

## Procedural Fairness and Public Opinion



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# Procedural Fairness and Public Opinion

PhD Dissertation

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## Preface

This summary report integrates and summarizes the different elements of my PhD dissertation “Procedural Fairness and Public Opinion”, conducted at the Department of Political Science, Aarhus University. The dissertation consists of this summary report and five papers, which are published in or prepared for international peer-reviewed journals or books. The summary report provides an overview of the project, outlines an integrated theoretical framework for the different elements in the dissertation, and raises important discussions that go beyond the focus in the individual papers. More elaborated theoretical arguments, methods, and measurement can be found in the individual papers. Aside from the summary report the dissertation consists of the following five papers:

- A. Bøggild, Troels and Michael Bang Petersen (2015). “The Evolved Functions of Procedural Fairness: An Adaptation for Politics”, In T. Shackelford and R. Hansen (Eds.), *The Evolution of Morality*, New York: Springer, 247-276.
- B. Bøggild, Troels (forthcoming). “How Politicians’ Reelection Efforts Can Reduce Public Trust, Electoral Support, and Policy Approval”, *Political Psychology* (available for early view)
- C. Bøggild, Troels, Lene Aarøe, and Michael Bang Petersen (2016). “Cognitive Bias and Political Cynicism: Interpersonal Communication Facilitates the Spread of Media Stories about Self-Interested Politicians”, *Working paper*
- D. Bøggild, Troels and Lasse Laustsen (2015). “An Intra-Group Perspective on Leader Preferences: Different Risks of Exploitation Shape Preferences for Leader Facial Dominance”, *Invited for ‘Revise and Resubmit’ in The Leadership Quarterly*
- E. Bøggild, Troels (2016). “Politicians as Cheaters and Reciprocators: Citizens’ Cheater-Detection Psychology Monitors Politicians’ Adherence to Democratic Principles”, *Working paper*



# Chapter 1: Introduction

Citizens' trust in politicians and support for their political decisions has preoccupied political scientists for decades. Trust and support among citizens induce voluntary compliance and hence serve as some of the most fundamental premises for the viability and stability of any political system (Easton 1965). A major enterprise for political scientists is therefore to understand and explain what makes citizens trust their politicians and support the decisions they introduce. Existing accounts in political science have mainly focused on how politicians can earn the trust and support of citizens by providing them with favorable political decisions and outcomes such as ideologically appealing policies, a prospering economy, and material benefits (Allen and Birch 2015, 392-393; Hibbing and Theiss-Morse 2008, 123-124). As Ulbig (2002, 793) notes, the conventional wisdom in political science has generally been that "when people get what they want they do not care how they get it." Popkin (1994, 99), for example, represents this view when he states that voters "judge government by results and are generally ignorant of or indifferent about the methods by which the results are achieved."

A quick look at news reporting shows, however, that policies and outcomes are only one part of what receives attention in politics. In addition, the public seems to take an interest in the political process leading to such policies. As noted by Entman (2004), a substantial part of political news coverage is *procedural*, focusing on the motivations, strategies, and general conduct of politicians in the political process leading to political decisions (see also Patterson 1994; Binderkrantz and Green-Pedersen 2009; Aalberg, Strömbäck, and de Vreese 2012; de Vreese 2012). Such media coverage often exceeds that of substantive political news coverage and is, at least in part, available due to public demand (Patterson 1994; Iyengar, Norpoth, and Hahn 2004). For example, US Senator Chris Christie did not attract public attention simply because he decided to veto a bill improving pigs' welfare but because his veto was considered a strategic move to please farmers in Iowa and further his personal ambitions for the presidency. Or, Danish minister Annette Vilhelmsen did not become the center of attention simply because her ministry handed out 1 million Danish kroner to an organization but because she was recorded on camera promising the money to her friend's organization before the deadline for applying for the funds had even passed.

These examples underline an important point: Citizens do not only evaluate politicians and their decisions based on their delivery of favorable outcomes but also turn to information on *how such decisions come about*. That is, there seems to be another dimension to how citizens evaluate political

representatives and the decisions they introduce. Studying this dimension is important because it advances our understanding of what drives political trust and policy support among citizens and—possibly—how to raise it. Raising trust and support by providing everyone with favorable outcomes will often prove difficult because politics always creates winners and losers. But efforts to raise political trust and support by turning to the procedural aspects of politics should be a plus-sum game accommodating both the winning *and* the losing team.

That people care about how decisions come about is supported by decades of research on procedural fairness in social psychology. This psychological literature has demonstrated that leaders can induce trust and support among group members by making decisions in accordance with a set of simple criteria for a “fair process” (Thibaut and Walker 1975; van den Bos, Wilke, and Lind 1998; Tyler 2006; Falk, Fehr, and Fischbacher 2008). For example, Chris Christie caught the public’s attention because he failed to live up to the impartiality criterion that a leader cannot have a personal, vested interest in the decision introduced. And Annette Vilhelmsen violated the neutrality criterion by giving preferential treatment to one specific part in the process at the expense of others. Importantly, such evaluations are not focused on the content or substance of the decision. Rather, a decision maker’s adherence to a set of procedural criteria serves as an alternative source of information—or a heuristic—that allows people to form opinions about leaders and their decisions easily and rapidly without necessarily considering additional aspects of the decision. That citizens care about procedural fairness is increasingly recognized in political science (Hibbing and Theiss-Morse 2002; Ulbig 2002; Hibbing and Alford 2004; Ramirez 2008). Still, as noted by Allen and Birch (2015, p. 392), the traditional view has largely been that citizens are motivated by their “*policy* preferences and *policy* evaluations” while the conduct and strategies of politicians in political decision making “are generally thought to be much less important” (see also Smith et al., 2007, p. 288; Hibbing and Theiss-Morse, 2008, pp. 123–124).

The limited attention to procedural fairness in political science is unfortunate and leaves at least three central questions unanswered. First, we do not know how far the effects of procedural fairness found in psychology travel in a political context. Some psychologists have argued that politics is fundamentally different from the settings in which they usually study procedural fairness (e.g., the courtroom, workplace, or classroom) and that people should think about politics mainly in terms of acquiring favorable outcomes and less in terms of procedural fairness (e.g., Leung, Tong, and Allan 2007). Recently, however, important work in political science has demonstrated that procedural fairness is a central antecedent of public trust in political in-

stitutions and political cynicism (Hibbing and Theiss-Morse 2002; Ulbig 2002; de Vreese and Elenbaas 2008; Jackson 2011; Allen and Birch 2015).<sup>1</sup> Still, it remains unknown if procedural fairness is a factor in upholding citizen support for public policy or influences other key political variables like vote choice (Hibbing and Alford 2004, 73–74, Jackson 2011, 78–79). Moreover, we do not know if procedural fairness can uphold political trust and policy support both among those who get a favorable and those who get an unfavorable outcome. This would mean that efforts to raise political trust and policy support by focusing on procedural fairness, in contrast to outcomes, is a plus-sum game and could help bridge political differences and uphold stability and consent in a political system.

Second, we have no knowledge of the cognitive abilities or competencies of citizens in evaluating politicians and their decisions according to procedural fairness criteria. Existing work has demonstrated that the average citizen has difficulties distinguishing between politicians based on their ideological platforms and policy preferences and quickly forgets such information (Converse 1964; Delli Carpini and Keeter 1996). Relying on information on procedural fairness, on the other hand, could serve as a useful alternative or heuristic to citizens, allowing them to simplify opinion formation by attending only to a subset of the information available to them. However, it remains contested if citizens’ use of such heuristics in fact helps them remember and distinguish between politicians and their policies—or rather leads them astray—when forming opinions and casting their vote. That is, an extensive literature has debated the appropriateness of citizens using heuristics in political opinion formation (Converse 1964; Sniderman, Brody, and Tetlock 1993; Lau and Redlawsk 2001; Dancey and Sheagley 2013).

Third, the literature lacks a theoretical explanation for *why* people are preoccupied with procedural fairness. While psychologists have provided strong empirical evidence for people’s attention to procedural fairness, several scholars have noted that the literature remains “impoverished” (Smith et al. 2007, p. 288) and “poorly developed” (Hibbing and Theiss-Morse, 2008, p. 125) at the theoretical level (see also Árnadóttir 2002). Theoretical explanations are important in their own right. But a lack of theory is particularly problematic in this case because it causes and underlies the other shortcomings in the existing literature mentioned above. After all, it is difficult to understand the effects of something and how well it works without theoretical insights on why it exists and how it functions.

To accommodate these shortcomings in the literature—a lack of theory on why citizens attend to information on procedural fairness and, in turn, a

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<sup>1</sup> Existing work in political science is surveyed below.

limited understanding of their cognitive abilities and attitudinal responses in this regard—this dissertation asks: *Why and how do citizens use procedural fairness criteria to evaluate politicians and their policies?* The “why” and the “how” part of the research question are interrelated: It is by answering “why” such information is important to citizens that it becomes possible to answer the “how” by deducing theoretical expectations concerning the attitudes and behaviors that it produces (i.e. the first point mentioned above) and the cognitive abilities available to citizens (i.e. the second point).

The summary report proceeds in four steps. Chapter 2 reviews existing work on procedural fairness in psychology and political science and outlines a theoretical framework that allows for answering the “why” and the “how” of the research question. Chapter 3 describes and discusses the research designs and data applied in the dissertation. Chapter 4 provides a summary of the most important empirical findings for answering the research question. Finally, Chapter 5 concludes by discussing the implications of the findings and lays out potential avenues for future research.

## Chapter 2: Existing Research and Theoretical Model

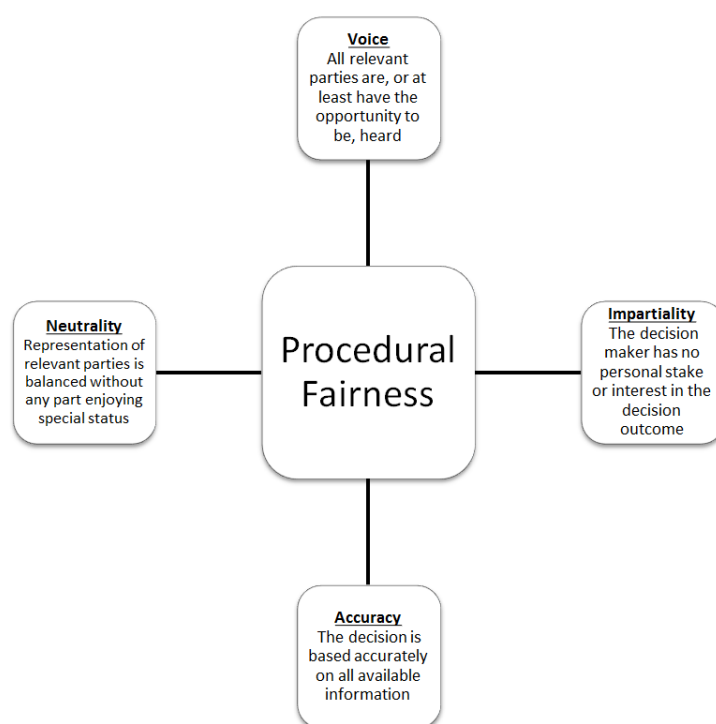
### 2.1. Procedural fairness: findings and theory in psychology

The concept of procedural fairness has received extensive scholarly attention in social science research over the last four decades. That people care not only about the substance and outcomes of decisions but also about *how decisions come about* when evaluating group leaders and their decisions has been labelled one of the most replicated findings in social psychology (Van den Bos et al. 1998, p. 1449) and has drawn considerable attention in behavioral economics as well (e.g. Falk, Fehr, and Fischbacher 2003; 2008; Ong, Riyanto, and Sheffrin 2012). This literature has uncovered several criteria for what constitutes a widely perceived legitimate or “fair” decision-making process (Lind and Tyler 1988; Van den Bos et al. 1998; Tyler 2006). For example, in his seminal book *Why People Obey the Law*, Tyler (2006) used panel data to show that people who had been in recent contact with the legal system were more likely to accept and comply with an unfavorable verdict when the judge adhered to certain procedural criteria such as allowing them to voice their opinions, appeared unbiased and impartial, and included all relevant parties in the decision-making process—even after control for the outcome of the verdict.

Another illustrative study comes from De Cremer and van Knippenberg (2003) who had subjects play a public goods game in which they had to decide how much of their own endowment (i.e., 1.5\$) they wanted to contribute to a public pot. If the public pot reached a certain size it would be doubled and afterwards divided among all players, creating an incentive for the subjects to contribute to providing this public good but simultaneously an incentive to free-ride by letting others make the necessary contributions. Each group of subjects played six rounds in total and was assigned a group leader, who decided throughout the game which subjects deserved a share of the public pot. The two authors experimentally manipulated whether or not the group leader allowed subjects to voice their opinions (as opposed to denying voice) before deciding how to divide the public pot and whether the group leader had accurate (as opposed to inaccurate) information about subjects’

contribution records to base his/her decision on. As expected, a group leader allowing voice in the decision-making process and basing the decision on accurate information significantly increased subjects' evaluations of the leader and subsequent contribution levels even after controlling for the payoffs received. These two examples illustrate the potential of using procedural fairness to keep up evaluations of leaders and their decisions without engaging in the difficult task of providing everyone with favorable outcomes. Figure 1 reports four of the most widely considered procedural criteria in the psychological literature.<sup>2</sup>

Figure 1: Procedural fairness criteria



Note: The listed criteria reflect work by Leventhal (1980), Tyler (2006), Colquitt (2001) and Blader and Tyler (2003).

The most widely applied theoretical account of these findings among psychologists is the relational model of authority (Tyler and Lind 1992). This account takes the starting point that people have a basic need to feel respected and valued by others in their group. From this perspective people care about information on procedural fairness because such information signals whether others appreciate their status and standing in the group. For example, the individual gains a positive self-image and self-esteem when being granted a

<sup>2</sup> This list is not exclusive and there is some variation in terminology within social psychological literature.



voice in group decision-making because it signals that the group leader and the rest of the group values and respects its opinions and standing in the group. This leads the individual to express trust in the group leader and support his/her decision, while trust and support is withdrawn when procedural fairness criteria are not honored (Lind and Tyler 1988; Tyler and Lind 1992).<sup>3</sup>

## 2.2. Procedural fairness in politics

While procedural fairness has been studied extensively in psychological research, its integration in public opinion research has been more limited. Studies have shown that citizens who perceive members of political institutions like the US Congress as being unresponsive to the public (i.e. voice), self-serving or “crooked” (i.e. impartiality), or too affiliated with special interests (i.e. neutrality) in political decision making are also less likely to express trust in these institutions (Tyler and Degoe 1995; Hibbing and Theiss-Morse 2002; Ulbig 2002; Allen and Birch 2015; see also Scharpf 1999). These studies are mainly correlational, however, and are therefore vulnerable to endogeneity problems such that trust in a political institution could drive public perceptions of its responsiveness, “crooked” behavior, or affiliation with special interests rather than vice versa (for two important exceptions see Tyler 1994; Ramirez 2008). Moreover, work on framing effects has provided experimental evidence that media coverage focusing on the strategic and self-interested motivations of politicians in introducing decisions can make citizens more cynical about politics (e.g., Cappella and Jamieson 1997; de Vreese and Elenbaas 2008; Jackson 2011). Finally, political scientists have tested the effects of procedural fairness in one-on-one economic games showing that players are less inclined to accept an unfavorable monetary payoff when an allocator intentionally (rather than coincidentally) keeps a large payoff for himself (Hibbing and Alford 2004; Smith et al. 2007). These contributions are important but have also led scholars to call for studies of the effects of procedural fairness outside the economic game context with real elected representatives and on key political variables like vote choice and support for public policy (Hibbing and Alford 2004, pp. 73–74; Jackson 2011, pp. 78–79).

On the one hand, the limited attention to the role of procedural fairness in research on public opinion is surprising. As mentioned above, media coverage on the procedural aspects of politics—focusing on the responsiveness, motives, and general “legitimacy” of political actors in policy making (Ent-

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<sup>3</sup> For a full review of existing theory in psychology, see Article A.

man 2004, 5, 81–82)<sup>4</sup>—is massive and sometimes even exceeds news coverage on the content and substance of policies (Patterson 1994). In particular, the media take an interest in politicians’ career-conducive and vote-maximizing efforts and motivations in political decision making (Aalberg et al. 2012; de Vreese 2012). As illustrated by the Chris Christie example above, the media often adopt a “strategy frame” focusing on the political and strategic motives and actions behind a political decision rather than an “issue frame” describing the content and substance of the decision itself. Moreover, such information is in high demand by consumers (Iyengar et al. 2004), likely because it serves as an alternative source of information or heuristic that allows them to form political opinions by attending only to a subset of the information available to them.

On the other hand, the limited integration of the procedural fairness literature in political science makes sense considering the theoretical framework available in the existing psychological literature. The relational model of authority (described above) holds that information on procedural fairness is important to people because it affects their self-image and self-esteem by signaling whether they are respected and valued by others in the group. This makes sense in small-scale settings with personal interactions (e.g. the workplace, courtroom, or classroom) in which most psychological research on procedural fairness has been conducted. But it seems less straightforward why information on procedural fairness of political institutions or politicians should influence the self-image and self-esteem of citizens or make them feel more or less respected and valuable to the group. This has led some psychologists to conclude that procedural fairness should be less important in a political context (Leung et al. 2007), reinforcing the traditional notion that citizens in the domain of politics care only about “outcomes,” “results” (Popkin 1994, p. 99), and “realpolitik” (Leung et al. 2007, p. 477).

This underlines how the main obstacle for research on the role and effects of procedural fairness in public opinion formation is theoretical. As critics have noted, the problem at the theoretical level is not just that we lack an understanding of why people attend to information on procedural fairness when evaluating leaders and decisions but also why they have these basic fairness intuitions in the first place (Smith et al. 2007, p. 288; Hibbing and

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<sup>4</sup> The term “procedural” is often used to describe additional aspects of political news coverage including horserace coverage on winning and losing and inter- and intra-party negotiations and conflict (Binderkrantz & Green-Pedersen 2009; Aalberg et al. 2012). However, these aspects are often unrelated to the concept of procedural *fairness* and are generally considered less relevant in shaping public opinion (De Vreese 2004, p. 295; Aalberg et al. 2012, p. 167).

Theiss-Morse 2008, pp. 125–126). It is by knowing why something exists that we become able to understand its effects and how it functions.

### 2.3. Addressing the “why”: the origins and functioning of political heuristics

As mentioned above, citizens’ reliance on information on procedural fairness can be thought of as a heuristic. Heuristics are simple decision rules that simplify and reduce the complexity in opinion formation by producing quick judgments based on limited information. Heuristics thus prompt individuals to form opinions rapidly and effortlessly based only on a narrow subset of the information available to them (Kuklinski and Quirk 2000; Gigerenzer, Todd, and the ABC Research Group 2001; Evans 2008; Petersen 2015).<sup>5</sup> In this sense people’s use of information on procedural fairness to evaluate political decision makers and their policies can be understood as a simple heuristic that simplifies decision making without attending to additional aspects of the decision.

In general, there are two types of heuristics: top-down and bottom-up. Each has different origins and functions in human decision making (Gigerenzer et al. 2001; Evans 2008; Petersen 2015). A top-down heuristic is learned through exposure to institutions, cultural norms, or elite debate in a specific context (Sniderman et al. 1993; Eagly and Chaiken 1993). This means that the selection of top-down heuristics used by an individual depends on the environment in which the individual is situated. From this perspective the attention to procedural fairness could be a product of cultural socialization in which individuals in democratic societies learn to perceive decision makers and their decisions as more legitimate or “fair” when they are carried out in accordance with democratic norms and rules. Tyler (2006, 109), for example, notes that it “seems likely that these views develop during the process of cultural socialization” but also adds that “little is known about

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<sup>5</sup> In contrast to this definition, traditional work in political science has generally defined heuristics narrowly as consciously employed “information shortcuts” that help citizens compensate for lacking knowledge and, ultimately, form coherent and stable political opinions in line with their ideological or material interests (e.g. Sniderman et al. 1993; Lupia 1994). Hence, political scientists generally perceive heuristics as simple means to obtain favorable political outcomes. Instead, this project adopts the original, psychological understanding of heuristics as automatic, “fast and frugal decision rules” that can serve different purposes and motivations in opinion formation depending on the heuristic at hand (for discussions see Kuklinski & Quirk 2000; Petersen 2015).

the origins of procedural preferences.” Yet, studies in psychology have demonstrated that evaluating leaders and their decisions according to procedural fairness criteria is not restricted to populations in democratic countries. The effects of procedural fairness have been replicated in diverse countries including China (Wiling 2011), Singapore (Khatri, Fern, and Budhwar 2001), Russia (Giacobbe-Miller, Miller, and Victorov 1998), and even in modern hunter-gatherer societies largely precluded from modern civilization (Meggitt 1978; Boehm 1993; see also Van Vugt, Hogan, and Kaiser 2008). Moreover, work in developmental psychology has demonstrated that procedural fairness intuitions emerge naturally in humans as part of a normal developmental process around the age of 6-7 (Gold et al. 1984; Hicks and Lawrence 1993; Grocke, Rossano, and Tomasello 2015). This provides *prima facie* evidence that people’s preoccupation with procedural fairness should not be understood with reference to cultural exposure to specific norms or institutions but that this disposition has deeper psychological roots.<sup>6</sup>

A bottom-up heuristic is not a product of learning in the specific environment but emerges reliably in all humans during normal development. This type of heuristic is thus part of our basic nature and exists because it evolved over evolutionary history as a solution to a recurrent threat to survival faced by our ancestors (Tooby and Cosmides 1992; Gigerenzer et al. 2001). Recent work in political science has demonstrated that many of the heuristics people use in political opinion formation are bottom-up heuristics (Haidt 2013; Petersen 2015). This is because many of the survival-related problems humans have faced ancestrally are also important political problems in modern society. For example, humans have recurrently faced the basic (political) problem of being taken advantage of by other group members engaging, for example, in criminal activity or free-riding. To effectively deal with these threats humans evolved a set of heuristics prompting them to respond in specific, survival-conducive ways whenever the given problem presented itself (Gigerenzer et al. 2001; Cosmides and Tooby 2006). These heuristics also guide opinions when citizens reason about structurally similar modern political issues such as how to deal with criminals or welfare recipients in need (Cosmides and Tooby 2006; Binmore 2011; Petersen et al. 2012; Haidt 2013; Petersen 2015).

From this bottom-up perspective the attention to procedural fairness could be an integral part of our psychology because it serves to detect and counter-act exploitation or “cheating” on the part of other individuals. Information on procedural fairness is not relevant in dealing with criminals or

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<sup>6</sup> For further support for this notion from neurobiology, anthropology, and developmental psychology see Article A.

welfare recipients but is specifically tied to the behavior of leaders in group decision making. Hence, attention to procedural fairness should be useful in instances where decision-making authority is delegated to another individual, introducing the risk of exploitation or “cheating” on the part of a group leader who uses this position to fulfill personal rather than group interests. This interpretation implies (in contrast to existing theory surveyed above) that information on procedural fairness should be important to citizens in a political context. In fact, because procedural fairness intuitions are designed to protect the individual follower from exploitation when delegating decision-making authority to others, it is essentially an adaptation *for* politics—that is, a simple means to allow groups of cooperative individuals to solve coordination problems through leadership without imposing costs on followers. *Article A* presents this theoretical account in full and reviews a broad set of empirical findings across different fields including social psychology, anthropology, neurobiology, and developmental psychology consistent with this account.

These insights on the origin and purpose of this heuristic are important because they generate a set of observable implications concerning its effects and functioning in political opinion formation. Hence, the aim and focus of the dissertation is not to provide evidence for the notion that this heuristic has evolutionary origins but rather to utilize this insight to introduce a theoretical framework that can inform and guide research on the issues raised above—whether and to what extent citizens use information on procedural fairness to evaluate politicians and their decisions, and if citizens possess cognitive abilities to make such evaluations. From this theoretical framework flows a range of insights on how the brain is configured to detect and counter-act exploitation and “cheating” on the part of other individuals, including leaders. These insights provide the basis for theorizing about and answering the “how” part of the research question.

## 2.4. Addressing the “how”: mapping the structure and content of the procedural fairness heuristic

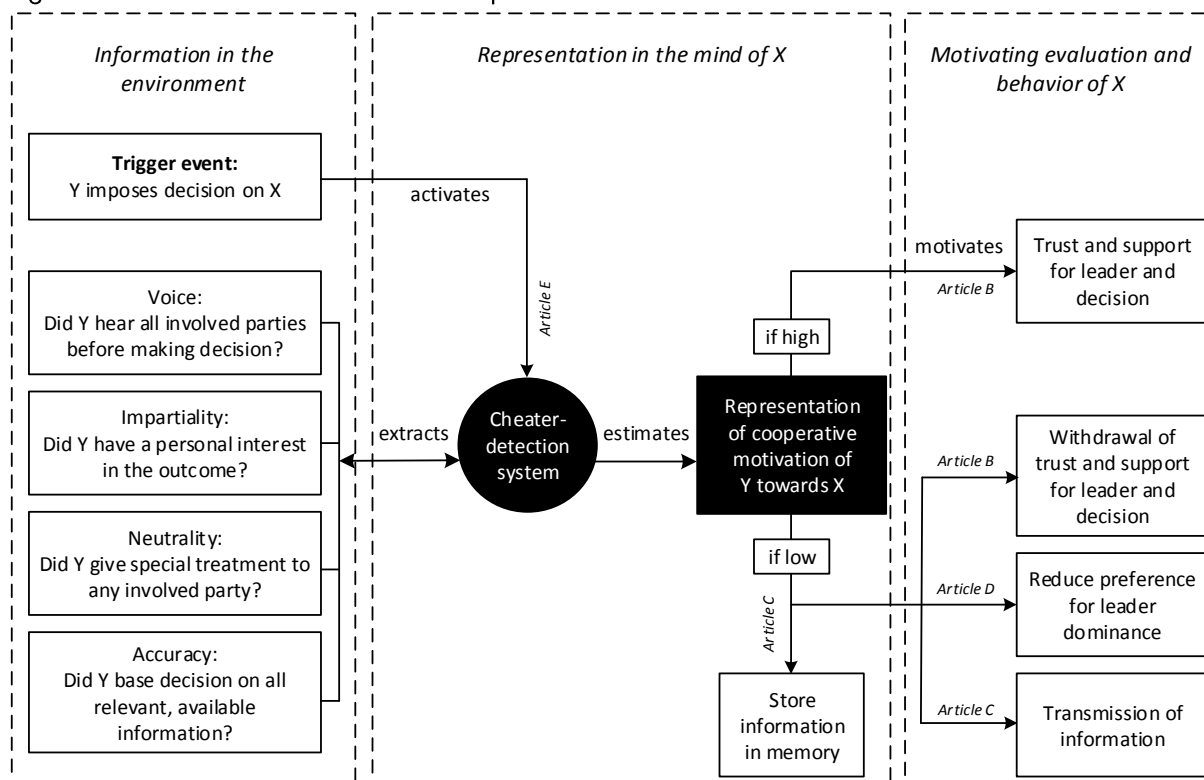
Bottom-up heuristics are designed to help the individual overcome a recurring threat to survival over evolutionary history (i.e. an adaptive problem). Such heuristics therefore entail two components that are essential for allowing the individual to respond in survival-conducive ways when an adaptive problem presents itself. First, bottom-up heuristics entail a *motivational system* that motivates the individual to react in specific ways that, on average, would have increased chances of survival in situations where the adaptive problem was present. Second, bottom-up heuristics entail a *representa-*

*tional system* that allows the individual to automatically and reliably detect cues from the environment signaling that the adaptive problem is present (Kiyonari, Tanida, and Yamagishi 2000; Tooby, Cosmides, and Barrett 2005; Delton and Sell 2014; Petersen 2015). A simple example of a bottom-up heuristic comes from the literature on pathogen avoidance. Because our ancestors have faced the recurring adaptive problem of being infected by pathogens, nature selected for a sophisticated bottom-up heuristic to deal with this type of threat. This heuristic entails a motivational system that makes people strongly averse to objects holding potentially harmful pathogens (e.g. rotten food, open wounds, or sick individuals) and a representational system that automatically and reliably allows them to detect cues signaling that such threats are present (e.g. through smell, taste, or visual cues) (Faulkner et al. 2004; Oaten, Stevenson, and Case 2009).

The bottom-up perspective on heuristics implies that people process and respond to information on procedural fairness in a structurally similar way. Specifically, citizens should be equipped with a *procedural fairness heuristic* entailing both a motivational system that makes them respond to information on leaders' adherence to procedural fairness criteria in specific ways that would have been adaptive over evolutionary history and a representational system that enables them to form reliable evaluations of leaders' behavior to act upon. In other words, the bottom-up perspective generates two sets of theoretical expectations that help answer the "how" part of the research question—how citizens respond to information on politicians' adherence to procedural fairness (facilitated by the motivational system) and their cognitive abilities in making such evaluations (facilitated by the representational system). These two sets of theoretical expectations are fully laid out and tested in the four empirical articles of the dissertation (Articles B-E). Figure 2 provides a brief overview or road map of the theoretical expectations and how the articles fit together.

As depicted in the upper left corner of Figure 2, the trigger event that activates the procedural fairness heuristic is when a group leader enforces a decision upon the individual. This information indicates that the adaptive problem that the procedural fairness heuristic evolved to accommodate—exploitation in the situation where decision-making authority is delegated to another individual—could be present. This activates, first, the representational system of the heuristic and, in turn, its motivational system.

Figure 2: The content and structure of the procedural fairness heuristic



Note: Adapted from Figure 2 in Petersen (forthcoming, p. 35) mapping the structure and content of the deservingness heuristic.

The first set of theoretical expectations relates to the representational system, which allows the individual to form precise and reliable evaluations of whether the decision is an act of exploitation or pro-social, group-oriented behavior on the part of the leader. Specifically, the representational system should assist the individual in forming precise and reliable evaluations in two ways (as depicted in the center column of Figure 2). First, as outlined in the figure, the trigger event activates a cheater-detection system that automatically directs the attention of the individual to information from the environment on whether the decision was made in accordance with procedural fairness criteria and reliably categorizes the leader as a “cheater” or “reciprocator” on this basis. *Article E* tests the prediction that citizens possess a cheater-detection system that allows them to effectively and reliably seek out information on whether politicians display “cheating” or “cooperating” behavior through adherence to procedural fairness criteria. Second, this information is then used to build a representation in the mind of X of whether the group leader displays cooperative motivations, and if the information indicates low cooperative motivations of the leader it is stored in X’s memory in

order to avoid future exploitation or cheating on the part of this individual.<sup>7</sup> *Article C* tests if citizens exhibit enhanced memory for information on “cheating” behavior by politicians (i.e. violations of procedural fairness criteria) compared to other types of political information.

The second set of theoretical expectations concerns how the motivational system of the heuristic directs opinions and behaviors of the individual in ways that, on average, would have been adaptive responses to the given situation picked up by the representational system. Specifically, the theoretical framework generates three insights on how the motivational system of the heuristic should make citizens respond to information on procedural fairness (depicted in the right column of Figure 2). First, if the decision is introduced in accordance with procedural fairness criteria (and, as a result, the cooperative motivations of a political leader are deemed high), the motivational system should lead the individual to express trust and support for the political decision maker and its decision, whereas trust and support should be withdrawn if procedural fairness criteria are violated. *Article B* investigates if procedural fairness is a central factor in upholding political trust and support for public policy and affects vote choice among citizens—and whether these effects appear among recipients of both favorable and unfavorable outcomes.

Second, the theoretical framework implies that the effects generated by the motivational system should extend even further. Specifically, the theoretical framework generates the unique insight that humans react to information on cheating dispositions and behaviors of an individual by broadcasting or transmitting such information to others in order to mobilize support against and counteract such individuals. *Article C* tests whether information on politicians who violate procedural fairness criteria not only affects citizens directly but is also more likely to be transmitted through interpersonal communication than regular issue-relevant political information and, ultimately, reaches more individuals and causes more extensive indirect effects—or ripple effects—on opinions throughout social networks.

Third, the theoretical framework implies that information on procedural fairness should not only shape trust and policy evaluations but also leader preferences more generally. Specifically, when decisions are adopted in violation of procedural fairness criteria (and the cooperative motivations of the

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<sup>7</sup> Specifically, the theoretical argument is that information on low cooperative motivations takes priority in X’s memory because forgetting that someone is a cheater (i.e. leaving you vulnerable to future exploitation) would have had more serious fitness consequences than forgetting that someone is a reciprocator (i.e. missing future opportunities for cooperation) (see Nairne and Pandeirada 2010; Bell and Buchner 2012).



political decision maker are deemed low), the motivational system should shift preferences towards a different type of leader from whom the risk of exploitation should be smaller. *Article D* tests if experimentally priming citizens with risks of politicians violating procedural fairness criteria leads them to choose a less dominant, physically formidable political candidate (perceived as less capable of engaging in exploitation)—and if priming them with risks of free-riding and criminal behavior from other group members leads them to opt for a more dominant, physically formidable candidate (perceived as better capable of sanctioning criminal and free-riding behavior). This would underline how concerns with procedural fairness and exploitation on the part of leaders shape preferences for candidate traits more generally—but also how these concerns are in competition with other concerns, which can influence preferences for politicians in the opposite direction depending on which concerns or problems are currently salient to the individual in the specific situation. In this sense, *Article D* tests both the reach and potential scope conditions of the effects of procedural fairness.

In sum, the research question of the dissertation—*Why and how do citizens use procedural fairness criteria to evaluate politicians and their policies?*—is addressed in three parts. First, to answer the “why” part, the dissertation parts with existing theoretical work in social psychology and argues based on evolutionary theory that people attend to information on procedural fairness as a means to detect and counteract exploitation on the part of political leaders. This theoretical account is fully laid out in *Article A*. These insights provide the basis for theorizing about and answering the “how” part of the research question, which is addressed in two parts. Second, the dissertation addresses the first part of the “how” question concerning the effects and potential scope conditions of procedural fairness in public opinion formation (facilitated by the motivational system). These effects and scope conditions are tested in *Articles B-D*. Third, the dissertation turns to the second part of the “how” question focusing on the abilities or competencies of citizens in evaluating politicians and their decisions according to procedural fairness criteria (facilitated by the representational system) addressed in *Articles C and E*. Chapter 3 introduces the research designs and data used to test the theoretical expectations.



## Chapter 3: Research Design and Data

As outlined in Chapter 2, understanding why and how citizens attend to information on procedural fairness in politics requires careful attention to the psychological processes and motivations underlying political cognition and decision making. This raises substantial methodological challenges and requires research designs and experimental protocols beyond those currently applied in political science research. To meet these challenges, the dissertation adopts a mixture of survey experimental designs that are well known to political scientists and new research designs from the cognitive sciences. In this chapter I first provide an overview of the research designs and data of the nine studies testing the theoretical expectations. Second, I discuss the advantages of using an experimental approach to answer the research question of the dissertation. Third, I lay out the measures taken in the studies to increase the external validity of the findings.

### 3.1. Overview of studies in the dissertation

As illustrated in Table 1, the dissertation draws on rich data material to test its theoretical expectations and offers extensive variation in the type of experimental treatment, dependent measures, and subjects surveyed across the studies. Specifically, the conclusions of the dissertation rest on nine empirical studies distributed across the four empirical articles (Articles B-E). Studies 1-4 adopt a survey experimental approach to test the effects of procedural fairness on citizen political trust, vote choice, and support for public policy in Article B. These studies use two types of experimental treatments in terms of manipulated political information presented as either real newspaper articles or vignettes and survey 871 Danish students through paper-and-pencil and online questionnaires.

Table 1: Overview of studies

	Applied in article	Short description	Experimental treatment	Subjects and number of cases	Mode of data collection	Data collection period
1	"How Politicians' Reelection Efforts" (Article B)	Testing effects of procedural fairness on political trust, vote choice, and policy support	Manipulated fictitious newspaper articles	Danish medical students (N = 154)	Paper-and-pencil survey	September 2013
2	"How Politicians' Reelection Efforts" (Article B)	Testing effects of procedural fairness on political trust, vote choice, and policy support	Manipulated fictitious newspaper articles	Danish law students (N = 515)	Paper-and-pencil survey	April 2013
3	"How Politicians' Reelection Efforts" (Article B)	Testing effects of procedural fairness on political trust, vote choice, and policy support	Manipulated vignettes describing policy	Danish medical students (N = 154)	Paper-and-pencil survey	September 2013
4	"How Politicians' Reelection Efforts" (Article B)	Testing effects of procedural fairness on political trust, vote choice, and policy support	Manipulated fictitious newspaper articles	Danish political science students (N = 202)	Online survey	March 2015
5	"Cognitive Bias" (Article C)	Testing memory + motivation in transmitting information on procedural fairness vs. outcome	Manipulated fictitious newspaper articles	US subjects recruited through MTurk (N = 1555)	Online survey	September-October 2015
6	"An Intragroup Perspective" (Article D)	Testing effects of procedural fairness on preference for candidate dominance	Manipulated vignettes for leader choice	Danish citizens (app. representative*) (N = 312)	Online survey	July 2014
7	"An Intragroup Perspective" (Article D)	Testing effects of procedural fairness on preference for candidate dominance	Manipulated vignettes for leader choice	US subjects recruited through MTurk (N = 808)	Online survey	June 2014
8	"Politicians as Cheaters" (Article E)	Testing cheater-detection abilities for leader adherence to procedural fairness criteria	Wason selection tasks	Danish citizens (app. representative*) (N = 312)	Online survey	July 2014
9	"Politicians as Cheaters" (Article E)	Testing cheater-detection abilities for leader adherence to procedural fairness criteria	Wason selection tasks	US subjects recruited through MTurk (N = 808)	Online survey	June 2014

Note: The table is adapted from Slothuus (2008, p. 31).

\* The sample was approximately representative based on quota sampling on age, sex, education, and region

Study 5 consists of two consecutive experimental online surveys conducted among a diverse sample of 1555 US subjects recruited through Amazon Mechanical Turk (MTurk) applied in Article C. This study uses manipulated political news stories presented as real newspaper articles and adopts a unique research design emulating the children's game "Telephone" to observe systematic biases in the transmission and memory of different types of political information. This design is used in two separate and slightly different experiments to test if news stories including information on politicians' violations of procedural fairness criteria (here in terms of the widely used "strategy frame") are better remembered by citizens and are more likely to be transmitted to other individuals than news stories including regular, issue-relevant political information (here in terms of the traditional "issue frame").

Studies 6-7 test the effects of information on procedural fairness on leader preferences more generally. The studies use the software program PsychoMorph to manipulate facial dominance of real-life political candidates from Scandinavia. This allows for a test of whether preferences for candidate facial dominance vary when subjects are experimentally primed with risks of politicians violating procedural fairness criteria (i.e. exploitation on the part of leaders) and risks of criminal activity and free-riding behavior (i.e. exploitation on the part of other group members). This expectation is tested in two different cultures using an approximately representative sample of Danish citizens (Study 6) and a diverse sample of US subjects recruited through MTurk (Study 7).

Studies 8-9 investigate if citizens have a cheater-detection system that automatically directs the attention of the individual to information on whether political decisions are made in accordance with procedural fairness criteria. Specifically, the two studies adopt an experimental protocol from psychology, The Wason Selection Task (WST), to test if citizens possess specialized cognitive abilities for reliably and effectively detecting politicians who violate procedural fairness criteria compared to other similar and logically equivalent cognitive tasks. For the first time, these studies include the WST in cross-national and nationally representative surveys and apply the method to the domain of politics. These cognitive abilities are tested among an approximately representative sample of Danish citizens (Study 8) and a diverse sample of US subjects recruited through MTurk (Study 9).

### 3.2. Advantages of an experimental approach

As mentioned above, most of the existing work investigating effects of procedural fairness on public opinion is correlational and therefore struggles with issues of endogeneity. Specifically, these studies primarily show that citizens

who perceive politicians or political institutions as carrying out political decisions without honoring procedural fairness criteria are also less inclined to express trust in such authorities, leaving them vulnerable to problems of reverse causality and omitted variable bias. In comparison, an experimental approach makes it possible to cope with such issues and obtain high levels of internal validity by randomly assigning subjects to different experimental treatments. This approach allows us to draw inferences about causal relationships by offering full control over the variation on independent and moderating variables and ensuring that such variables are exogenous to potential third variables and appear temporally before the dependent variable. Moreover, testing the cognitive abilities available to citizens when they process different types of political information requires sophisticated and innovative experimental protocols beyond traditional cross-sectional survey methods. Hence, there are multiple reasons for adopting an experimental approach to answer the research question of the dissertation. However, an experimental approach also raises challenges in terms of obtaining sufficiently high levels of external validity. In the next section I discuss the measures taken in the different studies to keep up external validity while still repeating the benefits offered by an experimental approach.

### 3.3. Increasing external validity

The efforts to increase the external validity of the findings presented in this dissertation generally center on three aspects. First, the dissertation entails careful attention to the choice of subjects surveyed in order to produce valid estimates of the opinion formation and cognitive abilities among ordinary citizens. To this end, two of the studies (studies 6 and 8) were carried out with an approximately nationally representative sample of Danish citizens representing the ideal subject diversity for estimating treatment effects among citizens. While nationally representative samples are ideal they are also expensive; as a result, the dissertation also builds on convenience samples consisting of students and US subjects recruited through the online platform Amazon Mechanical Turk (MTurk). Students differ from the general population by being younger, more liberal, less educated, and having lower incomes (Mullinix et al. forthcoming). US Subjects recruited through MTurk are generally quite diverse, especially compared to student samples or other convenience samples. Still, subjects recruited through MTurk tend to be slightly more liberal, politically knowledgeable, and score higher on psychological dispositions like need for cognition or need to evaluate compared to the general population (Berinsky, Huber, and Lenz 2012; Huff and Tingley 2015). However, importantly for the validity of the findings of the disserta-

tion, several studies have demonstrated that estimated treatment effects of experimental studies are virtually identical across MTurk and state-of-the-art, population-based representative samples (Berinsky, Huber, and Lenz 2012; Clifford, Jewell, and Waggoner 2015). This also seems to be the case with student samples despite their lower levels of proximity to population representative samples (Mullinix et al. forthcoming). Hence, while convenience samples based on MTurk subjects or students vary somewhat from subjects in nationally representative samples on central political and psychological variables, their responses to experimental treatments seem largely indistinguishable from those of the general population. As demonstrated in Articles D and E (using both MTurk samples and nationally representative samples), this is also the conclusion reached in this dissertation. In addition, the dissertation recruits subjects from two diverse countries, Denmark and the US. These countries vary on central political variables like welfare regimes, electoral systems, and (political) culture more generally (Nelson and Shavitt 2002). Hence, replicating the findings across such different contexts provides confidence in the generalizability of the findings and in the theoretical account stressing the operation of an evolved, universal psychological system.

Second, the dissertation raises the external validity in Studies 1-5 by providing subjects with realistic experimental treatments in terms of political news stories presented as real newspaper articles. Moreover, the news stories mostly include real-life political decision makers like EU politicians or the Danish government. Finally, these news stories focus on real-life, salient political issues like employment, educational programs, growth initiatives, and environmental policies. These steps each help ensure that the experimental effects demonstrated through the studies hold up in a realistic context with real-life political decision makers and on salient political issues. This realism also makes the studies a hard test of the theoretical expectations in the sense that subjects' political opinions are harder to "move" when they concern well-known political decision makers and issues on which subjects already hold stable and highly crystalized attitudes.

Third, the dissertation uses different modes of data collection that each situates the subjects in a natural, comfortable setting that closely resembles their real-world environment. A frequent objection to experimental studies is that they often place subjects in a highly sterile and unfamiliar research context (such as a campus laboratory), which could inflate or bias treatment effects (Gaines, Kuklinski, and Quirk 2007, p. 16). To deal with these potential issues the data collection for the different studies were conducted in subjects' immediate environments. Studies 1-3 were conducted in the students' regular classrooms. While this setting might feel less familiar and safe to subjects

than their own home it is closer to their real-life environment than, for example, a laboratory setting. Studies 4-9 were fielded to subjects through an online platform, which allowed subjects to fill out the questionnaire at a time of their own choice and in a setting with a natural level of distraction compared to the settings in which they usually read news and form political opinions (e.g. their home, the bus etc.). These modes of data collection each serve to bring the research environment in which the subject is situated as close as possible to their daily routine and real-life environment.



## Chapter 4: Summary of Findings

As mentioned above, the research question is answered in three parts. While Chapter 2 outlined a theoretical model for “why” citizens attend to information on procedural fairness (fully laid out in Article A), this chapter reports the two sets of empirical findings that this theoretical model has generated on “how” they respond to such information (fully laid out in Articles B-E). The chapter first reports the findings on how and to what extent information on procedural fairness influences the political opinions and preferences of citizens (facilitated by the motivational system of the procedural fairness heuristic) and next, whether they possess cognitive abilities for processing such information (facilitated by the representational system).

### 4.1. Procedural fairness and political opinions: effects and scope conditions

The first set of empirical findings concerns the effects and potential scope conditions of procedural fairness in public opinion formation. This part consists of three key insights or contributions to the existing literature.

First, from the theoretical framework introduced above we should expect that the findings on procedural fairness in psychology should travel in a political context and that information on procedural fairness should have a bearing on political trust, policy support, and vote choice of citizens. To test this basic expectation, *Article B* shows through four survey experiments manipulating decision-maker impartiality that citizens evaluate politicians and the policies they introduce according to procedural fairness criteria. In Study 1, for example, subjects were asked to read a short news article describing a (fictitious) political decision initiated by the EU Committee on Culture and Education to invest additional resources in higher education. The political decision was a trial or experimental scheme, in which eight pilot member countries were chosen to test the effects of further investments in higher education. The article was manipulated in two ways (i.e. a 2x2 design). First, the impartiality of the decision maker was varied by manipulating how the trial member countries were chosen. The partial edition mentioned that the chairman of the committee had included his home country in the experimental scheme in an attempt to increase his popularity and reelection chances in his home country. The impartial edition mentioned that the countries were chosen randomly. Here, randomness served as an analytically

clean operationalization of decision-maker impartiality as it is, by definition, free of intent and beyond the influence of any personal agenda. Hence, the outcome was kept constant while the impartiality of the procedure or allocation mechanism through which the decision was obtained varied. Second, the favorability of the outcome was manipulated. Since respondents in this survey were Danish, the favorable edition read that the chairman was Danish and had (either randomly or motivated by personal reelection) included Denmark in the trial scheme, while the unfavorable condition read that the chairman was Belgian and had included Belgium at the expense of Denmark. Manipulation checks confirmed that an allocation mechanism based on randomness was perceived as markedly more “fair” than an allocation mechanism based on reelection motives of the politician, and that the outcome was perceived as more “favorable” when the subjects’ own country (Denmark) was included in the trial scheme. As expected, the results showed that subjects were significantly more inclined to trust and vote for the politician and support the trial scheme when the countries were chosen randomly rather than based on reelection motives. Moreover, these effects were strong and significant in both the favorable and unfavorable condition such that an impartial decision maker had positive effects both among those getting a favorable and an unfavorable outcome. These findings underline how citizens are not only motivated by obtaining favorable outcomes, and that procedural fairness has the potential to raise and uphold political trust among both the winning and the losing team. The results were replicated across four studies using different manipulations of procedural fairness and outcome favorability, different political issues, and including politicians, parties, and the Danish government as decision makers.

Second, we should expect that the effects of procedural fairness extend even further than outlined above. As argued in Chapter 2, information on politicians violating procedural fairness criteria should not only affect the opinions of citizens directly but should also be more likely to get transmitted through interpersonal communication than regular issue-relevant political information and thus have a wider impact on political opinions. To test and support this expectation *Article C* adopted a survey research design emulating the children’s game “Telephone,” which allows for a test of which types of political information are more likely to get transmitted and affect opinions through inter-personal communication. Specifically, US participants were instructed to read two news articles: A film review and a political news story describing a new policy enacted by Congress at the initiative of Congressman Scott Harris. All subjects read the same film review but were randomly assigned to read one of two versions of the political news story. One version focused on the content of the policy by describing how Scott Harris was aiming

to improve US competitiveness in the face of increasing globalization (i.e. an issue frame), while the other version focused on the procedural aspects of the policy by describing how Scott Harris was attempting to improve his reelection chances in his home state (i.e. a strategy frame).<sup>8</sup> After reading both articles, subjects were asked for their opinions on the matter and to choose which of the two articles to recollect and retell to a new participant in the survey. These recollections were then passed on to a new set of participants in a new survey, who were also asked for their opinions and which of the two articles they preferred to recollect and retell. The results showed, as expected, that participants to a higher extent chose to pass on the political news story (over the film review) when it adopted a strategy frame rather than an issue frame, and that the strategy frame drove down trust in the politician, inclination to vote for the politician, and support for the policy in both rounds of the study. Hence, information on politicians' adherence to procedural fairness criteria not only affects the opinions of citizens directly but also reaches more individuals and causes more extensive indirect effects on opinions throughout social networks.

Third, the theoretical framework outlined above suggests that information on procedural fairness should also shape preferences for dominance in political leaders. To test this prediction, *Article D* primed subjects with either risks of politicians violating procedural fairness criteria (i.e. exploitation on the part of leaders) or risks of free-riding and criminal activity on the part of other citizens (i.e. exploitation on the part of other group members) and subsequently measured preferences for facial dominance through morphed images of real-life political candidates. As expected, priming subjects with risks of politicians violating procedural fairness criteria led them to choose a less dominant, physically formidable political candidate (perceived as less capable of engaging in exploitation) while risks of free-riding and criminal activity led them to choose a more dominant, physically formidable political candidate (perceived as better capable of sanctioning and preventing such exploitative behavior). In sum, Article D underlines both the reach and the scope conditions of the effects of procedural fairness: While such information can have a bearing on the type of political candidate citizens prefer, the results underline how other political (or adaptive) problems also influence leader preferences and sometimes in opposite directions than infor-

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<sup>8</sup> The two versions of the political news story were identical in length and Flesch-Kincaid score (readability measure). Moreover, a pretest survey confirmed that respondents rated the two versions similarly on readability, fluency, coherence, structure, and relevance but, as expected, rated them differently in perceived focus on strategy/process vs. issue/substance.

mation on procedural fairness. Hence, information on procedural fairness and the concern for exploitation on the part of leaders is only one of many factors that enter into evaluations of and preferences for political leaders.

## 4.2. Cognitive abilities for detecting and remembering “cheaters”

The second set of empirical findings concerns the abilities or competencies of citizens in evaluating politicians and their decisions according to procedural fairness criteria. Hence, this section takes a step back and reports findings on how citizens’ representational system allows them to form reliable evaluations of politicians and their adherence to procedural fairness criteria in two ways.

First, citizens should have a cheater-detection system that automatically directs their attention to information from the environment on whether the decision was made in accordance with procedural fairness criteria and reliably categorizes the politician as a “cheater” or “reciprocator” on this basis. To test this theoretical expectation *Article E* adopted an experimental protocol from psychology, The Wason Selection Task (WST). The WST provides an objective measure of citizens’ cognitive performance when they have to identify cases or individuals that violate conditional rules. The article experimentally manipulated the content of these conditional rules to test whether citizens hold a unique and superior ability to detect politicians making decisions without allowing citizens to voice their opinions (i.e. adhering to procedural fairness criteria) compared to other similar and logically equivalent cognitive tasks where cheater detection is not relevant. In line with the theoretical expectation, the findings demonstrated that citizens performed significantly and substantially better when asked to detect politicians passing decisions without adhering to procedural fairness criteria compared to other logically equivalent tasks without a risk of being cheated. The article also demonstrated that the ability to detect politicians who violate procedural fairness criteria decreased substantially when the subject was cued in to the task from a perspective where they were not personally at risk of being cheated (i.e. a perspective switch, see Study 2). Hence, across the Danish and the US sample, the findings underline how citizens have a cheater-detection system that operates when they evaluate politicians and allows them to effectively and reliably detect “cheaters” who violate the basic rules of the game.

Second, we should expect that citizens remember such information on “cheaters” better than other types of political information. To test and support this expectation a second experimental study was carried out in *Article C* based on the “Telephone” survey research design. Specifically, subjects

were randomly assigned to read one of the two versions of the political news story described above (i.e. the strategy-framed or the issue-framed version). After reading the article subjects were asked for their opinions on the matter. At the end of the survey, subjects were asked to write their recollection of the article including as many details as possible and were informed that their recollection would be passed on to a new participant in the survey. Subsequently, these recollections were passed on to a new set of participants in a new survey who were also asked for their opinions on the matter and to recollect as much information as possible from what they read. In line with the theoretical expectation, the results showed that subjects in both rounds of the study remembered significantly and substantially more information when the article adopted a strategy frame rather than an issue frame. Aside from showing that subjects remembered the strategy-framed article better than regular issue-relevant information, the article also demonstrated that the strategy frame drove down trust in the politician, inclination to vote for the politician, and support for the policy in both rounds of the study. In short, information on politicians who violate procedural fairness criteria not only drives down trust and policy evaluations among citizens but is also stored better (or longer) in their memory.

In sum, the findings show that the effects of information on procedural fairness on the political opinions of citizens are not only more far reaching than previously demonstrated, but citizens also hold specialized cognitive abilities for processing and remembering such information that exceed the abilities that are available when they process other types of political information.



## Chapter 5: Conclusion and Discussion

The dissertation and the five papers underline the importance of procedural fairness in shaping public opinion. Specifically, the dissertation provides three main contributions to the existing literature. First, the dissertation advances a new theoretical framework for understanding people's attention to political leaders' adherence to procedural fairness criteria. Second, the dissertation builds on this framework to generate and substantiate a new set of theoretical expectations on how and to what extent information on procedural fairness influences public opinion. And third, this framework is used to advance new insights on citizens' cognitive abilities in evaluating politicians and their decisions according to information on procedural fairness. In this chapter I elaborate on each contribution in turn and discuss implications and potential avenues for future research.

### 5.1. A new theoretical model

The dissertation contributes to the procedural fairness literature in psychology as well as the public opinion literature by introducing a new theoretical account of why people attend to information on procedural fairness on the part of group leaders. Importantly, this account breaks with existing notions that procedural fairness should be of little importance in a political context. In fact, the evolutionary account puts politics front and center by explaining people's preoccupation with procedural fairness as an evolved adaptation designed to solve an inherently political problem: delegating decision-making authority without incurring costs in terms of exploitation on the part of political leaders.

Outlining an evolutionary account naturally raises the question of whether the findings are in fact attributable to an *evolved* psychological system (i.e. a bottom-up account) or if the effects and functioning of this system could be explained exclusively with reference to cultural socialization (i.e. a top-down account). The findings do not constitute a smoking gun in favor of the evolutionary account or rule out that the procedural fairness heuristic could be internalized in citizens through cultural socialization. This said, proponents of social learning models have yet to provide a theoretical account of why the cognitive abilities of citizens (such as memory and conditional reasoning, cf. Articles C and E) vary systematically across different domains and the types of information and cognitive tasks they are confront-

ed with. Such an account could possibly be developed but at this point evolutionary theory provides the most comprehensive and viable account of the systematic variation in human cognitive performance on, for example, The Wason Selection Task and memory recall and encoding protocols (Cosmides and Tooby 2005; Nairne and Pandeirada 2010).

More importantly, however, the motivation for raising the “why” question is not to prove the origins of this psychological heuristic (as mentioned above) but rather to introduce a theoretical framework for understanding the psychological motivations and processes underlying citizens’ preoccupation with procedural fairness and their effects on political opinions. In general, scholars rarely test the most fundamental, axiomatic assumptions of their theories (e.g., is this trait evolved or learned through cultural socialization?) but rather evaluate their validity and relevance through the capacity to deduce testable observable implications and explain empirical patterns. By this standard the evolutionary account proves highly useful. First, it accounts for a wide range of results from the existing procedural fairness literature and thus holds the potential to serve as an organizing principle or meta-theoretical paradigm for integrating and reconciling existing theoretical models on procedural fairness and their empirical findings (see Article A). Second, it provides a powerful hypothesis generator that offers new, central insights on how citizens process and respond to information on procedural fairness—insights that I turn to and discuss below.

## 5.2. Effects and scope conditions of procedural fairness in public opinion formation

Another main contribution of the dissertation is that it breaks with old notions in political science that citizens’ political trust and policy evaluations are simply a function of the outcomes they receive from the political system. Whereas much existing work starts with the assumption that citizens are motivated to obtain favorable political outcomes in terms of ideologically appealing policies, a prospering economy, and material interests, this dissertation shows that they are also intrinsically motivated to include information on procedural fairness in their opinion formation and choice of politicians. This attention does not stem from a concern with getting as much as possible out of every group decision but rather with avoiding exploitation by leaders and being part of a cooperating, functioning social group. From an evolutionary perspective, the optimal strategy for survival would not be to attempt to “maximize outcomes” in every single interaction with others or the group at large but rather to “maximize cooperation” by paying attention and responding to any reliable cues of exploitative behavior. Hence, the deep-



seated human concern with procedural fairness and maintaining group cooperation is the way to maximize outcomes and survival in the long run instead of simple, immediate concerns with extracting as much as possible from every group decision. In contrast to conventional wisdom, citizens are not simply “outcome maximizers” but are better characterized as “reciprocal altruists” or “wary cooperators” (see also Hibbing and Alford 2004).

Importantly, the effects are strong and significant both when the outcome is favorable and unfavorable to the individual. This is an important finding as it underlines how raising public trust in politicians and support for their policies by turning to procedural fairness is a potential plus-sum game that accommodates both the winning and the losing team. This implies that institutional reform that pays close attention to citizens’ procedural fairness intuitions could be a feasible way to increase aggregate political trust and policy support among the public (see Article B for a discussion).

Although the dissertation shows that the effects of procedural fairness extend further than previously demonstrated, it also raises new questions and calls for further research on the subject. First, the different studies demonstrate effects on citizens’ opinions towards a concrete political decision maker, such as a politician, party, or the Danish government, and on individual political decisions or proposals. These dependent measures are important in their own right but a relevant extension of the findings would be to consider the effects on more aggregate level measures such as general political trust, institutional legitimacy, or general policy satisfaction and compliance. Also, the studies measure citizens’ *inclination* to vote for a political decision maker (i.e. vote intentions) rather than actual, real-life voting behavior. This underlines the potential for future work to apply alternative research designs and data sources such as natural experiments or panel data to extend these findings further through more generalized and actual behavioral dependent measures without sacrificing the internal validity of the results.

Second, more research is needed on the possible scope conditions of the effects of procedural fairness. Although the evolutionary account implies that concerns with procedural fairness should be a human universal (and social psychological research suggests that it is, see Article A), it also implies that there should be both contextual and individual-level differences in citizens’ susceptibility to information on procedural fairness. For example, in countries or periods with high levels of crime or free-riding behavior by other citizens, concerns with procedural fairness and exploitation on the part of leaders may be deprioritized or traded off in order to install a political leader perceived as capable of dealing with such threats. The same could be the case among individuals who are dispositionally worried about such types of threats (such as right-wing authoritarians). Article D goes some way in

demonstrating these trade-offs and scope conditions but also leaves unanswered questions. For example, it remains unknown exactly to what extent the findings and effect sizes travel beyond the two countries included in this dissertation. Although Denmark and the US vary on many important political and cultural variables, they both represent modern democracies with a relatively affluent and well-educated citizenry. It is likely that the effects of procedural fairness vary systematically with, for example, economic security and affluence, post-materialism, or crime rates.

Third, the findings also point to the importance of considering variation and developments in media coverage as drivers of political trust, policy support, and possibly voting behavior. Important prior work has demonstrated that the media's increasing use of "the strategy frame", portraying politics and political decision making as a strategic means to win votes and office, raises political cynicism among the public (e.g., Cappella and Jamieson 1997; de Vreese and Elenbaas 2008; Aalberg, Strömbäck, and Vreese 2012). This dissertation extends these findings by showing that it can also influence inclinations to vote for politicians and support for public policy (see also de Vreese 2004). Moreover, the dissertation shows how citizens are more likely to remember strategic news coverage and are more likely to pass it on to other individuals compared to regular, issue-relevant coverage. More generally, this underlines how research on political communication and public opinion could benefit from investigating not just the strength and persuasiveness of different types of news frames on political opinions through direct exposure but also its strength and persuasiveness when being transmitted between individuals. Even though inter-personal communication is widely recognized as an important factor in shaping political opinions and behaviors (Lazarsfeld, Berelson, and Gaudet 1948; Campbell et al. 1960; Lewis-Beck et al. 2008) and the rise in the use of digital social media over the last decade has reduced the costs and increased the impact and scope of such inter-personal communication (Bennett and Segerberg 2012), this dissertation is among the first scholarly work to address systematic differences in the strength and effects of different types of political information transmitted through social networks (for an overview, see Article C). In this respect the cognitive sciences, and evolutionary psychology in particular, contain a wealth of relevant insights on how cognitive abilities of humans—e.g. attention, encoding, and memory—are biased in favor of certain types of information. In the section below I turn to some of these insights.

### 5.3. The political cognitive abilities of citizens

A third contribution of the dissertation is that it advances our understanding of the political cognitive abilities of citizens. This has been a central topic for public opinion research for decades with the main conclusion being that the political cognitive abilities of citizens are quite weak and limited. For example, it is widely accepted that the average citizen is largely unable to think about politics in terms of ideology, often holds highly unstable and contradictory political opinions (Converse 1964; Lewis-Beck et al. 2008), lacks basic political knowledge, for example about the state of the economy, and is unable to recall basic policy positions of central political actors like the president and even the candidate they voted for (Delli Carpini and Keeter 1996; Achen and Bartels 2016). This has led a number of political scientists to conclude that people are generally ill-equipped to make meaningful decisions in democratic elections and, ultimately, hold political decision makers accountable (Shenkman 2009; Healy, Malhotra, and Mo 2010; Somin 2013; Achen and Bartels 2016).

However, this literature is, like most public opinion research, focused on outcomes and substance in terms of citizens' abilities to recall and reason about policy positions, ideological content, and societal outcomes. This dissertation addresses the issue from a different perspective by turning attention to another major type of political information available to citizens in terms of politicians' adherence to procedural fairness criteria. Specifically, from an evolutionary psychological perspective it makes good sense that citizens lack strong cognitive abilities for reasoning about abstract concepts like ideology, inflation, or unemployment rates. In evolutionary terms, such information has only recently become relevant, meaning that nature has not selected for specialized psychological systems for processing this type of political information. Information on procedural fairness, on the other hand, provides survival-relevant information about the presence of an ancestrally important adaptive problem in terms of exploitation on the part of political leaders. From these basic theoretical insights the dissertation shows that citizens, despite limited political knowledge, possess specialized cognitive abilities for remembering and distinguishing between politicians based on this type of information (see Articles C and E).

The findings have three important implications for understanding the political capabilities of citizens. First, it turns existing conclusions about the political capabilities of citizens upside down. Although Aristotle famously uttered that "man is, by nature, a political animal" most empirical work on the topic has mainly concluded that politics is anything but natural to citizens. According to McClosky (1964, p. 374), for example, "[t]he aphorism which

holds man to be a political animal may be supportable on normative grounds but is scarcely defensible as a description of reality.” In contrast, the findings of this dissertation underline, in line with recent work applying insights from evolutionary psychology (e.g. Fowler and Schreiber 2008; Hatemi and McDermott 2011; Petersen 2012), that humans are endowed with psychological adaptations for solving inherently political problems—such as keeping political leaders in line—and that politics is therefore an integral part of human nature.

Second, the findings demonstrate the important point that many of the political cognitive abilities of citizens are domain-specific. More specifically, the evolved psychological systems available for reasoning about politics are each tied to *one* specific domain or adaptive problem and do not help citizens reason about politics beyond this domain. Articles C and E both show that cognitive abilities for reasoning about information on procedural fairness are not activated and yield high performance when citizens reason about other types of political information. This also speaks to the limits or shortcomings of political cognition by underlining that there are certain (and arguably important) political tasks in a modern context that citizens are not naturally disposed to solve. For example, because understanding modern, abstract political concepts like ideology or the large-scale macro-dynamics of politics (like how tax cuts affect the economy) has not been important for survival over evolutionary history such abilities are not naturally acquired but must be acquired through intensive learning. Finally, the fact that political reasoning is domain-specific means that the political abilities of citizens must be evaluated on a case-to-case basis across different domains. Much prior work has used generic measures for the political “sophistication” or “awareness” of citizens by measuring how many facts they can recall about political candidates and politics (Zaller 1992; Delli Carpini and Keeter 1996). However, as demonstrated in Article C, this literature neglects that remembering political information is highly dependent on the type of information available to citizens and varies considerably across domains.

Third, although the evolved political cognitive abilities available to citizens would, on average, have helped increase survival under ancestral conditions, the findings imply that they may not necessarily be rational or optimal in a modern political context. For example, it is debatable whether the specialized ability to remember information from strategy frames rather than issue frames in fact benefits the modern citizen or democratic society at large. This underlines the importance of avoiding the naturalistic fallacy when we interpret findings based on evolutionary psychology: That something is evolved and, hence, part of human nature does not mean that it necessarily leads to rational or beneficial responses in a given situation or that

such responses are more desirable or justifiable than other alternatives. This is particularly important to underline when we apply evolutionary psychology to the study of moral psychology and political fairness intuitions.

More generally, the dissertation highlights the usefulness of analyzing the question of citizens' political motivations and abilities from an evolutionary psychological perspective. Because many of the adaptive problems faced by our ancestors have been related to group life, humans should be equipped with a range of heuristics designed to solve problems that are inherently political (see e.g. Fowler and Schreiber 2008; Petersen 2012). For example, studies suggest that humans are endowed with specialized psychological adaptations for identifying and dealing with free-riders and criminals (Cosmides and Tooby 2005; Petersen 2012; Petersen et al. 2012) and for handling relations with other groups (Lopez, McDermott, and Petersen 2011; Laustsen and Petersen 2015). While existing work primarily starts by advancing some normative understanding of what democratic citizens should be capable of and tests if citizens meet these expectations, the evolutionary perspective starts with theoretically guided insights on what political problems the human brain is—and is not—designed to solve. In this sense, the evolutionary psychological perspective holds the potential for a more nuanced and theoretically guided understanding of both the political motivations and cognitive abilities of the democratic citizen.



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## English summary

This dissertation advances our understanding of the determinants of citizens' trust in politicians and support for the political decisions they introduce. Political trust and support among citizens induce voluntary compliance and thus constitute central ingredients for the stability and viability of any political system. However, existing work in political science has mainly considered citizens' political trust and policy support a direct function of the favorability of the outcomes they receive from the political system, for example in terms of ideologically appealing policies, a prospering economy, and material benefits. In this dissertation I show that whether citizens trust a political decision maker and support its policy depends, in addition to the favorability of the outcome, on the decision maker's adherence to a set of procedural fairness criteria when introducing the policy. Did the political decision maker have a personal, vested interest in introducing the policy? Were all relevant parties included in the decision making process? Was everyone allowed to voice their opinions before the decision was made?

Specifically, the dissertation contributes to the existing literature in three ways. First, it draws on insights from social and evolutionary psychology and advances a new theoretical framework for understanding why citizens attend to information on procedural fairness. It is argued that this attention to procedural fairness stems from a deep-seated concern with avoiding anti-social, "cheating" behavior or exploitation when decision-making authority is delegated to group leaders. In this sense, people's concern with procedural fairness serves to solve an inherently political problem by allowing groups of cooperative individuals to solve coordination problems through leadership without imposing costs on followers.

Second, building on this theoretical framework, it is argued and demonstrated that information on procedural fairness is an important factor in how citizens choose between and evaluate politicians and their policies. A series of survey experiments show that information on procedural fairness affects citizens' trust in and inclinations to vote for politicians, support for public policies, and preferences for traits and characteristics of politicians more generally. These findings underline how the importance and impact of such information extends further than suggested by the existing literature.

Third, based on the theoretical framework it is demonstrated that citizens possess a set of cognitive abilities or competencies for evaluating politicians and their decisions according to procedural fairness criteria. Specifically, citizens possess a cheater-detection system and an enhanced ability to remember cheaters, which are also active when they evaluate politicians and

their policies according to information on procedural fairness. These cognitive abilities allow them, despite typical low levels of political knowledge or sophistication, to effectively remember and distinguish between politicians based on information on procedural fairness. These findings put the existing debate on the motivations and political cognitive abilities of the democratic citizen in a new light with important implications at the normative, theoretical, and methodological levels.

The dissertation consists of five papers that have been published or prepared for publication in peer-reviewed international journals or books and this report summarizing the project.

## Dansk resumé

Denne afhandling bidrager til vores forståelse af, hvad der påvirker borgernes tillid til politikere og støtten til de politiske beslutninger, de introducerer. Politisk tillid og støtte blandt borgerne bidrager til, at de frivilligt følger og efterlever lovgivningen og er således vigtige ingredienser for at sikre et stabilt og levedygtigt politisk system. Dog har den eksisterende statskundskabs-litteratur primært anset borgernes politiske tillid og støtte til politiske beslutninger som en direkte funktion af hvor favorable eller gunstige resultater eller "outcomes", de modtager fra det politiske system – eksempelvis i form af ideologisk kongruente beslutninger, en stærk økonomi eller materielle goder. I denne afhandling viser jeg, at hvorvidt borgerne stoler på en politisk beslutningstager og støtter dennes politiske beslutning også, udover selve resultatets gunsthed, afhænger af, om beslutningstageren introducerer beslutningen i overensstemmelse med en række procedural retfærdighedskriterier. Havde beslutningstageren en personlig interesse i at introducere beslutningen? Blev alle parter inkluderet i beslutningsprocessen? Fik alle mulighed for at udtrykke deres holdninger før beslutningen blev truffet?

Mere specifikt bidrager afhandlingen til den eksisterende litteratur på tre måder. For det første anvendes indsigter fra social- og evolutionspsykologien til at introducere en ny teoretisk model for at forstå, hvorfor borgerne indrager information omkring procedural retfærdighed i holdningsdannelsen. Der argumenteres for, at borgernes inddragelse af denne type information er foranlediget af en dybtliggende motivation for at undgå asocial, udnyttende adfærd, når ledere tildeles beslutningskompetence i en social gruppe. På denne måde fungerer borgernes opmærksomhed mod og inddragelse af information om procedural retfærdighed som en løsning på et basalt politisk problem i form af at tillade en gruppe af samarbejdende individer at løse koordinationsproblemer gennem lederskab uden at påføre omkostninger blandt gruppemedlemmerne.

For det andet anvendes denne teoretiske model til at argumentere for og påvise, hvordan informationer omkring procedural retfærdighed er en vigtig faktor i, hvordan borgerne vælger mellem og evaluerer politikere og deres politiske beslutninger. En række eksperimenter indlejret i spørgeskemaundersøgelser viser, at information omkring procedural retfærdighed påvirker borgernes tillid til og tilbøjelighed til at stemme på politikere, støtte til politiske beslutninger og præferencer for politikeres karaktertræk og egenskaber mere generelt. Disse fund understreger, hvordan effekterne og vigtigheden af denne type informationer rækker videre end antaget i den eksisterende litteratur.

For det tredje anvendes den teoretiske model til at vise, hvordan borgerne besidder en række kognitive evner eller kompetencer til at evaluere politikere og deres beslutninger ud fra procedural retfærdighedskriterier. Mere specifikt viser afhandlingen, at borgerne besidder psykologiske systemer, som hjælper dem til at identificere og huske asociale, norm-brydere individer, og at disse systemer også er aktive, når de evaluerer politikere og deres beslutninger ud fra informationer omkring procedural retfærdighed. Disse kognitive evner gør, at borgerne, trods typisk lav politisk viden og forståelse, formår effektivt og præcist at huske og skelne mellem politikere baseret på information omkring procedural retfærdighed. Disse fund sætter den eksisterende debat om borgernes politiske motivationer og kompetencer i et nyt lys med vigtige normative, teoretiske og metodiske implikationer.

Afhandlingen består af fem artikler, der er publiceret eller klargjort til publicering i peer-reviewed internationale tidsskrifter eller bøger og denne rapport, som opsummerer projektet.