding factors, while an interaction between the following factors and the experimental treatment was also included in the regression models.

The Order of the Experimental Treatment

First, the order in which the political leaders were seen had a small impact on the evaluation of the three politicians, whereby it was generally more favorable – or at least not disadvantageous – for politicians to been seen first. This finding is in accordance with a priming effect and thus supporting the hypothesis H12 regarding the order of the video treatment and anchoring effects of politicians who appeared first.

Regarding changes in Angela Merkel's scalometer ratings, the model showed a positive treatment effect of Merkel's positive emotional expressions for those participants who saw her first. The reference category in these models is the control group that featured neutral expressions. Since anger as well as neutral expressions led to slightly lower overall evaluations of Angela Merkel, the coefficient for the anger condition is not statistically significant in comparison to the neutral control condition. Furthermore, the treatment order had no impact on her overall evaluation.

The evaluation of her warmth shows a significant effect of the treatment order, whereby her warmth is evaluated on average lower by participants who saw Merkel in the second video after Gregor Gysi's expressions. Hence, her anger expressions had a significant negative effect for those participants who saw her last.

The order of the video clips did not have a significant effect on the evaluation of Gregor Gysi; the treatment effects remained stable regardless of whether he is seen first or second. For Sigmar Gabriel, only the model that focused on the assessment of his warmth is statistically significant; however, the order of the experimental treatment is not significant as a main or interaction effect. His negative-active emotional displays led to lower ratings when he was seen after Merkel, while no effect occurred when he was seen first. The model for his competence evaluations is not significant because none of the coefficients differ significantly from each other, but it can be noted that it appears to be slightly more beneficial for him to be seen last, since those participants evaluated him more positively afterwards. Despite the lack of statistical significance, the overall tendency is consistent across the dependent variables, in the sense that it was more beneficial for Merkel and Gabriel to be seen first, and less beneficial to be seen second.

Party Identification

Second, the consideration of party identification showed that ceiling effects likely occurred for the evaluation of Angela Merkel for CDU supporters, and in part for the overall sample. Angela Merkel's evaluations were

the highest of the three politicians before the experimental treatment was administered; therefore, a further increase in positive evaluations was hardly achievable. For this subchapter, party identification was measured as a dichotomous variable indicating whether participants identified with a certain political party. For politicians in general, party identification was measured as whether participants identified with any political party (1) or no party at all (0). For the three political leaders – Angela Merkel, Gregor Gysi and Sigmar Gabriel – party identifiers were classified as such if they identified with the CDU/CSU for Angela Merkel, the Left for Gregor Gysi and the SPD for Sigmar Gabriel (1). Participants who did not identify with these parties where classified as non-identifiers (0). It was not further differentiated whether participants supported any other political party or no party at all.

For Gregor Gysi, the ceiling effect was limited to supporters of the Left, who showed high evaluations of Gysi before the treatment was administered, thereby creating little room for a more favorable evaluation. However, participants who did not support the Left were not affected by such a ceiling effect and showed on average a positive response to Gysi's anger expressions. The analysis of Sigmar Gabriel's incivility showed that supporters remained unaffected by his expressions of incivility, which had a negative effect on other voters. However, the absence of moderating effects of party identification could be explained by ceiling effects, at least for Angela Merkel and Gregor Gysi. The evaluation of politicians as social groups was not moderated by levels of individual party attachments; hence, the empirical analysis showed mixed results for the impact of party identifications. The hypothesis H5$_a$, whereby party supporters responded more favorably to anger expressions of their leaders, could not be supported. The hypothesis H5$_b$, whereby negative responses to anger expressions of opposing political leaders had a negative impact of non-supporters, was partially supported by the findings of Sigmar Gabriel's expressions on the evaluation of his warmth. His supporters' evaluations of him remained unaffected by his displays of incivility.

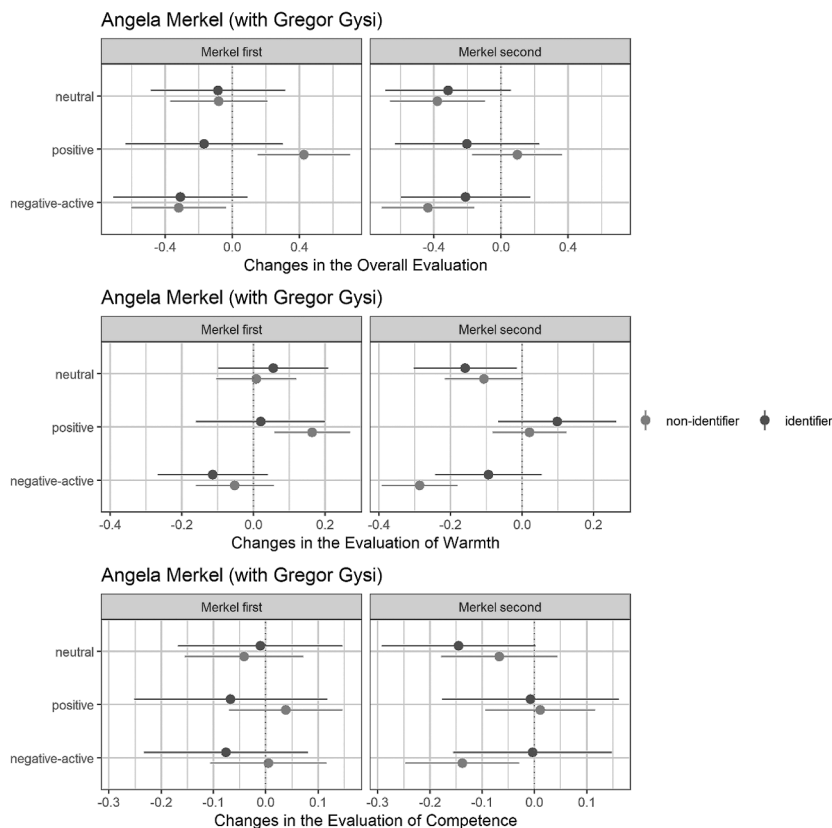The Order of the Experimental Treatment and Party Identification
In addition to moderating effects for the order of the experimental treatment and party identification, three-way-interactions between the experimental treatments, its order and party identification were tested for the three politicians. Focusing on Merkel's overall assessment, it can be seen that those who did not identify with the Christian Democratic Union and were also first exposed to her video clip, evaluated her more positively (see

210

Figure 22 and Table A.28 in the online appendix). Furthermore, and more to the point regarding negative-active emotional expressions, those who did not identify with the CDU evaluated her less favorably after seeing her negative-active emotional expressions. This effect does not differ significantly from the control group with neutral expressions.

The model that focuses on her warmth also points towards a moderating effect of party identification and the order of the experimental treatment. Those participants who saw Angela Merkel before Gregor Gysi responded more favorably towards her positive expressions – if they did not identify with the CDU. On the contrary, those who did not identify with the CDU and saw her after they were exposed to Gregor Gysi's anger and indignation, evaluated her less favorably. This negative effect neither occurred for those who identified with the CDU nor for those non-identifiers that saw her anger expressions first.

Lastly, the models for Angela Merkel's competence ratings are not significant regardless of whether participants also saw Gregor Gysi or Sigmar Gabriel in addition to her. Nonetheless, the coefficient for those who saw her anger expressions after those of Gregor Gysi and who did not identify with the CDU showed a slightly lower evaluation of her competence. While this coefficient is only significant at a 10-percent level, it shows a potentially consistent negative effect of being seen after other politicians, as indicated by the previous two models. This effect is specific to the co-occurrence of politicians. When participants were also exposed to Sigmar Gabriel, no significant effects occur (see Figure A.15 in the online appendix).

Figure 22: *Interaction between the Experimental Treatment, Treatment Order and Party Identification for the Evaluation of Angela Merkel (With Exposure to Gregor Gysi)*

Note: Figure displays coefficient plots with 95-percent confidence intervals.

To summarize the effects of three-way-interactions between the experimental treatments, its order and party identification, it can be said that the order of the video clips had the strongest effect on the evaluation of Angela Merkel, at least when participants also saw Gregor Gysi. While Angela Merkel is not only evaluated in comparison to Gregor Gysi, it mattered in which order she appeared. Overall, it might be more favorable for her ratings to have appeared first, as they did not result in more negative evaluations. When she appeared after participants had already been exposed to

Gregor Gysi, her negative-active expressions resulted in less favorable evaluations of her, particularly her warmth.

For Sigmar Gabriel and Angela Merkel, it was more advantageous appearing first, while being seen second or last, resulted in less positive changes. Appearing second, might induce evaluations and judgments in relation to the previous politicians whose appearances might act as an anchor heuristic or priming effect. This subchapter analyzed party identification by using a dichotomous measurement of support. Since the effects on non-supporters were counter-intuitive, it seems worthwhile to test the individual ideological predispositions of participants further to shed more light on the evaluation of politicians and political leaders. The ideological disposition of participants is therefore taken into consideration. This might offer a more finely grained approach that is more suited to parliamentary systems in which citizens might react positively towards politicians of one ideological bloc – consisting of several political parties – rather than one party. Alongside ideological predispositions, further individual personality traits, such as neuroticism, might affect how participants respond to the experimental treatment

Personality Traits
Finally, the consideration of further individual predispositions such as self-positions on the socioeconomic left-right continuum and personality traits hardly enhanced the regression models. The ideological self-positioning was only significant for the evaluations of Gregor Gysi and Sigmar Gabriel. It is likely that another ceiling effect occurred for those who positioned themselves ideologically as leftists and evaluated Gregor Gysi, which resulted in a more positive evaluation with an increase in socioeconomic right-wing attitudes. The moderating effects for Sigmar Gabriel mitigated the negative effect of his anger expressions for those who showed more leftist socioeconomic positions. The hypothesis H6, which stated that the individual response to anger expressions is moderated by individual personality traits such as neuroticism, was not supported by the experimental findings. Likewise, individual levels of extraversion did not moderate the effect of anger expressions on subsequent candidate evaluations.

Table 37: Overview of Main Effects and Moderating Effects for Politicians' Anger Expressions

	Male Politicians	Female Politicians	Angela Merkel (E2)	Gregor Gysi (E2)	Sigmar Gabriel (E3)	Angela Merkel (E3)
The Order of the Treatment						
Overall Evaluation			✓	✗	✗	✗
Warmth			✓	✗	✗	✗
Competence			✗	✗	✗	✗
Party Identification						
Overall Evaluation	✗	✗	✗	✓	✗	✗
Warmth	✗	✗	✗	✗	✓	✗
Competence	✗	✗	✗	✗	✗	✗
The Treatment Order and Party Identification						
Overall Evaluation	✗	✗	✗	✗	✗	✗
Warmth	✗	✗	✓	✗	✗	✗
Competence	✗	✗	✓	✗	✗	✗
Socioeconomic Position						
Overall Evaluation	✗	✗	✗	✓	✓	✗
Warmth	✗	✗	✗	✓	✗	✗
Competence	✗	✗	✗	✓	✓	✗
Neuroticism						
Overall Evaluation	✗	✗	✗	✗	✗	✗
Warmth	✗	✗	✗	✗	✗	✗
Competence	✗	✗	✗	✗	✗	✗
Extraversion						
Overall Evaluation	✗	✗	✗	✗	✗	✗
Warmth	✗	✗	✗	✗	✗	✗
Competence	✗	✗	✗	✗	✗	✗

Note: Cells display whether the respective variable had a statistically significant impact on the assessment of politicians as a main effect or moderating effect of anger expressions. "✗" stands for no effect, while "✓" indicates an effect.

5.3 The Broader Implications of the Experimental Treatment

5.3.1 The Longevity of the Treatment Effects

This section tests hypothesis H9 about short-term effects by analyzing whether participants were affected by the experimental treatment, even one week after the experimental treatment was administered. The following Figure 23 displays the average overall evaluation of Angela Merkel,

Gregor Gysi and Sigmar Gabriel by those participants who took part in the survey experiment at all three time points (Waves 1–3).[79] Based on Figure 23, Angela Merkel was by far evaluated more positively than her male counterparts. Those who participated in all three questionnaires have a fairly high opinion of her, with a mean evaluation that averages approximately 6.58 in the first wave (SD = 2.72), 6.50 in the second wave (SD = 2.76), and 6.43 in the third wave (SD = 2.84).

   Based on a graphical inspection, no major changes occurred for her evaluation over time. Furthermore, it can be seen that participants had a similar opinion of Gregor Gysi and Sigmar Gabriel during the pre-test (Wave 1) before the experimental treatment occurred. As previously analyzed, the experimental effect had the largest positive effect on the overall evaluation of Gregor Gysi, if participants saw his negative-active emotional expressions. During the second post-test this overall effect decreased slightly; however, participants still held a more favorable view of Gregor Gysi. This descriptive analysis was followed by a regression analysis to determine whether these changes are statistically significant. The dependent variable in this analysis was measured as a gain score between their overall evaluation in the third wave (t_3) and their overall evaluation during the pre-test (t_1).

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79 It has to be noted that only half of the participants were invited to take part in the third questionnaire. The participants were randomly invited to the third wave.

Figure 23: *Evaluation of Angela Merkel, Gregor Gysi, and Sigmar Gabriel in Three Panel Waves*
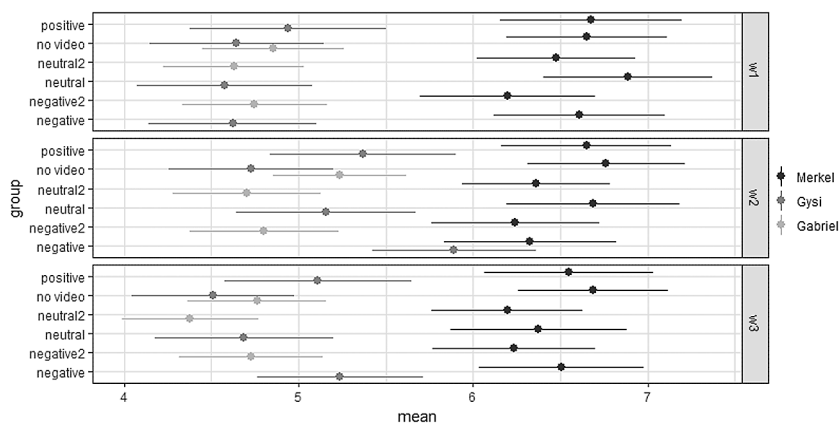
Note: The number of observations: Gregor Gysi (N = 527), Sigmar Gabriel (N=410–411), Angela Merkel (N=790–791. "Neutral 2" and "Negative 2" indicate the groups in which participants saw Angela Merkel and Sigmar Gabriel.

As expected from the graphical display in Figure 23, the regression models for Angela Merkel and Sigmar Gabriel are not significant, since none of the groups vary significantly from each other. Only the model for Gregor Gysi is statistically significant ($F(3, 523) = 2.65$, $p < 0.05$). This model shows that participants within the anger condition evaluated Gregor Gysi on average 0.75 points higher, even one week after the treatment occurred, in comparison to those who took part in the control group without video treatment. This evaluation indicates a decay compared to the initial treatment effect (see Model 2 in Table 38); nonetheless, a more positive evaluation has remained at t_3, one week after the initial exposure.

Table 38: *Longevity of Effects on the Overall Evaluation of Angela Merkel, Gregor Gysi and Sigmar Gabriel*

	Experimental Type	*Dependent Variable:* Scalometer		
		Merkel (1)	Gysi (2)	Gabriel (3)
Negative-Active	E2	-0.135	0.752***	
		(0.230)	(0.271)	
Positive	E2	-0.162	0.307	
		(0.240)	(0.283)	
Negative-Active 2	E3	-0.019		0.065
		(0.233)		-0.24
Neutral	E2	-0.546**	0.248	
		(0.236)	(0.278)	
Neutral 2	E3	-0.314		-0.155
		(0.232)		-0.239
Constant		0.034	-0.136	-0.095
		(0.160)	(0.189)	-0.165
Observations		790	527	410
Adjusted R^2		0.003	0.009	-0.003
F Statistic		1.468	2.645**	0.422

Note: $^*p < 0.1$; $^{**}p < 0.05$; $^{***}p < 0.01$. The reference category is the experimental group without video treatment. "Neutral 2" and "Negative 2" indicate the groups in which participants saw Angela Merkel and Sigmar Gabriel.

In addition to the overall evaluation of Gregor Gysi, the four items that measured the candidate orientation towards him are analyzed in more detail. Table 39 shows the longevity of the experimental treatment regarding Gregor Gysi's warmth and competence evaluations. Only two out of four models are statistically significant according to their overall F-tests – the models that measured Gregor Gysi's warmth. His competence ratings were not affected by his displays of anger and indignation one week after the treatment occurred. This includes the evaluation of his leadership skills ($F(3, 523) = 1.70$, $p = 0.166$), as well as his problem-solving skills ($F(3, 523) = 0.97$, $p = 0.406$). His likeability ratings were slightly affected by his displays of anger, since participants who saw his anger still rated him 0.32 points higher compared to those who saw no video, even one week after the experimental treatment was administered. Furthermore, his trustworthiness was also affected positively by his displays of anger and indignation by 0.20 points compared to those who saw no video. In this instance however, the coefficient is only significant at the 10 percent level, while the overall model is significant at a 5-percent level ($F(3, 523) = 2.94$, $p < 0.05$).

Table 39: *Longevity of Effects on the Evaluation of Gregor Gysi's Leadership Qualities*

	Dependent Variable:			
	Leadership (1)	Likeability (2)	Capability (3)	Trustworthiness (4)
Negative-Active	0.150	0.318**	0.156	0.202*
	(0.114)	(0.124)	(0.118)	(0.109)
Positive	0.267**	0.038	-0.027	-0.136
	(0.119)	(0.130)	(0.123)	(0.114)
Neutral	0.115	0.108	0.099	0.018
	(0.117)	(0.127)	(0.121)	(0.112)
Constant	-0.027	-0.020	0.061	0.102
	(0.080)	(0.086)	(0.082)	(0.076)
Observations	527	527	527	527
Adjusted R^2	0.004	0.009	-0.0002	0.011
F Statistic	1.700	2.525*	0.971	2.937**

Note: *$p < 0.1$; **$p < 0.05$; ***$p < 0.01$. The reference category is the experimental group without video treatment.

Contrary to the assumptions stated in hypothesis H9, this analysis partially supports the existence of prolonging effects – at least for Gregor Gysi. More long-lasting effects on the evaluation of Angela Merkel's and Sigmar Gabriel's warmth and competence evaluations were also analyzed; however, none of the models were statistically significant (see Table A.11 and Table A.12 in the online appendix). The varying effects are likely to be impacted by the varying media exposure of all three politicians and the negative predispositions held towards Gysi at the beginning of the survey experiment (Wave 1), as well as the quality of his anger expressions. In line with previous research (Lodge et al. 1995; Gerber et al. 2011), this finding shows a decay of the experimental treatment effects – even for the anger expressions of Gregor Gysi. Nonetheless, if emotional expressions leave a strong first impression, they can also influence the "online tally" of an already well-known politician. The enduring effects occurred for the evaluation of Gysi's warmth, which is in line with previous findings that the "online tally" of politicians is predominantly related to the evaluation of warmth (Laustsen & Bor 2017).

5.3.2 Spillover Effects on Political Parties

As hypothesis H10 states, the emotional expressions of key political figures could potentially influence how someone feels towards and evaluates the

respective political parties. Previous research has shown that not only do political parties hold certain trait ownerships of valence and positional issues such as the economy or security that can have an impact on the evaluation of a candidate in being more competent in those regards, but that the image of political parties can also be affected by party leaders and top candidates who shape the trait ownership of the party (e.g., Garzia 2017; Hayes 2005). Hence, this next section explores whether the experimental conditions showing Angela Merkel, Gregor Gysi and Sigmar Gabriel affected the evaluation of their respective political parties.

In order to test whether a spillover occurred, the scalometer for each party was used as a summary score to determine whether a more positive or negative evaluation has occurred after the experimental treatment was administered. In addition to the experimental treatment as the independent variable of interest, the models presented in the following controlled for individual factors such as age (mean-centered), gender, interest in politics (mean-centered) and party identification as control and moderating factors, since these factors have been shown to shape individuals' perceptions and stereotypical evaluations (Masters 1994; McDermott 1998; Pietraszewski 2016; West 2017). First, the empirical findings are presented for Angela Merkel as leader of the Christian Democratic Party, followed by the results for Gregor Gysi as leader of the Left, and Sigmar Gabriel as leader of the Social Democratic Party, at the time of the data collection.

The Evaluation of the Christian Democratic Party
A spillover effect based on Angela Merkel's negative emotional display could be tested with both sub-experiments in which participants saw either Gregor Gysi or Sigmar Gabriel. Both sub-experiments do not support an effect of Angela Merkel's negative expressions on the evaluation of the CDU (see Table 40). The experiment that also featured Gregor Gysi shows a small positive effect of the negative treatment condition with an increase of 0.22 points on an 11-point Likert scale; however, this effect is only significant at a 10 percent level. More clearly than her negative expressions, a significant spillover effect can be observed for her positive emotional expressions, which resulted in a more positive evaluation of the Christian Democratic Party by an increase of 0.56 points (Model 1).

In addition to the treatment effect, a moderating effect of party support was tested by analyzing potential differences for those participants who identified with the Christian Democratic Party. Such an interaction term did not result in significant changes in the evaluation of the CDU after seeing Angela Merkel's emotional expressions (Model 2).

When participants were additionally exposed to Sigmar Gabriel instead of Gregor Gysi, the experimental treatment conditions did not make a difference in the evaluation of the Christian Democratic Union. This failure to replicate the spillover effect of sub-experiment *Type 2* could indicate that not only are political leaders evaluated in relation to each other, but these contrasting effects also spillover to the evaluation of the respective political parties.

Table 40: Changes in the Evaluation of the CDU

	Dependent Variable: CDU Scalometer			
	E2	E2	E3	E3
	(1)	(2)	(3)	(4)
Negative-Active	0.216*	0.118	0.151	0.112
	(0.121)	(0.147)	(0.123)	(0.148)
Positive	0.558***	0.620***		
	(0.123)	(0.145)		
Neutral	-0.033	-0.142	0.126	0.101
	(0.122)	(0.149)	(0.122)	(0.147)
PID	-0.105	-0.214	-0.164	-0.231
	(0.094)	(0.183)	(0.108)	(0.185)
Female	0.362***	0.350***	0.108	0.108
	(0.093)	(0.093)	(0.107)	(0.107)
Age	-0.007**	-0.007**	-0.011***	-0.011***
	(0.003)	(0.003)	(0.003)	(0.003)
Political Interest	-0.009	-0.011	-0.096	-0.097
	(0.052)	(0.052)	(0.059)	(0.060)
Negative-Active*PID		0.303		0.124
		(0.261)		(0.265)
Positive*PID		-0.247		
		(0.272)		
Neutral*PID		0.323		0.081
		(0.260)		(0.264)
Constant	-0.292***	-0.254**	-0.151	-0.131
	(0.100)	(0.111)	(0.106)	(0.115)
Observations	1,371	1,371	1,051	1,051
Adjusted R^2	0.034	0.036	0.015	0.014
F Statistic	7.844***	6.092***	3.740***	2.828***

Note: *p < 0.1; **p < 0.05; ***p < 0.01. The reference category is the experimental group without video treatment. The abbreviation "PID" stands for "party identification".

The Evaluation of the Left

Similarly to the absence of spillover effects based on Angela Merkel's angry displays, the evaluation of the Left is not particularly affected by Gregor Gysi's anger expressions (see Table 41). While Gregor Gysi's anger expres-

sions led to a more positive evaluation of the Left, these effects also occurred for conditions in which participants saw neutral as well as positive expressions. Since the effect of his anger did not differ significantly from the effects of his other emotional expressions, this finding further supports the occurrence of an overall exposure effect rather than an effect caused by specific emotional expressions, such as anger. When testing an interaction effect between the experimental treatment and individual party identification for those who identified themselves with the Left, exposure effects were not significant; therefore, exposure to video material did not affect the evaluation of the Left for their supporters. The only significant effect remaining is merely significant at a 10-percent level, and indicating that respondents rated the Left higher if they were in the neutral control condition and did not identify with the Left. Hence, this finding at best supports a spillover effect that is due to exposure to key politicians rather than their specific emotional expressions.

The Evaluation of the Social Democratic Party

Lastly, a spillover effect on the evaluation of the Social Democratic Party after seeing Sigmar Gabriel's incivility was analyzed (Table 41). The regression model shows that a negative spillover occurred after participants saw Sigmar Gabriel's negativity; however, this effect is only significant at the 10-percent level. His negative expressions resulted, on average, in a less favorable evaluation of the SPD: by -0.21 points. This effect is significantly different from the control condition without video and the neutral control condition, in which the SPD was not evaluated more negatively (Model 3).

By testing whether this spillover effect is moderated by party identification, it can be seen that Sigmar Gabriel's anger had a negative impact on the evaluation of the SPD only for participants who did not identify with the Social Democratic Party (Model 4). Participants who supported the Social Democratic Party remained unaffected by Sigmar Gabriel's expressions in their support of the SPD (see Table 41 and Figure 24). This effect is significant at the 1-percent level.

Table 41: Changes in the Evaluation of the Left and the SPD

	The Left		SPD	
	Gysi (1)	**Gysi** (2)	**Gabriel** (3)	**Gabriel** (4)
Negative-Active	0.457***	0.475***	-0.211*	-0.394***
	(0.144)	(0.151)	(0.125)	(0.143)
Positive	0.359**	0.338**		
	(0.145)	(0.152)		
Neutral	0.571***	0.636***	0.088	0.129
	(0.145)	(0.151)	(0.125)	(0.141)
PID	-0.481**	-0.325	-0.140	-0.311
	(0.192)	(0.334)	(0.122)	(0.196)
Female	0.140	0.138	-0.159	-0.185*
	(0.110)	(0.110)	(0.109)	(0.109)
Age	0.003	0.003	-0.003	-0.004
	(0.004)	(0.004)	(0.004)	(0.004)
Political Interest	-0.059	-0.059	-0.061	-0.062
	(0.062)	(0.062)	(0.061)	(0.060)
Negative-Active*PID		-0.183		0.794***
		(0.508)		(0.293)
Positive*PID		0.336		
		(0.524)		
Neutral*PID		-0.897*		-0.238
		(0.537)		(0.294)
Constant	0.188	0.173	-0.083	-0.025
	(0.115)	(0.117)	(0.106)	(0.113)
Observations	1,370	1,370	1,051	1,051
Adjusted R^2	0.016	0.017	0.005	0.015
F Statistic	4.201***	3.421***	1.880*	2.968***

Dependent Variable: Scalometer

Note: *$p < 0.1$; **$p < 0.05$; ***$p < 0.01$. The reference category is the experimental group without video treatment. The abbreviation "PID" stands for "party identification".

Figure 24: *Moderating Effects of Party Identification on the Evaluation of the SPD*
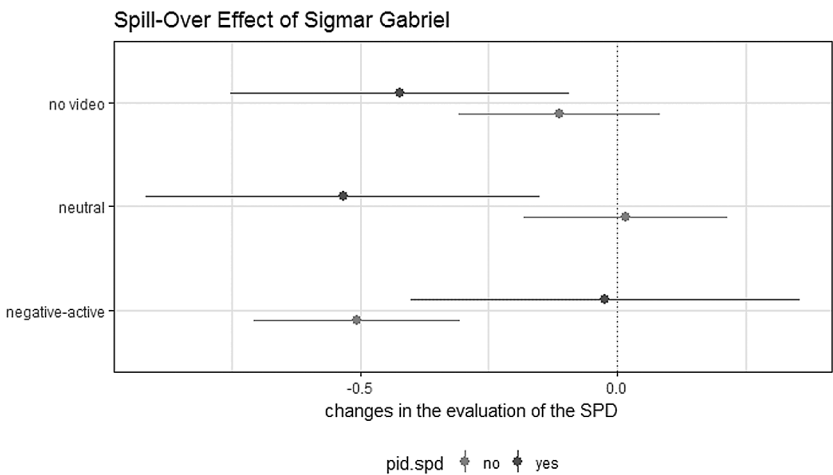
Note: Figure displays coefficient plots with 95-percent confidence intervals.

The Longevity of the Spillover Effects

The longevity of these spillover effects can be tested by analyzing the difference between the pre-test values (Wave 1) and the second post-test (Wave 3). None of the treatment effects remained significant one week after the experiment was conducted according to the overall F-tests (see Table 42). This indicates weak and short-term spillover effects on the evaluation of political parties.

Table 42: Longevity of Spillover Effects on the Evaluation of Political Parties

	Dependent Variable: Party Scalometer			
	CDU		The Left	SPD
	E2	E3	E2	E3
	(1)	(2)	(3)	(4)
Negative-Active	0.236	-0.003	0.185	0.252
	(0.272)	(0.271)	(0.282)	(0.241)
Positive	0.413		0.013	
	(0.284)		(0.295)	
Neutral	0.052	0.179	0.034	0.158
	(0.279)	(0.271)	(0.290)	(0.242)
Constant	-0.156	-0.156	0.286	-0.517***
	(0.189)	(0.186)	(0.196)	(0.166)
Observations	527	410	527	410
Adjusted R^2	-0.001	-0.004	-0.005	-0.002
F Statistic	0.853	0.285	0.178	0.563

Note: *p<0.1; **p<0.05; ***p<0.01. The reference category is the experimental group without video treatment.

To conclude, the hypothesis H10 regarding the effect of politicians' emotional expressions on the evaluation of their respective parties has been partially supported. Overall, the effects were relatively weak and were not limited to anger expressions, but rather their appearances and expressions in general as the spillover effects for the Left were obtained after exposure to Gregor Gysi.

A clear effect only occurred for Sigmar Gabriel's negative expressions and incivility, which resulted in less favorable evaluations of non-supporters. It can be noted that key politicians can potentially influence the imagine of their parties. Strong emotional expressions by party leaders, most likely in noticeable situations, have the potential to affect not only the evaluation of the politicians but also their parties.

5.3.3 The Response Time

The hypotheses H7 and H8 refer to participants' cognitive effort when political leaders are evaluated. The following section tests whether "high level" cognitive processes are activated by the experimental treatment, or whether automatic information processes are at work. By analyzing the response time of the candidate evaluation, some inferences about underlying mechanisms can be made in this regard.

Cognitive theories of information processing often assume that two modes of processing can be distinguished in automatic processing and sys-

tematic processing. The use of heuristics falls into the former category. Hence, if a "high level" cognitive process is not necessary, the response time between experimental groups should not vary drastically – neither in comparison to the other experimental treatment groups nor to the group without video treatment.

Higher response times might be observed if the experimental treatment elicited emotional responses that lead to anxiety or irritation, which then triggered participants to think more carefully about the candidate evaluations. Participants who are enthusiastic about an opposing politician might feel irritated and therefore think more carefully about their responses.

Emotional expressions of anger could be used as heuristics that someone cares about something (Hochschild 2012), for example signaling that politicians care about political issues and voters. The use of heuristics does not require an enormous amount of cognitive effort and therefore, if no differences can be found between experimental and control groups, this could indicate that automatic processes might be at work.

In order to test the hypotheses H7 and H8, the response time is considered as the dependent variable for the analysis. The response time was measured only for sets of indicators throughout the questionnaire. When focusing on the evaluation of politicians, two sets of indicators measured response times and are suitable to gauge whether any changes in response time appeared: a response time variable that belongs to the candidates' evaluation of warmth and competence, and one that relates to the candidate evaluation according to semantic differentials. Both variables measured how long it took participants to answer the items of candidate orientation (warmth and competence) and semantic differentials for politicians in the second wave.

A quantile regression analysis is used to compare response time measures across experimental groups in order to examine the underlying processes. In a quantile regression any given quantile, for example the median as 0.5 quantile, can be estimated instead of the mean of the dependent variable (Koenker 2005). A quantile regression model is chosen due to its robustness against outliers. Compared to the mean, the median has the advantageous property that it is less strongly affected by outliers, such as those participants who were distracted throughout the online survey and

took longer to complete the questionnaire.[80] The following quantile regression models were conducted while controlling for age, gender, political interest and party identification. The quantile regressions were estimated based on a modified implementation of the Barrodale-Roberts (BR) algorithm (Koenker & d'Orey 1987) and standard errors were bootstrapped using the pwy-method as suggested by Parzen, Wei and Ying (1994), which has to be shown to perform well (Davino et al. 2013: 123–127).

The first table (Table 43) shows quantile regressions with the median response time of the candidate evaluation focusing on the items of candidate orientation as the dependent variables. Of particular interest in these models are the varying effects for Angela Merkel and Gregor Gysi, while no significant effects can be found for Sigmar Gabriel.[81] The constant in these models represents the median response time for those respondents who did not see a video, were male, of average age, with an average interest in politics, and without supporting the respective political party. At this baseline, without exposure to video clips, respondents took noticeably longer to assess Merkel's candidate qualities (Median = 19.5 seconds) than they did for Gregor Gysi (Median = 16.32 seconds), while both response times were longer than for politicians in general. Judgments about politicians in general were made fairly quickly, with a median of 23.62 seconds for groups with male politicians and 24.01 seconds for groups with female politicians. These were quick given that in these two instances the response time also included the response to twice as many items (or four additional indicators). Being exposed to video material is associated with faster response times for both of these models regarding the evaluation of politicians as a social group, except for the group of participants which saw negative-passive emotion of male politicians (Models 1 and 2).

If participants were exposed to videos clips, their median response time also decreased, when they evaluated Angela Merkel's warmth and competence – regardless of the experimental condition. Participants who saw Merkel's positive emotions were at the median almost two seconds faster in their judgment than those who did not see a video. This effect for An-

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80 Similarly, the median is often used as a descriptive statistic in survey response time measures, and speeders are often identified by focusing on the median rather than the mean (Roßmann 2017: 100–101; Greszki et al. 2015).

81 The models for male and female politicians are not as relevant when focusing on candidate orientation due to an underlying measurement issue. The response time measure in both of these instances also includes four additional items regarding political efficacy and perceptions of politicians as a homogeneous social group.

gela Merkel can be replicated in the sub-experiment *Type 3*, in which participants also saw Sigmar Gabriel.

The exposure to video stimuli had the opposite effect for Gregor Gysi across experimental groups. Each video condition is associated with longer response times, whereby participants who saw his negative-active emotions were the fastest of those who saw a video clip with an increase in only 1.58 seconds, whereas those in the neutral control condition took 2.44 seconds longer at a median value. The response time for the evaluation of Sigmar Gabriel's qualities was not affected significantly by the experimental conditions (Model 5). Hence, these varying effects underline the different cognitive processes for each political leader as a result of the exposure to video clips. These differences could have been caused by the varying levels of familiarity with each political leader.

Table 43: Quantile Regressions on the Response Time of Candidate Orientation

	Dependent Variable: Response Time Candidate Orientation					
	Male Politicians (1)	Female Politicians (2)	Merkel (E2) (3)	Gysi (E2) (4)	Gabriel (E3) (5)	Merkel (E3) (6)
Negative-Active	-0.758	0.105	-1.250*	1.582***	0.189	-1.531**
	(0.787)	(0.840)	(0.651)	(0.609)	(0.591)	(0.720)
Negative-Passive	0.500	-1.105				
	(0.765)	(0.762)				
Positive	-0.774	0.368	-1.983***	1.902***		
	(0.697)	(0.808)	(0.614)	(0.634)		
Neutral	-0.113	0.579	-1.150*	2.443***	0.057	-1.469**
	(0.713)	(0.744)	(0.626)	(0.663)	(0.548)	(0.595)
Age	0.210***	0.211***	0.150***	0.164***	0.160***	0.156***
	(0.019)	(0.020)	(0.014)	(0.018)	(0.016)	(0.019)
Gender: Female	-1.968***	-1.158**	0.133	0.131	0.009	-0.406
	(0.561)	(0.541)	(0.490)	(0.522)	(0.429)	(0.544)
PID	2.210***	1.158	-2.433***	-1.500	-1.104**	-1.125**
	(0.695)	(0.727)	(0.458)	(0.970)	(0.484)	(0.522)
Political Interest	-1.016***	-0.842**	-0.217	0.057	-0.217	-0.437
	(0.144)	(0.168)	(0.261)	(0.318)	(0.237)	(0.296)
Constant	23.620***	24.008***	19.501***	16.319***	17.473***	19.626***
	(0.807)	(0.922)	(0.578)	(0.468)	(0.549)	(0.615)
Observations	1,764	1,766	1,372	1,372	1,051	1,051

Note: *p < 0.1; **p < 0.05; ***p < 0.01. The reference category in each model is the experimental group without video treatment. The quantile regressions are based on the median (0.5 quantile). The abbreviation "PID" stands for "party identification".

To test whether these findings are consistent, the next table (Table 44) presents the results of a median quantile regression that focused on the evaluation according to the semantic differentials as dependent variable.

This second set of dependent variables largely confirms the previous findings. Participants formed significantly quicker judgments if they saw a video of Angela Merkel, while it took them longer to respond to the items regarding Gregor Gysi and in this instance also Sigmar Gabriel.

The baseline for Angela Merkel was the highest, as in the previous models, whereby participants who saw no video, were male, of average age and with an average interest in politics, without supporting the CDU had a median response time of 26.63 seconds, when answering the six semantic differentials regarding Angela Merkel. In comparison, the estimate for almost the same group of participants – except for those with no party identification or any other than the Left – is a median of only 19.93 seconds for Gregor Gysi. As in the previous case, if participants however saw video clips of him, it took them longer to respond to the questionnaire items with a median increase of three to four seconds for each of the experimental groups, with anger displays falling in the middle with 3.57 seconds between positive emotions (3.30 seconds) and neutral displays (3.96 seconds).

Regarding the semantic differentials, participants who saw videos of Sigmar Gabriel also took significantly longer to respond to the questionnaire items, once they were exposed to either video condition. This is in line with the treatment effects for Sigmar Gabriel, which could mainly be found for the semantic differentials, but not for the items that measured his candidate orientation.

After accounting for the exposure effects of the video treatments, the response time converges for all three politicians at a similar level. Although it took respondents longer to evaluate politicians as social groups, it has to be kept in mind that the semantic differentials for politicians in general included two additional items. These models however only tested whether the response time differed across groups; as yet, none of the models indicated that anger expressions had led to a systematic increase or decrease in response times.

Table 44: Quantile Regressions on the Response Time of Semantic Differentials

	Dependent Variable: Response Time Semantic Differentials					
	Male Politicians (1)	Female Politicians (2)	Merkel (E2) (3)	Gysi (E2) (4)	Gabriel (E3) (5)	Merkel (E3) (6)
Negative-Active	-0.950 (1.571)	-0.264 (1.473)	-1.960** (0.844)	3.565*** (0.821)	2.027*** (0.707)	-2.226** (0.943)
Negative-Passive	2.550* (1.515)	-1.971 (1.497)				
Positive	-1.750 (1.291)	-0.829 (1.343)	-2.960*** (0.884)	3.304*** (0.659)		
Neutral	0.650 (1.627)	-0.486 (1.440)	-2.040** (0.941)	3.957*** (0.882)	2.730*** (0.741)	-2.358*** (0.889)
Age	0.450*** (0.037)	0.464*** (0.032)	0.240*** (0.020)	0.239*** (0.021)	0.216*** (0.022)	0.264*** (0.029)
Gender: Female	0.400 (1.084)	-0.293 (0.922)	0.080 (0.669)	1.022* (0.617)	-0.486 (0.654)	1.113 (0.836)
PID	0.350 (1.328)	-1.350 (1.273)	0.320 (0.647)	2.261** (1.100)	-0.000 (0.765)	1.340 (0.876)
Political Interest	-0.700 (0.617)	-0.271** (0.571)	-0.440 (0.391)	0.565 (0.391)	0.081 (0.342)	-0.377 (0.379)
Constant	44.100*** (1.495)	46.580*** (1.530)	26.630*** (0.771)	19.925*** (0.619)	21.282*** (0.582)	26.070*** (0.861)
Observations	1,764	1,766	1,372	1,372	1,051	1,051

Note: *p < 0.1; **p < 0.05; ***p < 0.01. The reference category in each model is the experimental group without video treatment. The quantile regressions are based on the median (0.5 quantile). The abbreviation "PID" stands for "party identification".

However, as stated in hypothesis H8, it is possible that participants who feel conflicted about the video treatment could take longer to derive a judgment about the politician in question. To test this assumption, the next table (Table 45) presents two additional models for Gregor Gysi. The case of Gregor Gysi seems especially suited to test this hypothesis H8, due to the fact that most participants did not have a high opinion of him before the experimental treatment was administered – at least given that they did not identify with the Left, according to scalometer ratings in the first panel wave (M = 4.42, SD = 2.85). In contrast, participants who identified with the Left had on average a more favorable evaluation of him (M = 8.20, SD = 1.80). Across political parties, participants had the strongest reactions towards Gysi's emotional expressions compared to the other politicians, i.e., the changes in his evaluation were the most noticeable according to the average treatment effects (see Subchapter 5.1).

Since participants who support the Left had already a high opinion of Gysi in wave 1, the following analysis solely focuses on the participants who did not support the Left and therefore, 130 participants were exclud-

ed from the following analysis. This is in line with the theoretical assumptions, since supporters of the Left should not feel irritated by any positive reactions towards Gregor Gysi's emotional expressions.

Hence, the two models in the following table (Table 45) included an additional dichotomous variable in the models that indicated whether a positive change in the evaluation of Gysi had occurred. A positive change was determined as being larger than the average change for those participants that did not support the Left.

Since the response time is only measured for two sets of indicators regarding the evaluation of political leaders, the dichotomous variable indicating change is also measured across all four items of candidate orientation (warmth and competence) and for three out of six items that measured candidate evaluations according to semantic differentials and indicated positive evaluation, such as politeness, peacefulness and modesty.[82] An interaction between such a positive reaction (change) and the experimental treatment was then added into the models.

The interaction effect is also displayed in Figure 25. From this analysis it can be seen that participants who were exposed to Gysi's negative active emotional expressions and changed their opinion in favor of Gregor Gysi did not take longer to evaluate his warmth and competence than those participants who did not respond positively. The same finding held true for the evaluation of his character traits according to semantic differentials (see Figure 26). Hence, the hypothesis H8 is not supported by the experimental findings. Exposure to video clips of Gregor Gysi resulted in longer response times regardless of the emotional expressions that were presented. Anger expressions also led to slightly quicker judgements compared to other emotional expressions; however, these differences are not statistically significant (see Figure 25 and Figure 26).

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82 Positive changes in the evaluation of arousal (agitation), emotionality/rationality, and attractiveness were not considered as relevant positive changes. The level of arousal could be interpreted as a manipulation check for the experimental treatment.

230

Table 45: Interaction Between the Experimental Treatment and Positive Evaluation of Gregor Gysi on the Response Time for Non-Supporters

	Dependent Variable:	Response Time
	Candidate Orientation (1)	Semantic Differentials (2)
Negative-Active	3.158***	4.114***
	(0.993)	(1.014)
Positive	2.026**	3.250***
	(0.805)	(1.031)
Neutral	3.447***	5.977***
	(0.901)	(1.215)
Positive Reaction	2.605***	0.682
	(0.871)	(1.093)
Age	0.158***	0.227***
	(0.019)	(0.022)
Gender: Female	0.553	1.045
	(0.591)	(0.664)
Political Interest	0.184	0.432
	(0.330)	(0.388)
Negative-Active*Positive Reaction	-3.947***	-1.341
	(1.393)	(1.707)
Positive*Positive Reaction	-2.026	0.205
	(1.427)	(1.525)
Neutral*Positive Reaction	-2.947**	-2.773
	(1.440)	(1.743)
Constant	15.424***	19.488***
	(0.556)	(0.702)
Observations	1,260	1,257

Note: *p < 0.1; **p < 0.05; ***p < 0.01. The reference category is the experimental group without video treatment.

Figure 25: *Interaction Effect Between the Experimental Treatment and Positive Changes Towards Gysi for Non-Supporters (Candidate Orientation)*
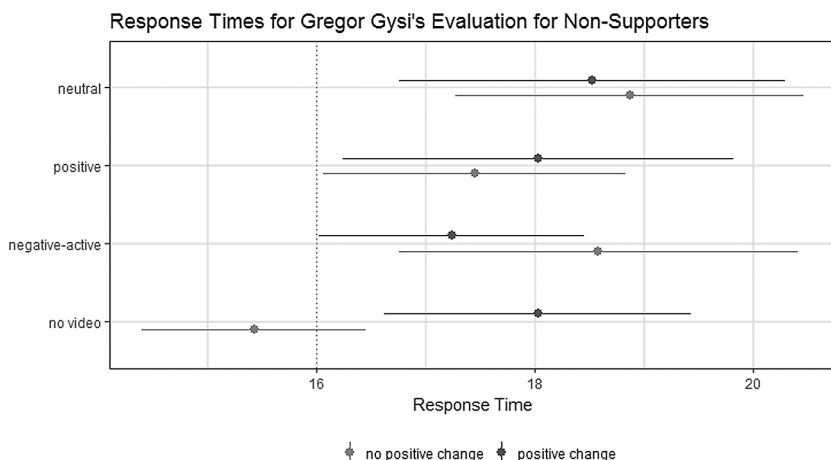
Response Times for Gregor Gysi's Evaluation for Non-Supporters

Note: The figure displays median quantile regression coefficients and confidence intervals based on Table 45 (Model 1). The dotted line indicates median response time for the control group without video treatment.

Figure 26: *Interaction Effect Between the Experimental Treatment and Positive Changes Towards Gysi for Non-Supporters (Semantic Differentials)*
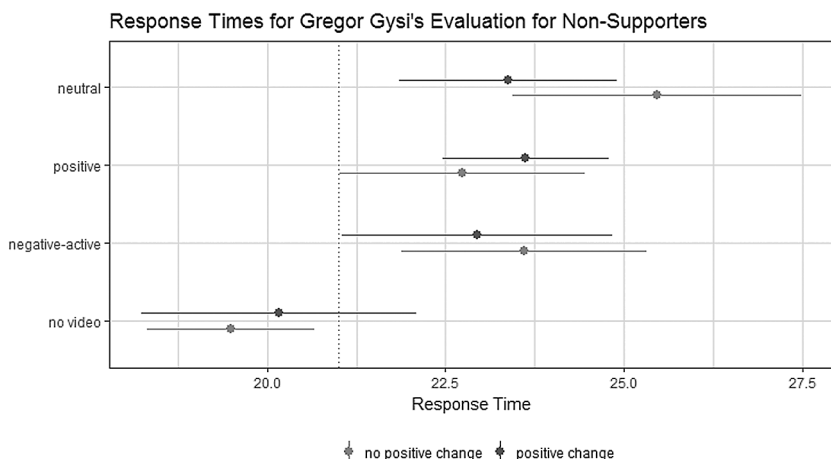
Response Times for Gregor Gysi's Evaluation for Non-Supporters

Note: The figure displays median quantile regression coefficients and confidence intervals based on Table 45 (Model 1). The dotted line indicates median response time for the control group without video treatment.

232

5.3.4 Summary of the Broader Implications

This section provides an overview of the broader implications of this study. The previous analysis focused on the longevity of the experimental effects, possible spillover effects as well as response time measurements as potential indicators of underlying mechanisms. The longevity of the experimental effects has been assessed by analyzing data from a third panel wave. At least seven days have passed between the third and second panel waves, in which the experimental treatment had been initially administered. By and large, most effects were not long-lasting, since no difference between the first wave and the third wave could be detected. This is not a surprise, as most effects were very small – even immediately after the experiment was administered. However, one exception occurred for Gregor Gysi: the treatment effects on his evaluations were the largest compared to the other politicians (Subchapter 5.1). They were also the ones that lasted the longest, although some decay occurred in comparison to the initial effects. For his overall evaluation and the evaluation of his likeability and trustworthiness, small treatment effects could be found when comparing the differences in evaluations between the first and third panel wave. Thus, the hypothesis H9 about short-term effects is partially rejected, as the analysis of Gysi's anger expressions indicates that effects can still be present one week after the initial administration of the experimental treatment.

As a second criterion to test broader implications, spillover effects were analyzed that might occur based on the evaluation of key political leaders on their respective parties. However, such spillover effects were not clearly linked to the expression of anger. A spillover effect could be found for Angela Merkel and the CDU only due to her positive emotional expressions. For the Left, a positive spillover occurred for non-supporters due to the exposure to the video clips – regardless of Gysi's emotional expressions. Only for Sigmar Gabriel was a negative spillover more closely linked to his expressions of incivility and moderated by the individual party identification. Respondents who supported the SPD remained unaffected by Gabriel's incivility in their evaluation of the Social Democratic Party. In contrast to those who supported the party, other participants (with a different or no party identification) reacted negatively to Gabriel's anger expressions and rated the SPD less favorably based on the scalometer evaluation. Overall, the analysis did not clearly support hypothesis H10, that exposure to emotional expressions of party leaders could also affect the evaluation of their respective parties. The initial spillover effects were not long-lasting, as they had disappeared one week after the initial exposure. However, contin-

uous uncivil media appearances of party leaders as well as strong emotional expressions could affect the evaluation of political parties more gradually.

Lastly, the response time was analyzed in order to test the reaction time as an indicator of the underlying causal mechanisms that could shape the candidate evaluation. The analysis provided some insights into differences between the politicians, whereby participants took longer answering items after being exposed to Gregor Gysi – a candidate that might be lesser known. After seeing Angela Merkel – the most well-known German politician – participants were faster in their responses.

This indicates that response times and cognitive processing might depend on how much previous knowledge is available to the participants. For this study, the response times were not affected by specific emotional expressions, but rather by exposure itself. Hence the hypothesis H7 about longer response times for the experimental group of anger expression is not supported by the analysis. In addition, the hypothesis H8 – whereby it was assumed that participants would take longer after reacting positively to emotional displays of a politician with low initial ratings – could also not be supported by the experimental data. This hypothesis was only tested by using data in relation to Gregor Gysi and those who did not support the Left.

6 Conclusion: Current Evidence and Future Directions in Research on Politicians' Emotion Expressions

6.1 Summary of Empirical Findings

This section summarizes the empirical findings and discusses them in light of the initial theoretical expectations. In addition to this summary, the limitations of this study are discussed and directions for future research on emotional expressions of political leaders are highlighted based on the presented findings.

This book set out to investigate the impact that politicians' expressions of anger have on citizens. The results of this investigation show that in most instances the emotional expressions of politicians, even the negative emotional expressions of anger, only induced slight changes in their evaluation, if at all. One exception in this study is the anger expressed by Gregor Gysi, which led to more substantial changes in his evaluation.

The first noticeable observation from this study is that most emotional expressions of politicians did not lead to substantial changes in their evaluation. Overall, it can be said that the effects for the three political leaders were fairly small, but more noticeable than those for male and female politicians as social groups. The most noticeable effects can be found for anger expressions by Gregor Gysi, followed by the effects on Angela Merkel's evaluations if participants also saw Gysi's anger. Nonetheless, more research into these contextual effects is needed, since they can shape the evaluation of politicians.

The effects of anger expressions for politicians as a social group are not significant in most instances, except for certain character traits that are more closely related to emotional expressions, such as being evaluated as emotional or agitated. However, none of the measurements that are commonly used to measure candidate orientation such as warmth and competence were affected by the anger expressions of male and female politicians.

The third major finding is that the impact of anger expressions depended on the status of the politicians – whether they were part of the government or opposition. For Gregor Gysi, leader of the opposition within the German Bundestag at the time of the experiment, anger expressions mainly increased his ratings in all aspects of his character traits – warmth and

235

competence. In contrast to these more favorable ratings, Angela Merkel's anger led to less positive evaluations – at least when participants were also exposed to Gysi's anger.

Ethological assumptions about the status of political leaders predict that politicians who hold power are best advised to display positive emotional expressions, such as happiness/reassurance, while politicians of the opposition could gain power by displaying anger/threat (Bucy & Grabe 2008: 84). The positive impact that Gysi's anger expressions had on his evaluation are in line with this assumption, as well as the negative evaluation of Angela Merkel's anger expressions by participants who also saw Gysi's anger expressions. The negative effects for Angela Merkel were not replicated when participants also saw Sigmar Gabriel's anger and uncivil behavior. In addition, Sigmar Gabriel's expressions had hardly any effect on the participants. It can be argued, however, that viewers might have had less clear expectations of his behavior: the video material was partially taken from news reporting on the election campaign of 2013 when Sigmar Gabriel was a politician of the opposition and attacking CDU politicians, yet he was part of the government – a grand coalition – at the time of the experiment.

In addition to the status of the politicians within the political system, this finding could be due to several reasons. It is also likely that gender stereotype expectations play a role in the assessment of these political leaders, particularly the negative evaluation of Angela Merkel by participants who also saw Gregor Gysi. Previous research has shown that negative emotional expressions by female politicians can have negative consequences for their evaluation as politicians and are therefore not advisable (Hess 2014: 70). However, if gender stereotype expectations play a role, this negative effect for Angela Merkel should have also occurred when participants were exposed to a video of Sigmar Gabriel's incivility in addition to her expressions of anger. Therefore, gender expectations might not necessarily explain the evaluation of the anger expressions of these three well-known politicians. As a more likely explanation, the findings indicate that politicians are evaluated in relation to each other.

Because voting decisions require a choice for one candidate and against another candidate (Redlawsk & Lau 2013: 131), comparative evaluations of political candidates are considered to be central aspects of electoral decisions (Rahn et al. 1990: 155). An empirical study on candidates' physical attractiveness has found that candidates are evaluated in relation to each other, by looking at the physical attractiveness of political candidates within the same constituency (Rosar et al. 2008). The authors conclude that

candidate characteristics such as attractiveness affect voters in relative terms: candidates benefit from being more attractive than their direct competition within the same constituency (Rosar et al. 2008). Hence, the comparative assessment of politicians can also extend to their emotional expressions. Although such effects are not built on strong theoretical assumptions and were only tested as potential priming effects of one politician, they were considered as potential factors and indeed present one of the central findings of this research. This finding is particularly relevant for understanding the outcome of elections and election campaigns, since voters are likely to evaluate leading politicians in comparison to each other, meaning that it might often be sufficient to appear to voters as favorable in relative rather than in absolute terms. Therefore, further research is needed into the factors that determine how and when politicians are evaluated in relation to each other. Gender stereotypical expectations can play a crucial role when politicians are evaluated in such relative terms.

This comparative assessment of politicians' emotional displays is an important finding. Future studies could focus on the nonverbal communication of politicians at public events during election campaigns. Particularly emotional expressions of politicians in TV debates should be analyzed in addition to the topics and their appearances to gain further insight into when a politician is deemed to be the winner of an argument – or even the debate as a whole.

The specific order in which politicians were seen revealed that the order of candidate appearances and displays of anger influenced their evaluation in certain instances. It could be shown that politicians might have a slight advantage by appearing first. This primacy effect could be due to an anchor heuristic that influences the processing of all subsequent information (Tversky & Kahneman 1974: 1128).

In regard to the candidate evaluation along the dimensions of warmth and competence, this study only partially supports the idea that anger expressions are beneficial for the evaluation of politicians' competence but not their warmth. For politicians as a social group, and for Angela Merkel when participants also saw Sigmar Gabriel, anger expressions did not have a significant impact on their candidate evaluations according to the overall rating, warmth, and competence. When participants also saw Gregor Gysi, Merkel's warmth and her problem-solving capabilities were evaluated less positively, while her leadership skills were not evaluated differently. Sigmar Gabriel's warmth was not affected significantly by his anger expressions, while his competence ratings – based on his leadership skills – improved after participants saw his incivility. This finding for Sigmar

Gabriel's incivility is in accordance with the previous findings of research on anger and dominance evaluations, unlike the findings for Gregor Gysi's anger.

When focusing on the political leaders as case studies, the varying effects for Gysi and Gabriel provide further empirical support for the idea that anger has a positive and a negative side (Hess 2014). Both sides evoke different responses in viewers. By analyzing the political messages in depth, it could be shown that Gysi's and Gabriel's anger expressions represented the two sides of anger: positive anger (moral outrage) versus incivility (personal attacks).

The analysis revealed that Gregor Gysi's expressions of anger and indignation led to an overall positive evaluation of his personality traits – positively impacting his warmth as well as his competence. This finding can be explained by the social function of his anger expressions. If anger is seen as a social function signaling to citizens how strongly a political leader cares about them, then this kind of political empathy (Kinder 1986: 241) could also have a positive effect on politicians' warmth. Gysi expressed his anger and indignation in regard to topics of social welfare, minimum wage, and education. Being in favor of those social policies and stressing social justice shows an empathetic response and compassion – qualities belonging to the dimension of warmth (see also Hess 2014: 63). Hence, it is not a surprise that his expressions of anger led to more favorable evaluations of warmth given the specific content of his messages.

Furthermore, this can also explain why Sigmar Gabriel's incivility did not lead to higher ratings of his warmth, since attacking opponents does not signal political empathy. This finding strongly indicates that the evaluations of anger expressions are strongly dependent on the source and target of one's anger, whether it is directed at a political opponent or caused by political issues. The findings are also in line with previous experimental research (Van't Riet et al. 2019) and by analyzing the three case studies, this book provides insights on the conditions that result in anger evoking backlash effects, as well as when it can foster support for politicians. Future research should be conducted to analyze anger expressions in relation to several political issues as well as valence and position issues.

In addition to the main effects for the experimental treatment, this study hypothesized that individual factors might shape the way in which citizens evaluate anger expressions. First and foremost, for the politicians under investigation, party identification did not add much to the explanation of individual reactions. This finding can be the result of several factors.

238

It is likely that a ceiling effect occurred for the evaluation of Angela Merkel. Supporters of the CDU evaluated her favorably in the pre-test condition (Wave 1), which was conducted in March 2015. Hence, a ceiling effect might be the reason why supporters of the CDU did not respond more positively to her anger expressions, when evaluating her competence. Similarly, supporters of the Left rated Gregor Gysi very favorably at the beginning of the experiment. Therefore, a ceiling effect can explain why supporters of the Left did not respond with more favorable evaluations than those who did not support the Left. However, his appearances appealed to a broader audience, so that those participants who did not identify with the Left evaluated him more favorably than they initially had. One further indication that the individual party identification made a difference is found when focusing on Sigmar Gabriel's anger. While it did not affect SPD supporters negatively, his anger led to less favorable evaluations for participants who supported another party or no party at all. The evaluation of politicians as a social group was not affected by whether participants supported any political party in comparison to the lack of party identification.

Whereas the individual party identification partially influenced the evaluation of politicians, no empirical evidence could be obtained for moderating effects of underlying personal traits such as neuroticism. A more finely tuned approach to measure personal attitudes towards conflict and verbal disagreements could be undertaken in future studies.

Taken together, these findings suggest a role for anger expressions in shaping candidate evaluations that moves beyond party labels. In addition, the relevance of these findings for electoral choices can be considered beyond the candidate evaluation itself. In order to test potential spillover effects of candidate evaluation onto party evaluations, the evaluation of the CDU, SPD, and the Left was measured after participants saw the video clips. No spillover effect occurred for Angela Merkel's negative-active emotional expressions, while the evaluation of the Left was affected by any exposure to Gregor Gysi, and therefore not particularly related to his anger expressions. For the SPD and Sigmar Gabriel, however, a negative spillover effect of his incivility occurred when participants stated that they did not support the SPD. Negative ratings of the Social Democratic Party did not occur for those who identified with the SPD.

These empirical findings extend the knowledge of viewers' attitude formation to effects of emotional expressions by political leaders. Until now, experimental studies have rarely dealt with the longevity of experimental effects, particularly so in regard to attitude formation. This study however

administered the same questionnaire one week after the experimental treatment occurred. By doing so, it could be shown that the positive attitude changes towards Gregor Gysi's warmth were still present within the experimental groups, and though the effects had diminished, they were still significantly higher than the assessment before the experiment was conducted. Gysi's warmth evaluation is the only case in which these longer lasting effects occurred. In all other instances, the treatment effects had disappeared after one week. Meaningful and continuing exposure to political leaders and their emotional expressions could influence the evaluation of their political parties more permanently.

6.2 Concluding Remarks and Implications for Future Research

One factor that has not yet been discussed is the individual emotional expressivity of politicians. Their emotional expressivity can affect how they are perceived and evaluated (Peterson et al. 2018). In order to evoke a shift in candidate evaluations, the emotional expressions have to be processed by voters – consciously or unconsciously. Angela Merkel is known for her lack of emotional expressivity (Mölders et al. 2017: 119). Neutral appearances, however, are advisable for female political leaders (Hess 2014: 70) and might account for her public perception as a rational leader rather than a gender stereotypical assessment as a warm but less competent woman (Eagly & Johannesen-Schmidt 2001: 783). The extensive data collection for suitable video material of Merkel's anger expressions is consistent with her public perception as being less expressive emotionally. In order to gather sufficient video material within the time frame of the data collections, CDU party conventions and speeches within the Bundestag that aired on Phoenix were screened. The political talk shows, which aired during the period of the media content analysis, provided sufficient video material for Gregor Gysi and Sigmar Gabriel. While all three video clips of the emotional expressions were coded as anger, the external classification showed that according to their facial expressions, Merkel showed anger in fewer frames and with a lower maximum probability than Gysi (40.6 percent vs. 81.1 percent). This difference is also reflected in the percentages of participants who self-reported their perceptions of the anger expressions by Merkel and Gysi (35.0 percent vs. 61.5 percent, see Subchapter 4.5). This might further indicate that there are differences in the emotional expressivity of these politicians which could have affected the evaluation of the politicians.

240

Because the scope of this study was limited to the evaluation of politicians based on their emotional expressions, it was not feasible to test the underlying causal mechanism extensively. The online survey experiments included measures of self-reported cognitive and affective reactions towards the video clips. However, this study did not include any additional experiments using physiological measurements of arousal, eye-tracking measures to determine the attention directed towards the video, or recording equipment in order to track signs of emotional contagion in respondents' facial expressions.

While such measurements can be undertaken in future research, this survey experiment was limited to self-reported measures of perceived emotional expressions and self-reported affective states. Self-reports of emotions and their perceptions have been discussed in the psychological literature as being challenging for participants (Siegert et al. 2011). Hence, measurement errors are likely to occur. From a theoretical standpoint, self-reports of emotions and perceived emotional expressions pose a significant challenge, since emotional expressions can influence participants as microexpressions that might not be detected consciously. Research has shown that emotional expressions can be processed consciously as well as pre-consciously or even unconsciously (Brader & Marcus 2013: 167–168; Ksiazkiewicz et al. 2018).

Due to the online nature of this survey experiment, however, it was possible to analyze participants' response times as an indication of fast and slow judgments. By analyzing these response times, it could be shown that expressions of anger did not necessarily lead to longer response times, since the response times depended on how familiar participants were with the politicians initially. In comparison to the control group without video treatment, Gysi's evaluation was given more thought if participants saw him in a video clip, regardless of the emotional expressions displayed. This effect did not occur for Angela Merkel, since participants took more time to rate her character traits if they did not see a video clip. These response times could indicate cognitive processes based on available – maybe even unexpected – information, whereby the nature of emotional expressions did not make a difference. Participants who saw anger expressions did not respond significantly faster. Nonetheless, the response time analysis of various politicians indicates that some underlying cognitive processes were at stake, even though the varying kinds of emotional expressions did not have a systematic effect. In addition, the analysis could not support the assumption that deeper processing is evoked by potentially irritating video clips; this was measured by the analysis of response times for the evaluation of

Gregor Gysi for those who did not support the Left and reacted positively towards the video clips. According to cognitive theories of information processing, feelings of irritation or uncertainty due to unexpected enthusiasm about candidates of another party could have led to longer response times; however, such an effect could not be found for those who reacted positively towards Gysi's anger expressions. Nonetheless, the finding is in line with previous research on exposure, whereby larger attitude changes can be expected if participants have not been highly familiarized with the stimulus (Zajonc 1968).

In addition to assessments of politicians as a social group, this study focused on potential attitude changes due to emotional expressions of three leading politicians, all belonging to political parties in the German Bundestag at the time of the investigation. Therefore, the findings for these three politicians can only be interpreted as case studies of attitudinal changes towards leading politicians. While future research could also incorporate changes in hypothetical electoral behavior in addition to attitudinal changes, fundamentally more research into emotional expressions of further politicians within the political system is needed. Further studies should consider how anger expressions by a leading female politician of the opposition are perceived, and whether existing gender stereotypes about displaying anger (Hess 2014: 70) are stronger than any positive impact anger might have. Given that social injustice is the target of anger, anger expressions by Sahra Wagenknecht or Amira Mohamed Ali (former and current Co-leader of the Left in the Bundestag, respectively) could be used as a comparison to Gregor Gysi's expressions of anger and indignation. If video clips regarding similar issues were chosen, a comparison between both politicians might give further insights into how anger of female politicians of the opposition is evaluated. Nonetheless, it must be kept in mind that people and therefore politicians have a unique individual expressiveness and so their neutral appearances have to be taken into consideration as a control group in order to avoid over-estimating the effects of emotional expressions. Future studies are well advised to treat politicians as specific case studies and measure their baseline emotional expressivity in public appearance as a point of comparison for any treatment effects.

One aim of this study was to replicate previous findings from American and French samples in the context of German politics, in which election campaigns have been previously described as tame (Tenscher 2013). It could be shown that within the context of German politics, emotional expressions of anger influence viewers; in particular, anger and indignation

of the opposition was well received, while expressions of incivility hardly had any positive impact for Sigmar Gabriel. This finding further extends to the study of populism. The Left has been classified as a left-wing populist party by political scientists (e.g., Bakker et al. 2016a; Mudde & Kaltwasser 2017); therefore, the anger expressions of a left-wing politician can be seen in light of populist appeals to voters. Criticism aimed at the status quo is one way of gaining support for parties of the opposition, but hardly possible for politicians of governing parties that are (partially) responsible for the current legislation. Thus, these findings might also translate to the study of anger expressions by right-wing populists. This route could be taken in subsequent empirical research studies.

This study has neglected the recent populist developments within Germany that have resulted in success for the Alternative for Germany (AfD), on the state level and more recently on the national level, with a vote share of 12.6 percent in the general election 2017. Specifically, the anger expressions that are shown by right-wing populist politicians in regard to the recent migrant crisis have not been under investigation in this study. These anger expressions might appeal to a certain part of the population, one which agrees with the political agenda and potentially repulses others who disagree with right-wing and extreme right-wing positions. In contrast to the findings of this study, party identification and political ideology and political self-positioning could potentially have a stronger impact on the evaluation of political candidates based on their anger expressions in regard to controversial issues such as the migration crisis. Hence, before the anger expressions of populist politicians are studied using experimental methods, it might be beneficial to apply blocking techniques in order to investigate the impact those expressions have on supporters and non-supporters or left-wing and right-wing voters, rather than an average treatment effect on a diverging issue (Gerber & Green 2012: 109–115). Such an approach is especially beneficial if convenience samples are used. Expressions of anger by right-wing leading male and female politicians should be studied to see what role gender stereotypes play. Additionally, Alice Weidel (leader of the AfD in the German Bundestag and female AfD lead in the general election campaign 2017) and Beatrix von Storch (Deputy leader of the AfD in the German Bundestag) are two female politicians whose anger expressions could be analyzed in future studies. For a cross-cultural perspective, emotional expressions of other right-wing populist politicians such as Marine Le Pen (party leader of the French Front National) and Geert Wilders (party leader of the PVV) could be analyzed in more depth. To date, only emotional expressions by U.S. President Donald Trump dur-

ing the 2016 election have been analyzed, particularly regarding expressions of contempt (Redlawsk et al. 2016; Redlawsk et al. 2018). Considering growing support for right-wing populist parties, varying forms of negative expressions – such as contempt and varying forms of anger – need to be distinguished to gain further insights into the evaluation of candidates and support for their parties and policies.

Further research might also explore responses to noteworthy anger expressions that are picked up by the media and public, for example because they violate social conventions. These future studies could be conducted as single case studies by observing and analyzing social media responses on Twitter and Facebook or comment sections in newspapers regarding the expressions of anger. Such a non-intrusive approach is not without bias, since only a small portion of the population engages politically online; however, it does not suffer from any observer and experimental effects due to artificial settings. Those case studies provide further real-world context and therefore, could also be used to advance the theoretical underpinnings regarding the role of contextual factors for the evaluation of emotional expressions. The context of emotional expression has often been deemed to be an important factor (Knutson 1996; Hess 2014; Barrett et al. 2011). However, the context is rarely analyzed systematically. Hence, case studies could analyze the context in which anger expressions are deemed appropriate, and whether they lead to changes in the evaluation of the respective politician.

Understanding the emotional appeals of politicians and the subsequent evaluations of political candidates is not only a relevant factor for the assessment of candidate appearances, and the effect of candidates within the triad of electoral vote choices (Campbell et al. 1960); it is also necessary for understanding political discourse, political developments such as populist parties gaining influence, and finally for enhancing the democratic discourse. By expressing anger at the status quo, populist leaders can signal that they understand and care about the socially deprived as well as those voters who feel neglected by the political parties in charge. Consequently, those voters may no longer trust established political parties and abstain from the ballot and other forms of political participation, unless political leaders appeal to them as voters by claiming to represent their interests in an authentic way. A small branch of research has indicated that *listening* can be a strategy applied by political representatives that could potentially improve the democratic discourse within modern societies by making it more inclusive of minorities (Bassel 2017; Dobson 2014). In light of growing populism across Europe in established democracies, democratic pro-

244

cesses need to be improved. While democratic listening might be one approach for representatives and political candidates, signaling the will to improve people's lives can certainly be used to gain support. Hence, emotion expressions and particularly anger need further attention from an empirical as well as a normative perspective in political science and political psychology. Likewise, the communicative dynamics between populist political leaders and established political leaders regarding their emotion expressions need to be analyzed in their effects on potential voters. Considering controversial topics of recent times – such as the migration crisis and climate change – can evoke varying emotion expressions from politicians across the political spectrum. Therefore, contrasting these varying emotion expressions – especially with a focus on emotional response strategies by political leaders of established parties – could further improve the understanding of candidate evaluations and citizens' support for political parties.

Finally, this study has shown that the currently predominant measurement of emotions as discrete emotions might be easily implemented by using fictitious scenarios of putative politicians; it is however much harder to implement discrete emotion expressions using real-world examples. Due to rapid changes in emotion expressions, the co-occurrence of several discrete emotions in video clips can hardly be avoided. These emotion expressions are likely to be similar or at least compatible in valence, arousal and coping potential. Therefore, this study urges the field of political psychology to reconsider the conceptual approach for the analysis of emotion expressions. Approaches that group emotion expressions along dimensions should not just consider two dimensions – valence and arousal – they should consider three dimensions: valence, arousal, and coping potential or dominance. These three dimensions are also connected to the three-factor model – happiness/reassurance, anger/threat, and fear/evasion. Focusing on the three factors and their underlying dimensions could be one way to guide future empirical work concerning politicians' emotion expressions.

The interplay of discrete emotion expressions – especially of anger, hate, contempt and disgust – should be of particular interest in future studies. It has been pointed out that some emotions overlap while they remain unique with regard to their specific appraisals, underlying targets, and aims (Fischer et al. 2018: 317). By considering the overlap and interplay of discrete emotion expressions, a deeper theoretical understanding of emotions in politics might be gained, especially with regard to the emotional appeals of right-wing populists. Different discrete emotions might be expressed according to varying channels, i.e., verbally, visually, or aurally.

Likewise, they could occur within the same channel simultaneously or sequentially (see also Fischer et al. 2018: 317). Hence, focusing on underlying commonalities, the co-occurrence, and specific use of anger, hate, and even fear should receive more attention in future research.

One strand of research has recently tried to expand the measurement of discrete emotions by connecting those to other discrete emotions, particularly anger, fear, and hope (or hopelessness), and wider-related concepts such as resentment and ressentiment in order to explain support for right-wing parties, nativist movements, and protectionist votes such as the Brexit referendum (Capelos & Demertzis 2018; Salmela & von Scheve 2018). Connecting anger expressions to these broader concepts could be a fruitful endeavor of future research. By doing so, new light might be shed on emotion expressions and polarizing political rhetoric geared towards both supporters and non-supporters.

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248

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264

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Appendix

Additional supporting information may be found in the online version of this book at the publisher's web site: