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Natural Disasters and National Election

*On the 2004 Indian Ocean Boxing Day Tsunami,
the 2005 Storm Gudrun and the 2006 Historic
Regime Shift*

LINA M. ERIKSSON



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Abstract

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The 2006 Swedish parliamentary election was a historic election with the largest bloc transfer of voters in Swedish history. The 2002-2006 incumbent Social Democratic Party (S) received its lowest voter support since 1914 as roughly 150,000, or 8%, of the 2002 S voters went to the main opposition, the conservative Moderate Party (M). This became the most decisive factor in ousting S from power after 12 years of rule. As a result, the M-led Alliance (A) with the People's Party (FP), the Center Party (C), and the Christian Democrats (KD) won the election. *Natural Disasters and National Election* makes the novel contribution of proposing two natural disasters, the Indian Ocean's 2004 Boxing Day Tsunami and 2005 Storm Gudrun (Erwin), which struck only two weeks following the tsunami, as major events that impacted government popularity in the 2006 election and contributed to the redistribution of voter support, within and across party-blocs. The core findings from this thesis show that the S government's poor crisis response to Gudrun, which is the hitherto most costly natural disaster in Swedish history, alone has an estimated effect of a magnitude that likely contributed to the 2006 historic regime shift, while the tsunami also seems to have mattered. The tsunami is particularly interesting, as S's poor international crisis response to the event constitutes the first natural disaster situation to knowingly have affected an election on the other side of the planet. Moreover, to some degree voters recognized the active opposition by C as effective representation and rewarded the party for its strong stance on the poor handling of both events by S. In fact, the active voice of C concerning these disasters likely helped move the party from the periphery of party politics to becoming the third-largest party in Swedish politics. In sum, this research investigates accountability and effective party representation via retrospective voting, which is an essential mechanism for the legitimacy of democracy. Findings suggest that the average Swedish voter indeed may be voting retrospectively to hold publically elected officials accountable, which suggest a healthy status of the retrospective voting mechanism and Swedish democracy.

Keywords: accountability, retrospective voting, party support, regime shift, natural disasters, crisis response, international crisis response, international law, effective representation, multiparty systems

Lina M. Eriksson, Department of Government, Box 514, Uppsala University, SE-75120 Uppsala, Sweden.

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To Martin and the cats

List of Papers

This thesis is based on the following papers, which are referred to in the text by their Roman numerals.

- I Eriksson, L. M. (2016). Winds of Change. Voter Blame and Storm Gudrun in the 2006 Swedish Parliamentary Election. **Electoral Studies*, 41, 129-142.
- II Eriksson, L. M. (Revise and resubmit at *Political Research Quarterly*). When Legitimacy Drowned. Waves of Blame in the 2006 Swedish Parliamentary Election. (Manuscript). Department of Government, Uppsala University.
- III Eriksson, L. M. (Under review). Waves of Blame and Winds of Change: Challengers, Effective Representation and Electoral Accountability in Response to Parallel Crises. (Manuscript). Department of Government, Uppsala University.

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Pursuing a PhD in the Department of Government at Uppsala University has been by far the most rewarding experience I have had thus far. From the outset, the workplace was a friendly and hospitable environment. Intellectually, the challenges have been many. The numerous people that make up this dynamic workplace all contribute with their unique perspectives and expertise, which makes Uppsala's political science program the exceptionally knowledgeable environment that I have had the privilege to be part of. I can recall plenty of occasions over the past five years when I have had the pleasure of engaging in discussions with colleagues and friends and other occasions when I have just listened to the many fascinating conversations and research presentations that take place at this amazing workplace every day. Over the past five years, I have learned more than I envisioned possible in a PhD program. For this, I will always be grateful.

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Indeed, much of my time as a PhD student has also been spent outside the Department of Government, travelling to conferences and workshops, going on field excursions, and visiting host universities. In all, I have visited four continents and seven countries as part of this PhD program. Some trips have been longer, others shorter, but they have all been rewarding in their own way. Some, however, stand out more in my recollections.

In the spring of 2012, I went on a field excursion to Guatemala with colleagues from the Center for Natural Disaster Science (CNDS), with which I have also been affiliated as a PhD student. Together, we hiked the Pacaya volcano in Antigua and participated in a bilingual natural disaster conference

in Guatemala City, where I had the opportunity to present my initial research proposal to a distinguished group of natural disaster science researchers. This was a truly memorable trip, and I learned a great deal about the local history of Antigua and its relation to the active Pacaya volcano.

Midway through my PhD program, in June 2014, I had the opportunity to travel to Beijing in China and present my first substantial findings to the international community of practitioners and researchers working on integrated disaster risk science. The response was overwhelming and surprising. I would never have thought that a Swedish storm and its implications for the 2006 Swedish parliamentary election would generate such broad interest across disciplines. After my presentation, I received more questions than there was time to answer.

One year later, in the summer of 2015, I visited a summer school in Ann Arbor, at Michigan University. I spent four weeks studying regression analysis for Michelle Dion and math for Stephen G. Bringardner, while also having time for tasting some great varieties of local beer with old and new friends. This was, undeniably, a fantastic summer.

A few months later, I moved to Palo Alto in California with my wonderful partner Martin and our two lovely cats, Soya and Sushi. In all, the four of us spent nine unforgettable months in sunny California while I finalized the first draft of this dissertation. During our stay there, I was a Fulbright Visiting Student Researcher at the Europe Center at Stanford University. At Stanford, I had the pleasure of meeting with both junior and senior researchers working on the same kind of research as that presented in this thesis. In particular, on several occasions, I had the opportunity to discuss parts of this work with Jens Hainmueller, who also served as my supervisor at Stanford. At one point, Michel Bechtel visited from Switzerland, which allowed me to also discuss my work with him. This has, of course, meant a great deal, as this dissertation, in fact, departs from an article co-authored by Bechtel and Hainmueller. At Stanford, I also got to know Massimo Mannino, who visited from Switzerland and who is also pursuing a PhD investigating the electoral effects of natural disasters. Needless to say, the Stanford environment was indeed spot on and a great resource during the final year of my PhD.

While the foregoing description naturally falls short in its summary of five years of encounters, involvements, and struggles as a PhD student, not to mention in recognizing all the people who have supported me throughout this journey and on many occasions offered feedback on my work, I think it nonetheless gives a good account of my overall experience. In any case, I would like to especially thank Helena Wockelberg, Pär Nyman, and Rafael Ahlskog, who have read the first complete draft of this dissertation and provided excellent feedback. I would also like to especially thank Suruchi Thapar-Björkert and Anders Westholm, who have provided important com-

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Introduction

Voters are not fools – V.O. Key Jr. (1966:7).

The 2006 Swedish parliamentary election was a historic election. The 2002-2006 incumbent Social Democratic Party (S) received its lowest voter support since 1914 (Valanalysgruppen, 2007). It observed the largest bloc transfer of voters in Swedish history. About 150,000, or 8%, of the 2002 S voters went to the main opposition, the conservative Moderate Party (M). This became the most decisive factor in ousting S from power after 12 years of rule. As a result, the M-led Alliance with the People's Party (FP), the Center Party (C), and the Christian Democrats (KD) won the election (Oscarsson & Holmberg, 2009).

Undeniably, much effort and time have been spent on debating and analyzing the reasons for this historic outcome in Swedish politics. Explanations provided by previous research consist of a combination of factors. These include how in 2006 the perceived ideological distance between S and M, as well as between the parties comprising the Alliance, became smaller than it had previously been. For the first time, a conservative bloc had one agenda, which is believed to have mobilized votes. At the same time, the 2006 political agenda of M came across more clearly to voters compared to that of S. This coincided with S losing its previous ownership of the two critical policy issues of unemployment and work to M. In particular, research has found that those voters who switched from S to M were in favor of less taxes, entrepreneurship, and privatization. In addition, they also seem to have favored the leadership of the M party leader, Fredrik Reinfeldt, over the S Prime Minister, Göran Persson. Taken together, the findings from previous research suggest that those voters who switched from S to M may have been closer to the conservative end of the ideological continuum from the outset and that the changes that occurred in the Swedish party politics leading up to the 2006 parliamentary election therefore may have facilitated the bloc transfer for those voters (Oscarsson & Holmberg, 2009).

Similarly, in their own analysis of the election outcome, presented in a 2007 report by the S-based *Valanalysgruppen* (the Election Analysis Group, my translation), S highlights unemployment and a desire for change in rule as the two main explanations for its electoral defeat. According to this report, many voters found the Alliance to have a higher credibility in creating jobs, but voters also did not vote as much in favor of the Alliance as they did against S. Previous S voters thought it was time for a change in rule (Val-

analysgruppen, 2007). Another issue raised in the report is the media coverage of the 2004 Boxing Day Tsunami, for which S received extremely negative evaluations for its crisis management and policy response (crisis response¹). However, while the S party acknowledges that its poor crisis response to the tsunami likely damaged the public trust in its ability to govern, the party members do not believe that it affected too many voters (Valanalysgruppen, 2007). This interpretation differs from that of conventional media, which projects the S party's poor handling of the tsunami as the mainstream explanation as to why S lost popularity in the 2006 election (see, for example, UI, 2012; Hallström, 2006; Franchell, 2010).

In contrast to the foregoing accounts, in this dissertation, I make the novel case for a hitherto unacknowledged factor as a contributing explanatory event for the changing climate in Swedish politics between 2002 and 2006. That is, the 2005 Storm Gudrun, which is the hitherto most costly natural disaster in Swedish history. In this thesis, I analyze the storm's impact on the 2006 parliamentary election outcome and highlight why the S-party's crisis response to Gudrun may have been perceived as poor in the eyes of voters. In addition, the hypothetical electoral impact of the 2004 Boxing Day Tsunami is operationalized and empirically tested for the first time. Though the tsunami is primarily evaluated and discussed in relation to interpretations of international law, alongside the analysis of Gudrun, I also examine and quantify the effects of the S government's poor crisis response to the 2004 Boxing Day Tsunami on the 2006 election outcome. As will be echoed throughout this work, while the tsunami and Gudrun had non-overlapping geographical impacts, it is nonetheless essential to consider both in any analysis of the 2006 parliamentary election outcome, as they occurred virtually parallel in time. Gudrun struck Sweden only two weeks following the tsunami, which created a very unusual and complex situation of parallel crises for the S party to handle. This dissertation thus concerns the methodical analysis of the respective effect of each of these disasters on the election outcome while controlling for the effect of the other, which also allows for estimating their combined effect.

Quantifying these disasters, moreover, allows for the electoral effects of both disasters to be tested and compared in relation to the effects of other factors that also may be quantified, such as jobs and taxes. More precisely, it allows for an analysis of the magnitude of the effects of each of these explanations when the effects of the others are also accounted for. Thus, the effect of the storm is compared to the effect of the tsunami while simultaneously also being compared to the effects of unemployment and disposable income, as well as other potential explanatory factors. In systematically comparing these factors, the S govern-

¹Here it should be noted that crisis management might be considered the improvised management of the unexpected, or unpredictable, disaster while policy response regards pre-established guidelines and structures in place for handling such a crisis, as well as minimizing the risk of its occurrence and impact. Crisis response refers to both concepts.

ment's poor crisis response to Gudrun alone turns out to have an estimated effect of a magnitude that likely contributed to the 2006 historic regime shift, while the tsunami also seems to have mattered. Nonetheless, as this study investigates the variations in geographical impact of the 2004 Boxing Day Tsunami and Gudrun on vote shares, this thesis is designed to detect whether there are electoral effects triggered by these disasters. However, it is difficult to say how large the total effects of these disasters were on the 2006 parliamentary election outcome, especially since Swedish voters may vote sociotropically. That is, it is not impossible that those who were unaffected by these disasters may have voted in support of those who were affected. This may imply that there are effects on the entire electorate that this study is unable to demonstrate, as it is not designed to pick up such voting patterns. Nonetheless, as will be discussed later on in this introduction to the thesis, even if this is the case, one very interesting contribution of this work, as suggested by the findings presented here, is that sociotropic voting may be occurring more locally than previously proposed.

Moreover, by means of a time-sensitive analysis, it is also possible to connect the shift in party support from S to M to the occurrences of both the tsunami and Gudrun, which took place prior to the announcement of the Alliance's common agenda. In contrast to previous research, then, this suggests a hitherto unrecognized complementary explanation to the 2006 parliamentary election outcome. If we take my estimates presented in this thesis literally, they imply that Storm Gudrun on its own could account for the 2006 historic regime shift. However, this kind of interpretation should be regarded with caution, as it is impossible, given the current data and the limited knowledge we have of things that might have influenced voters, to pin down the total size of the effect that Gudrun *de facto* may have had on the 2006 election outcome, or any of the following elections, for that matter.

Be that as it may, in this thesis, I go to considerable length to provide evidence in support of my main claim, that both the tsunami and Gudrun had a great deal of influence on the choices that Swedish voters made at the ballot box in September 2006. The purpose of this thesis is thus to provide a new explanation for the 2006 election outcome and, in so doing, show the considerable role natural disasters can play in democratic politics. In fact, the finding that Gudrun alone may have contributed substantially to the 2006 historic regime shift in Swedish politics makes this thesis the only study of its kind in Sweden, as it is the first to place natural disasters at the center of democratic politics.

Methodologically, and theoretically, this dissertation follows a somewhat different approach compared to previous research (Oscarsson & Holmberg, 2008b) put forward by the Swedish National Election Studies program (SNES), which, like its American counterpart, the National Election Study (NES), has been largely influenced by the classical Michigan Model in election research. Predominantly, research that departs from the Michigan Model relies on individual-level data, which is subjective and derived from a

random sample of individual voters presented with a predetermined set of questions (see, for example, Oscarsson & Holmberg, 2009; 2008a; 2008b). Nonetheless, the research provided by SNES also uses individual-level data to investigate other perspectives on elections such as, for example, the Retrospective Voting Model. This latter approach, however, also encompasses a body of literature that uses objective aggregate measures, rather than survey and interview data, to identify plausible electoral explanations for changes in voter support, which is also the case for this thesis. The main difference, therefore, between previous work and my own approach pertains to the subjective individual level rather than the objective aggregate measures used when investigating retrospective voting.

Essentially, this difference in approaches may in part explain the novel findings of this thesis, which point to the tsunami and Gudrun as events that reshaped the Swedish political landscape and contributed to the historic 2006 parliamentary election outcome. Nonetheless, to ask people questions, or to collect data by means of surveys, is surely regarded as one of the most established practices in social science research. The point is thus not to downplay the reputable efforts by SNES in any way. But there are nevertheless limitations in the knowledge that one can infer from such an approach, the most obvious point being the restrictions imposed by the theoretical underpinnings that drive the study and materialize in the set of questions posed. That is, as in any research, and this study is no exception, the questions asked may typically also limit the information we may acquire regarding a specific event. What we do not ask about, we may simply not know about. Previous research thus poses a plethora of highly relevant questions derived from both standard and contextual theories of what may explain the 2006 election outcome, except questions that concern voter evaluation of the S-government's handling of the 2004 Boxing Day Tsunami and the 2005 Storm Gudrun. We may therefore simply not know from previous studies if these natural disasters may have impacted the 2006 election outcome.

While there certainly is great merit in trying to explain the 2006 election outcome by asking people directly why they voted the way they voted and thereby also in the extension aiming to explain the election outcome by this subjectively derived individual-level information, it is, in light of the findings presented here, interesting that previous work has not pointed to the tsunami and Gudrun as events of major importance. This, I think, exemplifies a theoretical and methodological point, as my findings add an important contribution to existing literature, which shows that there is merit in using a variation of approaches in our quest to understand election outcomes. When these approaches are combined, we may gain a richer perspective. Surely, while the novel insights of this thesis indeed add an important contribution to existing knowledge, it alone does not come close to providing such a detailed understanding of the 2006 election outcome as that of previous research produced by SNES.

Nonetheless, the findings presented here are more comprehensible and plausible when understood in relation to previous research. That is, from previous studies, we know that M moved closer to S policy-wise and promoted itself as the new worker's party in the election campaign leading up to the 2006 parliamentary election (Oscarsson & Holmberg, 2009). This signals a narrowing gap between S and M on the ideological continuum of left-right party politics and seems like a very important contextual factor for understanding the findings presented here. This insight into the contextual change in Swedish party politics likely paved the way for voters to vote retrospectively by switching from S to M based on a valence issue, such as competence in crisis response to natural disasters, since the ideological gap between S and M had narrowed. Thus, among other things, because of the re-orientation of M, it seems quite plausible that the context was such that the electoral effects of the tsunami and Gudrun were likely to happen in the 2006 parliamentary election.

In this thesis, I present three papers. For papers 1 and 2, I employ a quantitative approach. In paper 3, however, I use a mixed methods approach. That is, a combination of methods, such as quantitative analyses and qualitative analyses, are blended. In doing so, I simultaneously use different methods to answer the same basic question, and in answering it, I also deliver richness in knowledge that just any one method would not be sufficient to provide. On the one hand, the quantitative methods are used to identify empirical correlations, which point to relationships between natural disasters and voter evaluation of government competence in crisis response. On the other hand, the qualitative approaches provide information concerning plausible descriptive theories as to why the identified electoral effects may have come about, as well as to how the crisis response strategies used by the political elite possibly played out.

Specifically, the quantitative analyses presented in this thesis are either based on the logic of an approximation of a natural experiment that follows a Difference-in-Differences (DiD) design or solely the latter, which yield very high reliability for causal inference. In contrast, the qualitative work performed herein has consisted of careful text analyses of several hundred articles in the form of newspaper coverage of Storm Gudrun. These articles have been systematically evaluated. In turn, this has yielded empirical patterns suggestive of political strategies in crisis response that in a second step have been corroborated by interviews with the political elite, thus also generating highly reliable empirical findings that logically explain Storm Gudrun as a major influence on the 2006 parliamentary election outcome. For the tsunami, the abundant collection of public news and government records concerning this disaster have served well to illustrate the S government's poor crisis response and where other political parties positioned themselves in relation to S, as well as each other, on the issue of the tsunami.

In employing the foregoing approach, I am able to identify novel information that contributes to our knowledge of natural disasters and their place in democratic politics. As I shall argue and thoroughly demonstrate throughout this thesis, natural disasters are by nature political. In showing how this is in fact the case, the findings from this thesis work contribute knowledge to an emerging political science-oriented research field, which is commonly referred to as retrospective voting and natural disasters, or just simply the politics of natural disasters. While this is the very specialized literature that this thesis speaks to, the results, however, also ought to be of a broader interest for politicians and political parties alike, as well as practitioners faced with crisis response to natural disasters in their work. In particular, this thesis adds to our understanding of political behavior, as well as the temporal and geospatial dimensions of electoral accountability, while also offering relevant empirical insights for public policy related to crisis response.

In what follows of this introduction to the thesis, I will begin by introducing the interdisciplinary context in which this thesis has evolved. This serves to illustrate how this thesis, besides being a dissertation in political science, also contributes to the emerging discipline of natural disaster science, which connects a multitude of different sciences. I then briefly explain what natural disasters are and outline their frequency over the past decade before narrowing this study down to its focus on the 2004 Boxing Day Tsunami and the 2005 Storm Gudrun. Thereafter, I explain why natural disasters may be considered political events. Following this, I introduce the theoretical venture point for the analyses of this work, which comes from the political science concept of accountability. I then explain its relation to retrospective voting, which runs like Ariadne's thread throughout this work, as it is the *de facto* mechanism that I exploit to empirically answer different questions posed in each study of this thesis. I then briefly introduce various perspectives on elections with a specific focus on the retrospective voting literature, which I account for in a brief review. I then present the subfield within the retrospective voting literature that this thesis belongs to, which is accompanied by a discussion on how I situate my work within this literature. Finally, I present each research paper that forms part of this thesis, summarize their main findings, and highlight their contributions to new knowledge.

I. The interdisciplinary perspective of natural disaster science

Until about one decade ago, natural disaster research was largely conducted within specific fields of science. Researchers from the natural, social, and engineering sciences approached the study of natural disasters with questions and methods designed to generate new knowledge relevant to each discipline, respectively. But at the turn of the millennium, mutual awareness of the research in the other fields had begun to grow. Hence, the different sciences started to approach each other and in the process came to generate what is regarded today as a multidisciplinary area of research that is moving toward consilience (McEntire & Smith, 2007). That is, natural disaster science has emerged as a research program spanning across disciplines with aims of multidisciplinary and interdisciplinary inputs and outputs. In sum, this process of integration between sciences is founded on the insights of the complexity of natural disasters generated from cumulative research within each discipline, for which there is now a growing consensus that scientific integration is the way forward (McEntire, 2007).

Outside academia, advanced interdisciplinary knowledge about natural disasters is also increasingly being requested at international, national, and local levels of governance. In the governance context, crisis response to natural disasters has seriously been on the agenda for about a decade. This has come to further the necessity for natural disaster science research to contribute with cutting-edge knowledge to better handle preparedness, risk reduction, and response to natural disasters. On the international level, this increased demand for science-driven disaster policy has been expressed by organizations such as the United Nations Office for Disaster Risk Reduction (UNISDR), which is working on an International Strategy for Disaster Reduction (ISDR), and the International Council for Science (ICSU), which has a new research program on Integrated Research on Disaster Risk (IRDR). Within the European Union (EU), the European Commission's Humanitarian Aid and Civil Protection department (ECHO) is currently increasing its involvement in Disaster Risk Reduction (DRR) in terms of both funding and activities, while at national and local levels, the efforts and investments vary.

In Sweden, the Swedish government commissioned Uppsala University, Karlstad University, and the Swedish National Defence College in September of 2009 to form the Center for Natural Disaster Science (CNDS). In September of 2011, CNDS launched the interdisciplinary Swedish Natural Disaster and Mitigation research school (SENDIM) to which I have belonged as a PhD student and in which environment this dissertation work has evolved. This thesis should therefore also be understood as a contribution to the emerging discipline of natural disaster science that connects a multitude of

different sciences. Indeed, countless multidisciplinary discussions provided by CNDS, as a science-based platform, have served as input to this thesis.

What are natural disasters?

Natural disasters may be defined as any swift and instantaneous event that is caused by nature and that impacts the socio-economic system. That is, for a natural phenomenon to be classified as a disaster, its impact has to be measurable in terms of affected people, lost lives, and economic losses. This interaction with society is what makes natural disasters distinct from natural phenomena (Alexander, 1993). More precisely, for a natural phenomenon to count as a disaster, its destruction has to be significant. It must cause such serious disruptions to the functioning of a society that it makes it impossible for the locally affected area to survive using its own resources. Thus, crisis response must be mobilized from another location (UNISDR, 2007).

The Emergency Events Database (EM-DAT) holds the most comprehensive collection of data in the world on natural disasters, which begins with records from as early as the 1900s and includes records from the present time (EM-DAT 2015). In addition, UNISDR frequently reports on the global status of natural disasters. According to UNISDR, between 2005 and 2014, the world experienced an average of 335 weather-related disasters per year, with an annual economic cost of 250 to 300 billion USD. This is a 14% increase in frequency of events since the previous decade and nearly a 100% increase since two decades ago. According to grim climate change predictions, this trend is likely to continue upwards in the decades to come (UNISDR, 2015).

The work presented in this thesis concerns two very different kinds of natural disasters, the 2004 Boxing Day Tsunami and the 2005 Storm Gudrun. The tsunami is considered a geophysical disaster caused by an earthquake of M9.3, which occurred 30 km below sea level just north of the island Simeulue. It had an epicenter about 160 kilometers off the west coast of Sumatra, which triggered the worst ocean-wide tsunami in world history, elevating several cubic kilometers of water by vertical friction along the Burmese and Indian tectonic plates (Intergovernmental Oceanographic Commission, 2008). In contrast, Gudrun is considered an extra-tropical storm, or a mid-latitude cyclone. This is defined by its location in the middle and high latitudes and its cyclonic low-pressure shape, which chiefly obtains its energy from the horizontal fronts, or contrasts, in the atmospheric temperature. When occurring in winter, extra-tropical cyclones, like Gudrun, become particularly destructive and explosive due to extreme contrasts in temperature related to cold fronts (EM-DAT, 2016).

II. The political side of natural disasters

While it is clear that politicians cannot be responsible for the causal chain of natural phenomena,² they may nevertheless be held accountable for the impact these events have on society, particularly since the severity of natural disaster impacts may depend on a whole range of issues that fall under public institutions to administer. That is, when natural phenomena become natural disasters, public institutions in democratic states will at least to some degree be responsible for the gravity of their impact. An example from political science research by Parker et al. (2009) on the impact of Hurricane Katrina, which shows that New Orleans was exceptionally vulnerable to Katrina due to poor urban planning, illustrates this point. This particular research identifies several weaknesses, such as the poor location of hoses and buildings confined to hurricane-sensitive low grounds, which all became flooded during Katrina. In addition, substandard levee systems and lack of investments in restoration programs for New Orleans' natural protection barriers, the wetlands, contributed to the severity of flooding. Admittedly, these are all policy issues of relevance for local and state-level governance that could have been better planned given the existing experiences from previous hurricanes and the knowledge from natural disaster research. In fact, in light of Hurricane Katrina's destruction, one may question the many identified weaknesses of the crisis response system, both from an urban planning perspective and from a perspective of local and state-level coordination. This highlights the political side of natural disasters and exemplifies why the study of this field may be referred to as the politics of natural disasters.

Moreover, the crisis response aspect of natural disasters may be regarded as a public good, that is, a good or service that, at least to some degree, does not diminish in availability to others when consumed by one person (it is said to be non-rival) and that is difficult or costly to exclude non-payers from consuming (it is said to be non-excludable) (Frank & Bernanke, 2004).³ Ac-

² While this is true in most instances, this may vary somewhat depending on the type of disaster. For example, the failure of politicians to institute vaccine programs or lax rules regarding the prescription of antibiotics may be seen as precipitating biological disasters, which by definition are natural disasters. The same can be said regarding the failure of democratic governments to provide safe public water fountains in developing countries. Furthermore, public projects, such as the building of dams, may cause floods. For some other types of natural disasters, however, the politicians can never be held responsible for the actual disaster itself, which is true for storms, volcanoes, earthquakes, and tsunamis. Nonetheless, in case the events are at all foreseeable, which they typically are, at least probabilistically by historical records and scientific knowledge, though perhaps not to the precise timing of events, politicians may still be considered responsible for the crisis preparedness and response to such disasters.

³ This is not to be confused with what in economics is referred to as a pure public good, which is a good or service that to a very high degree is both non-excludable and non-rival. That is,

ording to this definition, we may think of its applicability, in varying degrees, to crisis response spending. In particular, we may consider it in the context of improved infrastructure, such as better levees, or an enhanced SOS system, involving the military, the police, the fire department, and local rescue services. That is, if one person benefits from this kind of good, others can still enjoy the same benefit or service (it is non-rivalling), and when improved infrastructure resists the impact of hurricanes or crisis response operations are mobilized, they do not exclude non-payers (the public good is in this respect non-excludable). Furthermore, the non-rival and non-excludable aspects of public goods make them unattractive for private companies to produce, as they are hard to charge for. That is, as public goods are essentially available to most people without necessarily having people pay for them, they are highly unprofitable to produce. In turn, this gives rise to the free-rider problem, which occurs when too little of a good or service is produced as a result of its non-profitability. This is why public goods typically, though there are exceptions, are funded by taxation (Frank & Bernanke, 2004), which is important from a democratic perspective since it also legitimizes public expectations of crisis response.

In addition, taxation as a means for governments to finance crisis response also fulfills the requirement of having its benefit exceed its cost in a welfare-maximizing way (Frank & Bernanke, 2004). This is particularly clear for crisis response spending as it regards natural disasters, since it holds the benefits of saving lives and increased human welfare, which makes it hard to argue that the costs of such measures could ever exceed their benefits. In fact, since most democracies with previous experience with natural disasters have public institutions specifically designated for the task of crisis response to natural disasters, this concerns the legitimacy of the allocation of public resources. This adds an explicit economic component to the political side of natural disasters.

Finally, in the case of the 2004 Boxing Day Tsunami and the 2005 Storm Gudrun, many Swedes made claims on the aforementioned kind of services that pertain to the public good definition of crisis response, which the government largely failed to deliver. This raises a point of representation, because in any democratic context, an incumbent who is to represent the interest of the majority links crisis response to natural disasters with the representation of an affected population. For political scientists, this creates ample opportunity to study how democratically elected representatives perform in terms of crisis response and if the performance is evaluated as representative or not. This makes natural disasters highly political events and places them at the center of democratic politics, which is exactly what this dissertation is about: the accountability in crisis response to natural disasters.

individuals cannot, in a pure sense, be excluded from using it while its consumption simultaneously does not reduce availability to anyone else (Frank & Bernanke, 2004).

III. What is accountability?

The concept of accountability is central to democracy. Despite variations in institutional design, modern democracies commonly face the same dilemma of agency loss due to delegation, which occurs when the elected incumbent (agent) does not represent the interest of the principal (some majority of the electorate). Agency loss assumes divergence in interests between principal and agent as well as asymmetric information (information is not completely shared between principal and agent). This may lead to either adverse selection (when the principal selects the wrong agent) or moral hazard (when the selected agent takes unobservable action against the interest of the principal). This dynamic relationship between the agent and the principal is commonly referred to as the principal-agent problem (or model), of representative democracy.

In essence, there are two types of accountability mechanisms designed to counter the principal-agent problem: horizontal accountability (given by institutional design) and vertical accountability (given by retrospective voting). In both of these cases, accountability should be understood as the means by which the principal may try to counteract agent misbehavior by motivating political action that is representative of some majority (Strom, 2003). In what follows in the introduction to this thesis, I will make a clear distinction between vertical and horizontal accountability. This is an important distinction to make because the work of this dissertation mainly concerns vertical accountability. However, these concepts are not mutually exclusive categories. In fact, as shall become clear from the investigation carried out in paper 2 of this thesis, horizontal accountability may precede vertical accountability, and as such they can function together to achieve legitimacy in representative democracy.

Horizontally, accountability takes place in between elections, as a mechanism given by institutional design, which allows for a variety of accountability options (Strom, 2003; Manin et al., 1999). In general, there are two horizontal accountability mechanisms that pertain to both parliamentary and presidential systems. The first is based on monitoring and reporting requirements and the second constitutes institutional checks. In the case of the first, information may be obtained through monitoring activities by the principal (by means of media or opposition parties) or via committee hearings by legislators in which ministers or civil servants have to testify, or as regular reports by the government to parliament. The second mechanism implies that parliament may subject executive agencies to legal inquiry or external audits (investigations) or submit them to the veto of a third party (Strom, 2003). In the case of the latter, however, though there are many similarities between parliamentary and presidential systems, the institutional designs also exhibit general differences (Manin et al., 1999).

Parliamentary systems, like Sweden, exhibit a straightforward linear hierarchy with indirect delegation and the constitutionally assigned accountability mechanism of a vote of no confidence, which gives the majority of parliament power to vote the prime minister and his cabinet (government) out of office at any time. In these systems, power is typically divided between bureaucratic departments and local and national levels of governance. These separations render accounts not only to citizens but also between levels and departments, which is particularly important for horizontal accountability, as not all civil servants are democratically elected. In contrast, presidential systems hold a complex system of plurarchy with more direct delegation. Here, it matters more how checks and balances are institutionally designed, as it may cause variation in degrees of transparency. In any of these cases, however, civil servants may only be accountable to publically elected representatives (Strom, 2003; Manin et al., 1999).

In contrast to horizontal accountability, vertical accountability takes place at elections (as a mechanism connecting the principal with the agent). This may be regarded the most fundamental and institutionalized form of accountability, where the principal performs retrospective evaluations of the agent. As such, elections are one of the key mechanisms for accountability, as the selection and replacement of rulers by votes also allows for the possibility of political change. This is given by a basic three-step election cycle of initiation (elections), followed by enablement to rule (without legally binding instructions by the principal for a defined period of time) and termination (elections). In this view, accountability takes place at the interception of termination and initiation by retrospective voting. Here, accounts can only be held after experience and evaluation of the previous election cycle, where the election serves as the mechanism to do so by termination and initiation, while also establishing when accounts will be given next. Indirectly, then, this kind of accountability mechanism ought to motivate political action that is to the benefit of some majority (Manin et al., 1999).

Nonetheless, although elections are essential to vertical accountability, retrospective voting is not the only function of elections. Another closely related perspective on elections is the Responsible Party Model, which raises a more prospective account of voting (Holmberg, 1999; Schmitt & Thomassen, 1999). While this view may be considered as the opposite of the retrospective voting perspective, it still holds a valid contribution in understanding how voters may view elections, parties, and their platforms. For this reason I will now elaborate on how these differing views may be understood in relation to each other. This is an important distinction to understand, as it motivates retrospective voting as the empirical approach of this thesis.

IV. Prospective versus retrospective voting

In practice, the agent in the agent-principal model of representative democracy has since the early 1900s come to be represented by political parties. As parties have forward-looking party platforms, which they use to compete over votes prior to elections and try to implement following elections, this renders a prospective, rather than retrospective, function of elections (Holmberg, 1999; Schmitt & Thomassen, 1999). Downs (1957) was the first to articulate this idea from a rational choice perspective. Downs argued that voters use a utility-maximizing calculus when deciding their vote. According to this calculus, voters make a decision based on what they think will yield the greatest utility in the future. In essence, this perspective allows voters to rationally⁴ estimate utility gained by the counterfactual scenario of having the opposing party govern instead. Whichever party is then thought to yield a higher utility in this comparative utility-maximizing calculus will thus also be the party that obtains the vote (Manza & Brooks, 1999; Abramson et al., 2010).

Today, the prospective view of elections is commonly referred to as the Responsible Party Model and connects the approval of the party platform by the principal with the vote. Thus, in this view, the agent only has a mandate to carry out the implementation of the prospective party platform and to act in accordance with election promises (Holmberg, 1999; Schmitt & Thomassen, 1999). Therefore, this view stands diametrically opposed to the retrospective voting perspective where politicians and parties are retrospectively punished or rewarded for their actions rather than voted upon based on their election promises (Key, 1966; Fiorina, 1981; Ferejohn, 1986; Holmberg, 1999).

While the prospective and retrospective views on elections in representative democracy may be understood as each other's opposite, it is most likely the case that both are at play simultaneously for different parts of the electorate in any given election. For the purpose of this work, however, I position myself within the latter perspective of retrospective voting. As the aim of this dissertation is to analyze whether the 2004 Boxing Day Tsunami and the 2005 Storm Gudrun may have impacted the 2006 Swedish parliamentary election, the vertical accountability mechanism of retrospective voting is the logical venture point out of the two. Given that both disasters happened in the midst of the 2002 to 2006 mandate period and that they were near parallel in timing, though with non-geographical overlaps, the crisis response to any one of these disasters could not have been part of the party platforms launched for the 2002 electoral campaigns. Prospective accounts are there-

⁴ It should be noted, however, that one of Downs' conclusions was that it is irrational for voters to vote, as the probability that their vote will determine the election outcome is extremely small. Yet, he developed some explanations for this rather irrational behavior.

fore likely not the case here. Instead, the retrospective position quite naturally follows from the natural disaster and election focus of this work, as natural disasters typically are unpredictable by nature and their future prevention is seldom a hot topic in electoral campaigns. There is nonetheless a possibility for natural disasters to become part of electoral campaigns after they come into existence.

Specifically, in this work, I argue along the same lines as forerunners Key (1966), Fiorina (1981), and Ferejohn (1986), who all advocate the retrospective voting approach. While this school also follows a rational choice perspective, it differs slightly from that of Downs (1957), as the retrospective voting perspective also allows for voters to rationally compare the past results of the governing party with the counterfactual scenario of how the opposition would have performed. In addition, and perhaps most importantly, the retrospective version of the rational choice approach also stipulates the motivational power of the retrospective voting mechanism, that is, for officeholders to also stay alert to the handling of “new and unexpected events that arise between elections” (Ferejohn, 1986, p. 7).

In a way, retrospective voting may in this sense be interpreted as voting myopically (in a short-sighted manner) by letting the past determine the future, instead of looking forward, as in prospective voting. Nonetheless, to the extent that voters do reward or punish the incumbent, retrospective voting may impact electoral outcomes, at least in theory. More precisely, the motivational power of retrospection ought to benefit some electoral majority, as it allows for the selection and replacement of rulers by votes, which could happen over crisis response performance to unexpected events like natural disasters (Manin et al., 1999). Theoretically, then, this is *why* rulers would act in the interest of some majority, as it follows from the possibility of sanctions that governments may act accountably by anticipating retrospective judgments. As such, retrospection implies a *de facto* potential for incumbents to prevent electoral losses by implementing actions conducive to such an aim (Manin et al., 1999).

Despite its theoretical power, however, retrospective voting is not a flawless accountability tool. The problems of agency loss due to delegation, as given by asymmetric information and moral hazard, remain. Here, the former is an evident problem. As voters do not know many things that politicians do, rendering accounts at the polls is inadequate for representation. This is so since insufficient information makes it difficult to evaluate the incumbent, which in turn lowers the possibility of not being reelected. That is to say, there is ample room for politicians to maneuver. Contrary to the foregoing view, then, the vote may not compel governments to act in the best interest of some majority but only to perform at a minimum of what is needed to remain in office. Conversely, it is equally plausible for voters to err in their judgment and punish a representative government due to lack of information. In addition, moral hazard is just as plausible since the incumbent

may strive to prevent electoral losses by anticipating electoral outcomes and thus aim to hide its actions from the public eye. Yet, it is also possible for governments to err in their judgment of being representative of some majority (Manin et al., 1999).

Keeping the problem of agency loss in mind, we may nevertheless conjecture that, in theory, retrospection still implies the possibility of sanctions. Consequently, and apart from their real agendas, incumbents ought to at least be motivated to exhibit behavior that maximizes their possibility of reelection. For this reason, it should be in their interest to convey a public image that is representative of some majority (Manin et al., 1999). Ultimately, therefore, and regardless of which scenario is the given, it is always the perception of the voters that matters for retrospective voting and not necessarily if a government is representative or not. In short, voters will judge incumbents based on what they know when using elections as an instrument for accountability through retrospective voting.

Key conditions and obstacles for retrospection

Thus far, we may agree that governments are considered accountable if voters can detect if they are representative or not and sanction them accordingly. For this to work, however, citizens must be able to correctly identify representative behavior. In order for such assessments to occur, a few key conditions of retrospection must be met. Two such conditions are information and transparency. These may be understood as the first out of the two horizontal accountability mechanisms discussed earlier, i.e., monitoring and reporting requirements. That is, in making judgments, voters may reduce informational asymmetries by relying on screening efforts afforded by opposition parties (that monitor and inform citizens without conspiring with or against the government), independent interest groups, and party-independent mass media (Manin et al., 1999; Strom, 2003).

In addition to information and transparency, to make the power of sanctions real, clear alternatives must exist, and politicians must also have incentives to be reelected, which may be problematic in cases where limitations on possible office cycles are in place. The barriers for new parties to form and enter office must therefore be reasonably low. Moreover, to the extent that institutions enhance or obscure clarity of responsibility, it is more or less easy for citizens to assign credit and blame. For example, coalition governments, or divided governments (when different parties control the presidency and congress), tend to reduce the clarity of who is responsible, thus possibly posing an obstacle to informed voter judgment.

In any case, however, even if assuming that asymmetric information, and all else given above, would be in optimal equilibrium, there is still one major obstacle to retrospection of specific policy issues. This obstacle is the one vote rule. As most of us would agree, one cannot evaluate the perfor-

mances of all sectors with only one vote (Manin et al., 1999). What, then, one may ask, are the theoretical implications of these conditions and obstacles for the study of political evaluation? In answering this important question I will argue that natural disasters are exceptionally good cases to study, as they minimize the theoretical obstacles for retrospection. This is so because natural disasters trigger extreme circumstances that happen to create very favorable key conditions for retrospection to take place, i.e., the first horizontal accountability mechanism of monitoring and reporting requirements that comprise information and transparency. In the next section of this introduction to the thesis, I will elaborate on how this is the case. In turn, this will allow me to argue for my choice of the 2006 Swedish parliamentary election, the 2004 Boxing Day Tsunami, and 2005 Storm Gudrun as suitable cases for the study of retrospection.

V. Natural disasters as a case for retrospection

From the foregoing account of retrospective voting, we know that retrospection is not theoretically uncomplicated. This renders some challenges for a political scientist who wishes to examine *if* and *how* it works in reality. That is to say, do voters hold elected officials accountable? In aiming to answer this question by empirical investigation, we should aim to limit the theoretical obstacles of retrospection. To do this, we would ideally like to examine a case of retrospection in a context where it is clear that the incumbent is the most responsible and what the political alternatives are. In such a context, we want to come across a scenario where the incumbent has incentives to be reelected and where asymmetries in information and probabilities of moral hazard are low. Thus, we would like to know that citizens are likely to identify what they deem representative and not. Accordingly, we need to observe broad communication of the politics in question between the incumbent and the public, plus extensive screening efforts afforded by opposition parties, independent interest groups, and mass media. In addition, we would like to look at something of such a magnitude that, although one cannot evaluate the performances of all sectors with one vote, this particular political issue ought to be important enough for a discernable share of the population to potentially capture its evaluation by the ballot.

In brief, we should aim to investigate a case for retrospection that has to concern something sufficiently significant to make the theoretical power of sanctions real and also to motivate political action representative of some majority. This is why natural disasters offer a unique context in which one is highly motivated to study *if* retrospection works. This is so as the extreme circumstances connected to natural disasters speak directly to the concerns raised above. That is, in a situation of crisis, like that of a massive natural disaster, it is clear that the incumbent is the most responsible. In a repre-

sentative democracy, when such a situation occurs, it is also clear what the political alternatives are. Crises, moreover, typically tend to ignite the political opposition and trigger massive screening by independent media while also being of direct concern to a large share of the affected population. In such a context, where the incumbent is in the spotlight of attention and scrutinized for his or her crisis response, we may assume that the asymmetries in information and probabilities of moral hazard are low. This is why there is motivation to turn to the multi-party system of representative democracy in Sweden to examine the crisis response by the S incumbent party to the 2004 Boxing Day Tsunami and the 2005 Storm Gudrun in the 2006 Swedish parliamentary election.

Specifically, in selecting Sweden as a context for this study, I make use of a well-established democratic framework where the incumbent is likely to be viewed as most responsible while also being motivated to be reelected, and where we can see clear political alternatives. In this context, we may expect the asymmetries in information and probabilities of moral hazard to be unusually low with respect to both the tsunami and Gudrun. This is so as both disasters generated extensive media coverage, which also tested the S incumbent's public communication skills with respect to its crisis response. And, what is more, as will become clear from all three papers presented in this thesis, it was precisely in this context that horizontal accountability in the form of screening efforts by opposition parties and independent interest groups took place, which in sum rendered the probability for moral hazard low.

Equally important is the magnitude afforded by these events, which by nature affected a discernable share of the population. In fact, the 2005 Storm Gudrun is considered the most dramatic natural disaster known to have occurred in Sweden and to Swedes in modern times (Eriksson, 2016). Likewise, the 2004 Boxing Day Tsunami, which occurred only two weeks before Gudrun, until date constitutes the most covered event by Swedish media in the postwar period (Kivikuru & Nord, 2009). Hence, given the considerable impact of both disasters and the thorough coverage by media of these disasters, we may therefore assume that most Swedish citizens are likely to have been very well informed of the crisis response to both the tsunami and the storm. Consequently, it is also likely to think that citizens were able to separate what they deemed representative behavior from that which was not. In fact, it is plausible to believe that both cases could have made the power of sanctions real.

In sum, given the very unique circumstances of the tsunami and Gudrun, it is likely that the S government should have been motivated to at least project an image of far-reaching mitigation and crisis response, which would be representative of some majority. And this is why these parallel crises appear as very intriguing cases to empirically scrutinize retrospection in the context of the 2006 Swedish parliamentary election. As you will see from the find-

ings presented in the three papers that comprise this thesis, the contribution of this work is considerable in terms of retrospection. In fact, both disasters turned out to have very likely generated considerable retrospective effects in the 2006 parliamentary election, while the storm also had longer-lasting effects that likely carried over to following elections. These are unique and interesting findings that shed new light on the historic 2006 election outcome, which makes this study exceptional for Sweden.

Before presenting the empirical studies of this thesis, however, I will give a short account of two other major approaches in election research, as they have evolved in parallel with the retrospective voting perspective. An understanding of these approaches is important in order to understand the evolution of the retrospective voting field in relation to the bigger field of election research, which encompasses different perspectives. Following this, I will give a much more thorough introduction to previous research in the field of retrospective voting, as it is important for understanding where in the literature we may place this dissertation and its contribution to knowledge. In so doing, I will first give a brief account of how the retrospective voting field has developed over time and highlight distinctive strands within this literature. This will allow us to see what the focuses of these different strands are and how the newly emerging application to natural disasters as cases for retrospection has come to constitute the most recent offshoot from the retrospective voting literature.

VI. Perspectives on elections

Contemporary election research emerged during the early twentieth century, following the widespread extension of the franchise that had begun in the nineteenth century (Manza & Brooks, 1999). Since the start, researchers have followed various theoretical approaches. Out of these, the sociological, social-psychological, and rational choice approaches stand out as particularly influential (Manza & Brooks, 1999; Abramson et al., 2010). While both prospective and retrospective voting fall under the latter of these three perspectives, in order to better situate retrospection in the voting literature and in the context of cumulative election research, I will only summarize the work of the first two approaches and that of retrospective voting. Admittedly, this will leave out much work on prospective voting, which constitutes a rather separate orientation. Nonetheless, the focus on retrospective voting will help illustrate how the other two fields have evolved in relation to the retrospective voting perspective and how the work of this thesis is positioned within the broader literature on elections.

The sociological approach

Earlier work on elections from the 1900s to the 1930s has been mostly descriptive. During this period, scholars mainly looked at the influence of belonging to social groups, such as family, peers, trade unions, social class, and ethnicity, on voting decisions. This paved the way for the influential sociological approach, also known as the Columbia Model, initiated by Lazarsfeld et al. (1944), who worked out of Columbia University. This approach holds social group belonging as central in understanding how voters behave (Manza & Brooks, 1999; Abramson et al., 2010). In arguing that social composition determines voting decisions, these authors state that a “person thinks, politically, as he is, socially. Social characteristics determine political preference” (p. 27, as quoted in Abramson et al., 2010).

The groundbreaking analysis by these scholars concerned the 1940 U.S. presidential election. In this work, Lazarsfeld et al. (1944) used categories such as Catholic, Protestant, a binary coding of rural or urban residence, and four categories of socioeconomic status as predictors of voter behavior. Other known works that build on this perspective include Berelson et al. (1954), Alford (1963) and Hamilton (1972), where Alford particularly contributed to the class and income voting literature that followed (see, for example, Lipset, 1981; Ingelhart, 1997; Manza & Brooks, 1999; Stonecash, 2000; Brewer & Stonecash, 2007; Abramson et al., 2007; Bartels, 2008; Dalton, 2008).⁵

The social-psychological approach

However, scholars Campbell et al. (1960), who worked out of Michigan University, turned to more of a social-psychological perspective. By incorporating an individual-level perspective from social psychology to the sociological approach, they developed the Michigan Model (Manza & Brooks, 1999; Abramson et al., 2010), which rests on the concept of a funnel to illustrate the mechanism of voting. At the narrow end of the funnel, which predicts voting decisions, social-psychological attributes like party identification and political attitudes, learned from childhood and strengthened in adulthood, are operating. In this regard, the Michigan Model extends the Columbia Model, as it holds that these social-psychological attributes are influenced by social characteristics such as those emphasized by Lazarsfeld et al. (1944), only that those are placed further back in the broader spectrum of the funnel that causally precedes the social-psychological attributes (Manza & Brooks, 1999).

⁵ In addition, the sociological approach has also been applied to the study of coalitions (Axelrod, 1972 and 1986; Petrocik, 1981; Polsby et al., 2008) and party identification (Stanley et al., 1986).

Nonetheless, while it is true that Campbell et al. (1960) did argue for partisanship as one of the strongest predictors of vote choice, they also recognized that the political attitudes of voters are not merely “reflections of personality factors, or group memberships, or fixed partisan loyalties” (p. 6) but are rather also reactions to decisions taking place at the level of national politics. In this view, social psychological attributes mediate social characteristics as voters assess their options based on the state of politics at the ballot box, which may explain variations in voting outcomes among members of the same social group (Manza & Brooks, 1999).

In a later work, Miller and Shanks (1996) revisit the Michigan Model to examine recent U.S. voting patterns. In accordance with the classical model, they identify six factors at the back of the funnel to be causally linked to six independent factors at the narrow end of the prediction funnel. With the exception of notable changes in voter attitudes and party attachments, Miller and Shanks still find some stability in vote choice between 1952 and 1992. Also, Schickler and Green (1997) and Green et al. (2002) find partisanship to be a remarkably stable predictor of voting choice, both in the U.S. and in other countries. Other known studies that follow the social-psychological approach include, but are not limited to, Converse (1964; 1975; 2006; 2007) and Lewis-Beck et al. (2008).

The retrospective voting approach

The retrospective voting literature largely developed in parallel to the foregoing perspectives and holds a much more optimistic view of voters compared to the sociological and social-psychological approaches. That is, rather than being governed by predetermined attributes like social status and partisan loyalties, voters are often seen as being capable of giving a rational assessment of political options based on experience. This is a very important difference that separates the retrospective voting literature in a very distinct way from other perspectives of voter behavior. Though not explicitly formulated in terms of retrospection from the start, this literature has a strong presence in the economic voting literature, which goes back to at least the 1920s (Monroe, 1979a).

Nonetheless, while the economic voting literature goes back a century, the earlier work was typically theoretically weak and more empirically oriented in terms of investigating whether voters considered retrospective assessments of the economy when voting. The first real theoretical elaboration of why voters ought to make retrospective assessments, however, was put forward in the 1950s, as presented by Key (1955). Key’s work constitutes one of the earliest records of a retrospective voting mechanism in the form of a theory of critical events. Essentially, this theory suggests that dramatic events, such as the Great Depression, determine a voter’s predispositions toward politics, parties, candidates, and policies. According to Key, the na-

ture of these critical events is so dramatic that they serve to pull voters out of their regular voting patterns and cause them to reassess their political orientations. For example, it is widely recognized that the Great Depression was such an event, which re-shaped political orientations among the voting population (Monroe, 1979a). A few years later, Key (1961) introduces a somewhat more elaborate outline of retrospection, focusing more on the critical issue of having a challenger party for electoral accountability. And after yet another few years, Key (1966) explicitly articulates the theory of retrospective voting for the first time. For this latter work, Key has since been widely recognized as the founder of theories of retrospective voting (Stokes, 1999).

Specifically, in the latter work, Key (1966) disputes the Michigan Model for portraying the American voter as rather unsophisticated (Campbell et al., 1960) by showing that voters often switched party in order to reward or punish the incumbent for his or her performance (Healy & Malhotra, 2013). Essentially, it is in this work that Key establishes the Retrospective Voting Model in contrast to the prospective view of elections in an extensive study of U.S. presidential elections between 1936 and 1960. In this study, Key uses polling data to show a strong congruence between policy positions of parties and their voters. In the same study, Key also demonstrates that voters switch to parties that better represent this congruence should they find it in deficit by their current representatives. This finding suggests rational and retrospective assessment rather than prospective voting, which does not rely on such rational assessments of previous voter representation by political parties. It was in light of these findings that Key made the famous statement “voters are not fools” (Key, 1966, p. 7), which is also the opening citation of this thesis and thus sets the tone for what one may expect from the work presented here.

Several scholars have followed in the footsteps of Key in building on the theoretical aspects of the retrospective voting model (Barro, 1973; Peffley, 1985; Ferejohn, 1986; Austen-Smith & Banks, 1989; Fiorina, 1981, 1981b; Seabright, 1996; Persson et al., 1997; Fearon, 1999; Besley & Case, 1995; Ashworth & Bueno de Mesquita, 2013). Ashworth (2012) provides an excellent review of the most recent developments in this area while also pointing to some very important connections between formal theory and the empirical literature. Nonetheless, as mentioned previously, the economic voting literature constitutes one of the oldest traditions of empirical investigation in political science. This is a very central field for my own work presented here, as it motivates the newly emerging field of retrospective voting in natural disasters, which is the most recent offshoot of works in the retrospective voting literature. That is, instead of applying the retrospective voting mechanism to retrospective economic evaluation by voters, the logic of retrospective assessments is applied to the crisis response of natural disasters by incumbent governments. To illustrate how this transition has evolved over time, I will very briefly recapitulate the evolution from economic voting in

the literature to the current focus on natural disasters, which is also the strand of this thesis.

Generally, one may say that the economic voting literature originated in the U.S. around 1920, because most work prior to the 1920s is impressionistic, relying on general sentiments of how people tend to vote during times of economic hardship. In contrast, work from the 1920s to the 1950s is a bit more quantitative, offering a somewhat mixed picture of economic voting (see, for example, Rice, 1928; Tibbits, 1931; Neprash, 1932; Bean, 1940; Gosnell & Coleman, 1940; Ogburn & Coombs, 1940; Clark, 1943; Kerr, 1944; Pearson & Myers, 1948; Bean, 1948; Wilkinson & Hart, 1950). Still, work from this period is theoretically weak, as it does not elaborate on why voters ought to vote economically (Monroe, 1979a). Nonetheless, various macroeconomic propositions are investigated in relation to voting, focusing on the question of *if* a relationship exists between economic variables and the vote. Frequently used measures in this earlier literature are price indices, general business activity, unemployment, income, or other indices of economic activity to investigate if economic fluctuations may impact election outcomes (Kramer, 1971).

In contrast, research from the 1960s to the 1990s shows remarkable advancements in the statistical applications to analyses of retrospective voting. The field now moves towards more fine-tuned analytical estimations using multivariate econometric models that aim not only to identify *if* a relationship exists between economic variables and the vote but also to answer *how much* the estimated effect matters in relation to other variables of relevance for election outcomes (see, for example, Rees et al., 1962; Kramer, 1971; Fiorina, 1974 and 1978; Tufte, 1975; Stimson, 1976; Wides, 1976; Kernell, 1977 and 1978; Fair, 1978; Pollard, 1978; Monroe, 1978; Klorman, 1978). For a review of some of this work, see Monroe (1979a and 1979b). Though some results from this period admittedly point to weaker connections than others do, the findings still show ample evidence of economic voting from several countries (see, for example, Åkerman, 1947; Durant, 1965; Butler & Stokes, 1969; Zeller & Carmines, 1978; Schneider, 1978; Frey, 1978, 1979a; Frey & Schneider, 1978a-c). For a brief review on some of these studies, see Monroe (1979b), and for reviews on the later comparative work in this field, see Lewis-Beck and Stegmaier (2000), Lewis-Beck and Paldam (2000), and Jordahl (2006). Overall, the literature on economic voting is extensive, but a few comprehensive reviews exist (see, for example, Kiewiet & Rivers, 1984; Lewis-Beck & Stegmaier, 2000; Healy & Malhotra, 2013).

Various subfields of research have also emerged from the economic voting literature. One prominent issue for investigation, which surfaced in the late 1970s, concerns whether voters vote sociotropically or egotropically. Specifically, research interested in these questions looks for evidence of what has been labeled the sociotropic-voting hypothesis, which centers on the individual evaluation of large-scale, national economic government per-

formances. This stands in contrast to the hypothesis that voters assess changes in their own individual finances, typically referred to as egotropic voting. Kinder and Kiewiet (1977) presented the first study to propose the sociotropic voting thesis, showing that individual unemployment and financial status do not impact voting whereas the general business trend does (Monroe, 1979a). This finding supports the sociotropic-voting hypothesis as an alternative explanation for why we observe macro patterns of economic voting and was reaffirmed in later work by Kiewiet and Kinder (1978 and 1979). Following these studies, several other scholars have found similar evidence (Brody & Sniderman, 1977; Sniderman & Brody, 1977; Schlozman & Verba, 1979). Though Kramer (1983) and Kiewiet (1983) quickly came to question this approach because of “serious problems of evidence and interpretation” (as cited in Kiewiet & Rivers, 1984, p. 384), this branch of economic voting research has continued until the present day and includes findings from various countries.⁶

In addition, there is available work that investigates how political context matters for retrospection. For example, Powell and Whitten (1993) introduce what has become known as the responsibility hypothesis, suggesting that clarity of responsibility is key for retrospection. That is, in order for voters to be able to assess the past performances of those who govern, they must also be able to identify who is responsible (Lewis-Beck & Stegmaier, 2000). This supports earlier findings by Lewis-Beck (1986 and 1988), who has suggested the same association: The more complex the coalition formation, the less the retrospective effects (Lewis-Beck & Stegmaier, 2000). While later studies further support this (see Anderson, 1995; Whitten & Palmer, 1999; Anderson, 2000; Royed et al., 2000; Samuels & Hellwig, 2010), Wilkin et al. (1997) and Chappell & Veiga (2000) find the opposite in their study, whereas Kayser and Wlezien (2011) argue that it is when voters’ pre-existing party attachments are weaker that accountability is stronger (Kayser & Peress, 2012).

Nonetheless, the new millennium has seen a new development for the investigation of retrospective voting, with some work applying the retrospec-

⁶ See, for example, Hibbs (1979), Kinder et al. (1989), Brown and Woods (1991), Paldam and Schneider (1980), Rivers (1983), Rosenstone (1983), Holmberg (1984), Markus (1984, 1988 and 1992), Lecaillon (1981), Lafay (1985 and 1991), Lewis-Beck (1988), Hibbing (1987), Lewin (1991), Lanoue (1994), Nannestad and Paldam (1994), Clarke and Stewart (1995), Price and Sanders (1995), Clarke et al. (1997), Alvarez and Nagler (1995 and 1998), Romero and Stambough (1996), Sanders (2000), Anderson (2000), Anderson et al. (2000), Nadeau and Lewis-Beck (2001) and Jordahl (2006). And, for work highlighting the issue of *culture* in the theorizing of retrospection, suggesting that some cultures may, or may not, have a greater degree of sociotropic thinking than others, see Hibbs (1993), Nannestad and Paldam (1995 and 1997) and Borre (1997). And, for reviews on some of these works, see Kiewiet and Rivers (1984), Lewis-Beck and Stegmaier (2000) and Jordahl (2006).

tive voting model to contexts other than the economy. That is, instead of solely using macro- and micro-economic indicators to examine retrospective voting, the literature also moves into other areas. For example, Berry and Howell (2007) investigate school board elections in South Carolina and thus also make a case for retrospective voting in non-national settings. Others find that luck matters for economic voting. For example, Leigh (2009) finds systematic attribution errors when comparing “the effect of world growth (luck) and national growth relative to world growth (competence)” (p. 165) and finds that luck matters more. Still others find that voters are rather unsophisticated and that irrelevant events matter to their vote. For example, Wolfers (2007) finds that voters in oil-producing U.S. states systematically re-elect incumbent governors during price hikes and oust them from power when prices fall. Healy et al. (2010) draw on social psychology to find that irrelevant events, like sporting losses, affect electoral outcomes “with the effect being larger for teams with stronger fan support” (p. 12804). Nonetheless, as pointed out by Ashworth and Bueno de Mesquita (2013), the systematic errors in voter judgments found by Healy et al. (2010) show small effect sizes. For this reason, Healy and Malhotra (2013) suggest that such “errors may make a difference only in close elections” (p. 286). Within this strand, there is also work that examines elections of judges to U.S. state courts and the role of media in conditioning vote choice (Ashworth & Bueno de Mesquita, 2008; Lim et al., 2010; Snyder & Strömberg, 2010; Ashworth, 2012; Kayser & Peress, 2012). Other studies focus on differences in sentencing between districts where voters get to vote either for challengers or for keeping or replacing the incumbent judge by appointment (Gordon & Huber, 2007; Lim, 2011; Ashworth, 2012).⁷ There is also a growing literature on casualties in war and their effects on vote shares (Mueller, 1973; Karol & Miguel, 2007; Kriner & Shen, 2007; Grose & Oppenheimer, 2007; Gartner et al., 2004; Gartner, 2008; Healy & Malhotra, 2013).⁸

⁷ In this context, findings suggest that “judges in competitive districts will be more likely to send convicts to prison than judges in retention districts” (Ashworth, 2012, p. 193) and that judges facing challengers in liberal-leaning districts are more lenient in their sentencing compared to those who face retention elections and those who face challengers in conservative districts. Moreover, findings by Park (2012) “provide some evidence that we should be concerned about the increase in punitiveness. Park finds that virtually the entire burden of increased punishment in Gordon and Huber’s (2007) data is from enhanced punishment of African American defendants” (Ashworth, 2012, p. 194). This, of course, raises normative questions of accountability.

⁸ This comprehensive review also lists recent work not included here that pertains to retrospective voting and policy, (such as the electoral effects of U.S. federal spending (see, for example, Alvarez & Schousen, 1993; Bickers & Stein 1996), work investigating if making politicians less accountable may increase welfare (see, for example, Achen & Bartels, 2004b; Dal Bo & Rossi, 2011), as well as research on how voters may be helped to make more informed decisions (see, for example, Ferraz & Finan, 2008 and 2011), and work on how to aid voters on overcoming their emotional biases in blame attribution in order to enhance democratic accountability (see, for example, Schwarz & Clore, 1983).

More important for the work of this thesis, however, is the literature on natural disasters and retrospective voting, which has largely evolved in parallel with the various studies that examine retrospection in contexts other than the economy. While there are some exceptions, there are in particular some older, more qualitatively oriented works that investigate crises and natural disasters in relation to politics and elections. This focus of research has over the past decade developed into a strand of its own within the retrospective voting literature. Specifically, this subfield to the retrospective voting literature has seen a recent quantitative revival with the emergence of a small body of works that examine the electoral effects of natural disasters in several countries, which is also the literature to which this thesis adds. As this body of works has continued to grow, there has been a debate regarding the rationality of voters ensuing in relation to its findings. While this may seem counterintuitive since the theoretical underpinning of these empirical investigations builds on the rational voter perspective in the tradition of Key (1966), as we shall see in the following review of the literature on natural disasters and retrospective voting, there have been arguments put forth that aim to disprove the rational voter hypothesis by means of testing the retrospective voting mechanism in the context of natural disasters. Nonetheless, while these arguments exist, there is at present a general consensus to the opposite, which is also the position of this study. In order to understand how the findings from this dissertation connect to the literature on natural disasters and retrospective voting, and in order to appreciate this dissertation's contribution to new knowledge, I will now summarize the very specialized field of research that this thesis belongs to.

VII. Natural disasters and retrospective voting

Barnhart (1925) presents one of the first studies on record to intuitively capture the idea of indirect economic effects of a natural disaster on political parties. By means of geographical maps illustrating the Nebraskan population, agriculture, and precipitation, Barnhart finds that severe droughts in Nebraska between 1880 and 1890 likely contributed to a local economic decline that caused popular support for the Republican Party to diminish while support for the new Populist Party emerged. In particular, the new party supporters consisted of farmers, who were severely affected economically by the drought, which likely made them more receptive to the discourse of the Populist Party. And, in the same year as the writings of Barnhart, Miller (1925) provides a similar account of events in Kansas. Following the economic hardship of the 1885 economic depression, faced by many farmers, Miller finds a local rise in support of the Populist movement.

Another similar study is presented by Lipset (1959), who connects an extended drought in the context of the Great Depression in the Canadian

province of Saskatchewan to the successful rise of the Socialist Party. In a later and extended edition of this work, Lipset (1971) describes how the “torturous drought years” (p. 128), which caused a “complete breakdown of the provincial economy [also] forced a migration from the drought devastated areas” (p. 129). Lipset links the “double catastrophe of depression and drought” (p. 134) and the common sentiment at the time that “the politicians are ... believed to have the power to prevent another catastrophe” with the “willingness of agrarian activists ... to place themselves under the command of the socialists, who appeared to have a new and workable answer to their problems” (p. 135). Writing around the same time, Irving (1959) provides a very similar account of the emergence of the Social Credit Party in the Canadian province of Alberta, which also occurred following an extended drought and grasshopper infestations during the Great Depression. Combined, these two latter works thus are among the first to offer a detailed narrative of the political context of natural disasters, which may trigger voters to make their individual assessments when deciding to vote economically.

Furthermore, Abney and Hill (1966) introduce the first quantitative work on retrospective voting in natural disaster contexts but find no evidence for such evaluations in the 1965 New Orleans mayoral election, in spite of timely relief spending in response to Hurricane Betsy. Nonetheless, it is not until about 40 years later⁹ that the new offshoot from the economic voting litera-

⁹ There is, nonetheless, interesting work produced in the adjacent literature on political instability. Here, Olson and Drury (1997 and 1998) perform the first statistical test, a pooled time-series, of natural disasters and social unrest. The study concerns 12 countries, where data on political unrest is regressed on the aggregate number of fatalities caused by natural disasters, also using several controls, such as GDP, aid, prior instability, and population size between 1966 and 1980. The result shows a significant and positive association. However, their findings also suggest that government repression may reduce, or even eliminate, the social uprisings. Moreover, Olson and Drury (1997) also reference the quantitative works by Davis and Seitz (1982) and Seitz and Davis (1984), looking at the “relationship between regime-type, mismanagement, and levels of disaster damage”(p. 222). In addition, Olson and Drury (1997 and 1998) also list several qualitative works as sources of inspiration for their study. These include work by Freudenheim (1979) and Drabek (1986), which investigate how political problems affect disaster assistance, and work that suggest that disasters trigger political instability by Mayer (1974), Cuny (1983), and Albala-Bertrand (1993). In addition, they list several studies that suggest the 1970 Indian Ocean Typhoon as a possible trigger for the emergence of East Pakistan and Bangladesh (Kim & Ziring, 1977; Cuny, 1983; Albala-Bertrand, 1993), as well as work on the 1972 Nicaraguan earthquake and the sequential establishment of the new 1979 regime (Woodward, 1985; Dore, 1986; Anderson, 1988; Bulmer-Thomas, 1991). Olson and Drury (1997 and 1998) also list research on the 1974 hurricane in Honduras and the following fractional shift within the military government, which was coupled with substantial policy revisions (Dunkerley, 1988). Furthermore, qualitative research offers an extensive narrative of how the 1976 earthquake in Guatemala triggered the rapid onset of democratization (SAIS Study Group, 1985; Dunkerley, 1991; Granados, 1992; Perera, 1993; Bates, 1982). Alongside this is also work on the 1985 twin earthquakes in Mexico, which caused the regime to face a severe legitimacy crisis (Schroeder, 1985; Cockroft, 1990; Annis, 1991; Smith, 1991; Castañeda, 1993; Cothran, 1994; Hellman, 1994; Tangeman, 1995; Krauze, 1997; Olson & Drury, 1997). Finally, however, Olson and Drury (1998) also mention two cases that experienced an opposite move following natural disasters. These are the 1931 hur-

ture, which focuses on retrospective voting in natural disaster contexts, clearly begins to emerge. Specifically, this body of works is also commonly referred to as the politics of natural disasters and tends to leverage the methodological benefits of exogenous weather phenomena to investigate various important questions by means of the retrospective voting mechanism. On the one hand, this literature uses approximations of natural experiments to increase the reliability in causal inference.¹⁰ While on the other hand, it has also moved towards extending the various questions of relevance for the retrospective voting thesis. These pertain to voter's sophistication, short-sightedness, rationality, and evaluation of crisis response by means of the ballot.

Achen and Bartels (2004a) present the first paper since Abney and Hill (1966) to specifically investigate the electoral effects of natural disasters in the U.S. This influential and controversial work on shark attacks, droughts, and wet spells is a pure retrospective voting analysis and marks the beginning of the newly emerging revival of this body of literature. In sum, Achen and Bartels find these events to historically have caused U.S. presidents to lose votes, for which reason they argue that voters are irrational, as such incidents are beyond the control of politicians, and that such irrationality furthermore undermines the accountability claim of democracy. However, this interpretation has been questioned in several contexts (see, for example, Healy & Malhotra, 2013) since it is likely not the causal chain of natural disasters that voters hold governments accountable for but rather their crisis response.

In this regard, two strong proponents of the argument against the voter irrationality perspective are Ashworth and Bueno de Mesquita (2013). These authors offer a formal theory of specific use for understanding the underlying mechanisms in the retrospective voting literature pertaining to natural disasters, which suggest that Achen and Bartels (2004a) have misinterpreted

ricane in the Dominican Republic and the 1954 hurricane in Haiti, where the former experienced a dictatorship and the latter a tyrant military regime following the disasters (see, for example, Crassweller, 1966 for the former case and Ferguson, 1987; Chirot, 1994; Heintz & Heintz, 1996).

¹⁰ Nonetheless, while there certainly are advantages of studying retrospection in the context of natural disasters, some of the points that concern the strong advantage of these studies may be too optimistic. For example, it has been stressed that one specific advantage of this approach is the temporal isolation of events (see, for example, Healy & Malhotra, 2013). However, this is not completely true. While it without a doubt may be true for the crisis management part of crisis response, as it may be clearly attributed to the current incumbent, rather than previous administrations, this does not necessarily hold for the policy response side of crisis response. That is, previous incumbents, if not the same as the current, may have seriously failed in investing in preparedness spending. Therefore, if the incumbent is new and the event happens early on in the term, this makes the isolation of temporal attribution of blame in retrospective voting just as problematic of an issue as when analyzing economic voting. For a debate on this in the economic voting literature, see Bartels (2008) and Campbell (2011) (Healy & Malhotra, 2013).

their findings. In particular, Ashworth and Bueno de Mesquita (2013) put forth a very appealing reasoning to dispute the voter irrationality interpretation, which is very much in line with my own theoretical reasoning put forth in this thesis. Their argument holds a view of government preparedness schemes, mitigation, and emergency response being considered reasonable indicators for past and future performances of incumbents. This is so simply because natural disasters tend to create more informative settings, in which the competence of incumbent politicians may be randomly stress-tested and assessed. Thus, natural disasters constitute changes in the informational environment of voters, as voters are able to observe many things that they are not when natural disasters are absent. These may, for example, include how well the infrastructure was actually planned with respect to preparedness for natural disasters.¹¹ This reasoning coincides well with research by, for example, Berry and Howell (2007) and Snyder and Strömberg (2010), which underscores the importance of high-information environments for voter responsiveness. That said, Ashworth and Bueno de Mesquita (2013) also emphasize that while such findings as those by Healy et al. (2010) indeed suggest that a “small negative effect on incumbent electoral fortunes constitutes evidence of at least some amount of voter irrationality” (p. 4), this cannot automatically transfer to the interpretation of voter irrationality where we find sizable punishment effects by voters over crisis response to natural disasters. In sum, when examining retrospection in natural disaster settings, we ought to seriously consider the mechanisms at play, both formally and empirically.

In a more focused study, Arceneaux and Stein (2006) exploit the massive flooding caused by Tropical Storm Allison in Houston, which happened just months before the 2001 mayoral election, to investigate retrospective blame. They “find that whether citizens blame the government depends on their level of political knowledge and how severely the flood affected their lives” (p. 44). In fact, their findings show that even if voters blamed the government, they only voted against the incumbent mayor if they specifically believed the city was responsible for inadequate flood preparation, which suggests voter competence and sensitivity to varying levels of government responsibility.

Jacobsson (2007) performs a retrospective voting analysis of the effects of Hurricane Katrina and finds that despite disaster relief, George W. Bush’s unpopularity over Katrina seems to have contributed to a Democratic predominance in the 2006 House of Representatives election. Also investigating

¹¹ In short, Ashworth and Bueno de Mesquita (2013) show that it is wholly plausible for irrational voters to supply a greater level of accountability (in this regard, the authors also reference several works from the political agency literature showing that rational election behavior may distort optimal accountability) and that the informational argument shows that “the observation that incumbents suffer electorally following negative events outside of their control does not imply that voters are irrational” (p. 24).

retrospection in the context of Hurricane Katrina, Malhotra and Kuo (2008) explore the processes that make people decide whom to blame when natural disasters are poorly responded to, which they refer to as the intermediate step of attribution.¹² This may be understood as the mechanism that translates impacts of natural disasters into electoral effects. In an online survey experiment, they use Hurricane Katrina to investigate how people assign blame to officials at different levels of government. In sum, the results show that partisanship influences blame only if no other information is available.¹³ However, when introducing content-rich information, citizens on average use it to make informed decisions. This suggests voter competence in assigning blame to various levels of government responsibility.

In a study very similar to the foregoing, Malhotra and Kuo (2009) employ the same survey experiment, but with the additional approach of investigating if emotions like anger and sadness may moderate the cues of information given about whom to blame for the poor crisis response to Hurricane Katrina. Malhotra and Kuo find that individuals with strong negative emotions are more likely to rely on party cues in assigning blame rather than content-rich information, which is referred to as peripheral route processing. By contrast, people with low degrees of sadness or anger are able to make better use of the content-rich information in assigning blame, engaging in central route processing. Also in the same context, Sinclair et al. (2011) study voter turnout following Katrina. They find that while the cost of flooding suggests an overall decrease in voter turnout, it seems to have increased turnout for those most affected.

Moreover, Lay (2009) also uses Hurricane Katrina as a case. Explicitly, Lay investigates if retrospective evaluations outperform the importance of race in the 2006 New Orleans mayoral elections. As such, he puts two rivaling theories of vote choice to the test. Central to this test is the performance of Mayor C. Ray Nagin, who prior to Katrina was considered largely unbeatable. Following the disaster, however, there was extensive media coverage of Nagin's poor handling of the crisis, coupled with a focus on his failure to properly evacuate the city. In line with theories of retrospective vot-

¹² This work draws on research from the field of social psychology. See, for example, Taylor and Doria (1981) for work on group-serving bias, and Taylor and Jaggi (1974), as well as Fletcher and Ward (1988), for work on how positive attribution for outcomes occurs with respect to in-groups and negative attribution with respect to out-groups.

¹³ For additional work that investigates partisan bias in voter blame attribution, see, for example, Niemi et al. (2011) for an account of how voters that are increasingly distributed along party lines may be more biased and therefore not vote retrospectively. And for similar work in numerous other contexts, as it regards a plethora of policy issues, see work by Peffley (1985) and Peffley and Williams (1985), as well as Kinder and Mebane (1983), Abramowitz et al. (1988), Stein (1990), Conover et al. (1986), Wlezien et al. (1997), Bartels (2002), Evans and Andersen (2006), Evans and Pickup (2010), Rudolph (2003a, b and 2006), Gaines et al. (2007), Levendusky (2009), Brown (2010), Marsh and Tilley (2010) and Tilley and Hobolt (2011) (Healy & Malhotra, 2013).

ing, citizens ought to punish Nagin, causing his popularity to drop. However, the latter theory of race as an important predictor in vote choice suggests that voting in urban elections is grounded in long-standing political and social characteristics such as racial group interests. Katrina thus provides a case to study how these challenging theories hold up in a very unique context. While findings from this case show that racial group interests were predominant in the re-election of Nagin, voters also showed competence to varying levels of political authority, since the main responsibility of crisis response was placed on the federal government rather than the city.

Other studies have investigated citizen competence and government accountability in the broader context of natural disasters. For example, Healy and Malhotra (2009) perform a vote function of the U.S. presidential vote, as the president controls relief and preparedness spending via the Federal Emergency Management Agency (FEMA). Specifically, they use measures of disaster damage, federal government relief spending, and preparedness spending as key independent variables for 3,141 counties between 1988 and 2004. In employing this approach, Healy and Malhotra claim that they are able to look at electoral outcomes of government relief spending in response to natural disasters and contrast it with voter's responses to government preparedness spending. In sum, as relief spending is found to systematically exceed preparedness spending for all election cycles in the data, Healy and Malhotra argue that this implies substantial public welfare losses. This is so because the average voter's action distorts the incentives of public officials to invest in disaster preparedness, suggesting voter myopia. In addition, Healy and Malhotra also find that voters are egotropic rather than sociotropic, shown by a regression separating direct transfers from assistance packages directed toward local governments, which suggests that voters only respond to direct transfers. Nonetheless, their interpretation of welfare losses has been questioned by Ashworth (2012), who argues that a better suitable theoretical model for this part of the interpretation would be the multitask model (see, for example, Daley & Snowberg, 2011). This model would allow for an interpretation of voters as being fully rational when preferring to spend on relief rather than preparedness. Another interpretation would be via an accountability model put forth by Bueno de Mesquita (2007), which questions the claim by Healy and Malhotra (2009) of reduced welfare as a consequence of voters' willingness to reward relief instead of preparedness spending (such as improved infrastructure). This model essentially "suggests that a bias toward relief spending, for rational or irrational reasons, might enhance voter welfare if incumbents have the opportunity to engage in corruption while funding infrastructure projects" (p. 191). Moreover, Ashworth (2012) and Ashworth and Bueno de Mesquita (2013) have also argued that the preparedness and relief measures used by Healy and Malhotra (2009) do not allow for their myopic conclusion of voters. In particular, Ashworth (2012) points out that it is more than likely for voters to observe preparedness spending only by the degree of disaster impact. As such "finding that, hold-

ing disaster fixed, prevention spending has no impact on votes does not mean that preparedness spending, in fact, has no causal effect on votes” (p. 190). Hence, it may be fair to say that both the irrational and myopic voter thesis has been the subject for some debate within the literature on natural disasters and retrospective voting.

Nevertheless, in yet another vote function study, Healy and Malhotra (2010) make use of data on U.S. tornado incidents between 1952 and 2004 to study the effect of exogenous economic losses on electoral outcomes. Using county-level data, Healy and Malhotra find that voters punish the incumbent party in presidential elections for economic damage (measured as county per capita tornado damage) when a disaster declaration is not issued, but never for tornado-caused deaths (measured as county per capita fatalities). As such, in this study, the authors conclude that voters signal democratic competence in that they seem to assign both credit and blame to disaster response policies, or the lack thereof. The same pattern holds for the incumbent vote share pertaining to damage and deaths in surrounding counties, indicating an assessment of policy response as it pertains to the economic damage and casualties of others in nearby counties.

There are also case studies of specific events in other countries. For instance, Bechtel and Hainmueller (2011) investigate retrospection in the context of the 2002 Elbe flooding, which occurred only about one month prior to the national election and was the most devastating in German history. Holding a relief response program considered to be the most extensive in German post-war history, they find that the shortsightedness of retrospective voters in evaluating good policy performance is more long-term than expected. More precisely, prior to the flooding, the incumbent party was expected to lose the election due to increased unemployment and a weakened economy, but more than likely due to the disaster relief policy, it managed to persuade just enough voters to remain in office. Just after the flooding, a boost in vote shares of 4% was concentrated to the affected areas whereas a loss of 3% was identified in non-affected areas. The relief is estimated to have generated a 7-percentage point increase in vote shares for the 2002 election in the affected areas, out of which 25% carried over to the 2005 election. By 2009, however, no effects remained. Finally, the authors stress that the findings may indicate less of an incentive for politicians to invest in long-term preparedness and risk-reduction programs against natural hazards, as the short-term gains may be greater, given that a crisis is well handled. Thus, retrospective voting, as an accountability mechanism, may not be powerful enough to induce long-term policy solutions.

There is also work that is closely related to that of electoral accountability in various ways, while also being undertaken in the context of natural

disasters.¹⁴ However, often this type of work pertains to less democratic or non-democratic settings, which more or less place them outside the retrospective voting literature.¹⁵ One such case is Russia. Here, Szakonyi (2011) performs an analysis of the 2010 election and finds punishment effects on the regional incumbent United Russia Party following the 2010 Russian

¹⁴ For example, Besley and Burgess (2002) use panel data on disaster relief from 16 major Indian states between 1958 and 1992 and find government responsiveness to be positively associated with the degree of literacy as well as the extent of newspaper circulation. On the one hand, this suggests that media coverage may enhance the accountability mechanism of elections. On the other hand, it may also suggest that the awareness of this possibility among politicians motivates vote-strategic disaster relief spending. In sum, this study points to the necessity of widespread and local media for protection of vulnerable populations. Other important studies have explored international aspects of disaster relief. For example, Katzenstein and Keohane (2006) attribute the favorable upswing in Indonesian public opinion of the U.S. after the 2004 Boxing Day Tsunami to the substantial and extensively publicized relief operations of the Bush Administration in Southeast Asia. In contrast, the average public opinion in 20 unaffected countries (Sweden excluded) favored its own country's disaster relief support, suggesting country biases in media reporting, individual schemas, and collective images. Similarly, Eisensee and Strömberg (2007) show that U.S. aid to over five thousand foreign disasters between 1968 and 2002 on average depends on the newsworthiness of television news material instead of the disaster itself. Roughly 30% of all earthquakes and volcanic eruptions obtain news coverage, compared to only 5% of epidemics, droughts, and food shortages. Thus for every person who perishes in a volcanic eruption, food shortage demands 38,920 casualties to receive the same expected media coverage. The conclusion is that media induces extra relief to volcano and earthquake victims compared to those exposed to epidemics, droughts, cold waves, and food shortages. In the extension, therefore, media networks induce a relief bias against African disasters compared to Asian ones, as Africa has more droughts and food shortages relative to Asia. And, in the adjacent literature on democratic legitimacy and interpersonal trust, Carlin et al. (2012) examine three earthquakes in El Salvador (2001), Haiti (2010), and Chile (2010). They find that the upholding of interpersonal trust levels in the aftermath of disasters is conditioned upon the state's capacity to maintain law and order and to provide swift disaster relief to affected individuals. Furthermore, in the case of Chile, which may be regarded as a less consolidated democracy in a comparative perspective of research on natural disasters and retrospection, Carlin et al. (2014) find that citizens who suffered damage tend to lower their evaluations of democratic institutions and support for democracy. Instead, they show greater support for action and military coups. Moreover, there is also related qualitative research in the literature on democratization. Here, political scientist Camp (2015) writes on Mexico's shift to a democratic model. Essentially, Camp uses Mexico as a case to describe how the democratic transition of Mexico exemplifies a semi-authoritarian political model, which, step by step, has evolved into an electoral democracy. Camp illustrates how this process takes place over two decades, entailing several important features, including a "social and civic movements originating from government incompetence in addressing the results of the 1985 earthquake in Mexico City" (1). Thus, while there were many other factors of great importance in the process of Mexican democratization, it seems as public dissatisfaction with government crisis response to natural disasters also played a role. Accordingly, in absence of electoral accountability, the context of natural disasters may constitute a trigger for democratic movements.

¹⁵ See, for example, recent work on Pakistan. For the effects of the 2010 flood on the sequential rise in electoral support for the Taliban, see Masera and Yousaf (2015), and for effects on political participation, see work by Fair et al. (2015).

Wildfires.¹⁶ In contrast, however, Lazarev et al. (2012) find increased support for the Russian incumbent at all levels of governance.

Moreover, Gasper and Reeves (2011) provide further evidence from the U.S. indicative of voter competence and sensitivity to varying levels of government responsibility in natural disaster contexts. Specifically, Gasper and Reeves perform a county-level analysis of gubernatorial and presidential elections from 1970 to 2006, in which they find that “when the president rejects a request by the governor for federal assistance, the president is punished and the governor is rewarded at the polls” (340).

Around the same time, Reeves (2011) find evidence of strategic disaster relief spending by U.S. presidents between 1981 and 2004. The relief is found to be skewed in the direction of electorally central battleground states, showing a rewarded by about 1% at the ballot box. However, this relationship was only detected after 1988, when Congress expanded the president’s authority with respect to disaster relief spending. In contrast, however, Chen (2013) finds no such indications of strategic disaster relief spending in an analysis of individual-level data on FEMA hurricane disaster awards in Florida between 2002 and 2004. Rather, when widely distributed, such disaster relief is shown to effect voter turnout by mitigating the opposition, i.e., by decreasing their share of voter turnout in comparison to that of the incumbent’s.

Furthermore, in a study of India, Cole et al. (2012) find that while governments are punished for monsoons, the punishment is less severe when crisis response is strong and when state-level responses are provided nearing Election Day. In addition, Pande (2011) delivers a very comprehensive review of the bordering literature of accountability in contexts of field and natural experiments in low-income countries “to answer the question of whether informed voters can enforce better governance” (p. 215). Pande concludes, overall, that the literature points to the indication “that voter behavior is malleable and that information about the political process and politician performance improves electoral accountability” (p. 215). Going forward, Pande thus recommends that future research aim towards “understanding how voters can gain access to credible sources of information and understanding how politicians react to improved information about their performance” (p. 215).

Finally, the most recent works on retrospective voting and natural disasters show mixed results. For example, Twigg (2012) finds that Hurricane Andrew had a positive influence on the state of Florida and local incumbents. Flores and Smith (2013) find that while incumbents tend to survive

¹⁶ There is also the closely related work by Schultz and Libman (2011). While not looking at electoral accountability, they nonetheless find that the crisis response to the Russian 2010 Wildfires seems to have benefited from the local knowledge of governors with close ties to the federal center affording disaster relief.

natural disasters, they are vulnerable to the number of casualties that the disasters instigate. In contrast, however, Bodet et al. (2016) find no evidence for retrospection. Specifically, Bodet et al. (2016) use the 2013 flooding of the Bow and Elbow rivers in the City of Calgary as a case to show that there needs to be some caution for the field to assume a natural experiment setting when examining retrospective voting in natural disaster contexts. More precisely, these authors investigate variations in incumbent support and voter turnout between affected and unaffected areas in the sequential municipal election, which was held four months later, compared to the election held prior to the flooding. All 26 neighborhoods were flooded, and around 75,000 people, or seven percent of the city population were displaced. In pursuing their analysis, however, the authors find systematic differences between treatment and control groups, suggesting that the flood did not impact voter support or voter turnout. To be exact, when analyzed as a natural experiment, their results suggest that support for the incumbent mayor increased at lower rates in flooded areas. However, when treatment and control groups are matched on a series of covariates, the outcome is not independent of treatment assignment and the effect thus disappears.

Situating the thesis in the literature

From the foregoing reviews of the various strands in the retrospective voting literature, it is clear that research on economic voting has traditionally been the main case under study. However, the theoretical question subsumed in this work is not one of a purely economic nature. Rather, the fundamental question asked by this literature in various empirical investigations, including the literature on retrospective voting and natural disasters, though not always explicitly stated, is one of voter accountability, which is a cornerstone of democracy. This makes the cumulative effort of the retrospective voting literature a much important endeavor for political science, as it is about more than just investigations pertaining to issues of macroeconomic cycles or individual finances. It is about the empirical investigation of one essential part of our democratic systems. Evidently, economic voting has been a widely employed means by which researchers have been able to use specific measurements of the economy that exist within and across countries over time to examine retrospection. Essentially, this has allowed for a discussion that transcends national borders and that has engaged political scientists in various places to discuss accountability from a comparative perspective. In sum, political scientists in this tradition have stressed that if we may detect that voters indeed retrospectively assess objective performance indicators, then we may also know that voters effectively hold elected officials accountable for their actions.

Lately, the retrospective voting field has seen a surge in research of contexts other than the economy. Out of these, the branch to which this thesis belongs focuses on natural disasters as a new approach to the investigation

of voter accountability. Accordingly, while this emerging literature does not emphasize the question of voter evaluation in regards to macro-economic trends, such as unemployment, growth, or inflation, it often uses a whole battery of economic measurements as controls when investigating the effects of natural disasters on election outcomes, while also examining the possibility that disasters may effect incumbent popularity through their effect on the economy. This is, of course, important, because we know that the economy matters for retrospective voting and because natural disasters mostly serve as approximations of natural experiments. That is, as pointed out by Bodet et al. (2016), natural disasters do not necessarily create the randomization we would like to see in order to simulate an experimental setting. Nonetheless, if combined with what we know from the economic voting literature, we may still exploit the exogeneity that these events offer.

In what follows, I will present the three studies that comprise this thesis. These research papers should first and foremost be understood as a contribution to the field of retrospective voting and natural disasters. Specifically, the work presented here is an application of the retrospective voting model in the tradition of Key (1955, 1961, and 1966) to the context of crisis response to natural disasters. That said, in line with the arguments put forth by Ashworth and Bueno de Mesquita (2013), I hold that the 2004 Boxing Day Tsunami and the 2005 Storm Gudrun are to be understood as events that created a more informative setting in which the competence of the S-incumbent party was stress-tested and assessed. For this reason, I also believe that rational voter evaluation followed in the 2006 Swedish parliamentary election.

Hence, the most prominent contribution of this dissertation to the retrospective voting literature is the novel case I make for the 2005 Storm Gudrun as a hitherto unacknowledged explanatory factor that contributed to the changing climate in Swedish politics between 2002 and 2006. In addition, I also operationalize and test the electoral impact of the 2004 Boxing Day Tsunami for the first time. In short, while several studies of retrospective voting and natural disasters have been undertaken in various countries, this is the first study of its kind in Sweden. As such, I extend the literature to a new context, and by systematic evaluation of the retrospective voting mechanism in the Swedish framework I add considerable knowledge about a new country and two natural disasters to the literature. Moreover, this is also the first study to investigate two parallel disasters, though with a non-overlapping geographical impact, in an analysis of the same sequential election outcome.

Nonetheless, while this study investigates the variations in the geographical impacts of the tsunami and Gudrun on vote shares, it is difficult to say how large their total effects were, especially since Swedish voters may vote sociotropically. That is, it is not impossible that those who were unaffected by these disasters may have voted in support of those who were affected. This may imply that there are effects on the entire electorate that this study is

unable to demonstrate, as it is not designed to pick up such voting patterns. However, this points to a more subtle contribution implied by the findings presented in this thesis, which speaks to the literature on sociotropic voting. As we know, the sociotropic voting literature has a national focus. Conversely, since all the studies within the field of this thesis, which focus on natural disasters and retrospective voting, investigate variations within countries, and many of them find effects, this suggests that either (1) people vote egotropically or (2) people vote sociotropically, but their focus is not exclusively on the entire nation when doing so. The latter suggests that sociotropic voting could possibly be more localized, which is also supported by the findings I present in this dissertation. Nonetheless, it is also important to note that I cannot test sociotropic voting with a national focus with the design used in this work. In any case, what this thesis is designed to test is explained below, where I present the three papers that comprise this thesis by introducing their respective research approaches and main findings.

VIII. Presenting the research papers

The title of this thesis is *Natural Disasters and National Election: On the 2004 Indian Ocean Boxing Day Tsunami, the 2005 Storm Gudrun, and the 2006 Historic Regime Shift*. It is a compilation thesis that consists of three single-authored papers that use Sweden to study the electoral effects of these two natural disasters on government and political parties. Broadly defined, this research thus falls within the study of democracy. Specifically, it examines accountability as retrospective voting over crisis response to natural disasters.

The main focus of the first two papers in this work is the retrospective citizen evaluations of the Swedish 2002-2006 incumbent Social Democratic Party's (S) party's crises responses to the 2005 Storm Gudrun and the 2004 Indian Ocean Boxing Day Tsunami. In close connection to this is the accompanying analysis of how these disasters played out electorally for the main opposition party of the conservative Moderates (M). It is important to analyze M in relation to S, because since the early 1980s, these two parties have dominated the left (S) versus right (M) divide in the political arena, in terms of ideology and vote shares.

That said, as Sweden in fact also has several small parties, which over time have received fluctuating electoral support, it is also important to examine their roles in this specific context. Additionally, therefore, the third and final paper in this thesis investigates the retrospective citizen evaluations of the positions and strategies that the remaining smaller parties, other than S and M, obtained in response to the S-incumbent's line of action. That is, since Sweden constitutes a multi-party system, the electoral effects of the 2004 Indian Ocean Boxing Day Tsunami and the 2005 Storm Gudrun are analyzed for each party, respectively.

In sum, this work should be of a wider interest to readers in the areas of accountability, retrospective voting, representation, crisis response, natural disasters, regime shifts, party identification, international law, and political behavior. The core findings and contributions of each paper in this dissertation are summarized below.

Paper 1.

The first article in this thesis is entitled *Winds of Change: Voter Blame and Storm Gudrun in the 2006 Swedish Parliamentary Election*. In this article, I use an approximation of a natural experiment to exploit a crucial case, Storm Gudrun (Erwin), for the study of change in party support in Swedish municipalities.¹⁷ I find that a natural disaster may shift long-standing party support for the long term. This is significant because it suggests durable punishment effects over nine years and eight months, seen in three sequential parliamentary and municipal elections (2006, 2010, and 2014), which is the hitherto longest time dimension for an accountability analysis of retrospective voting in a natural disaster setting. Although it is more difficult to interpret these longer-term effects as causal effects because of the time lag between Gudrun and the election in question, my results at least suggest substantial punishment effects in the 2006 election. Nonetheless, if one believes in the long-term analysis, this also addresses the question of myopic voting in assigning blame to poor response efforts, which has been an open question since Bechtel and Hainmueller (2011) found long-lasting rewards for beneficial disaster relief spending during the 2002 Elbe flooding. In light of my findings, then, the myopic voter thesis thus stands empirically challenged, particularly as previous studies have mainly focused on disasters that take place

¹⁷ It is important to note that the logic of a natural experiment only partially imbues the design of this study, though in a very important way. That is, on the one hand, it is clear that one may regard the storm impact on Swedish municipalities as being determined by nature, which makes the treatment exogenous to the social world and thus also to the dependent variable of interest. However, on the other hand, the storm path is not exposing municipalities to random treatment, as the storm in fact mostly ran through the southern part of the country. The weakness of this study, therefore, is the imperfect randomization in treatment, as near-random assignment is necessary to approximate experimentation. Nonetheless, as the treatment across municipalities in the south of Sweden exhibits great variation in degree of storm affectedness, I argue that the analysis of the south combined with a DiD design, at least to some extent, alleviates this shortcoming. Thus, I refer to the design of paper 1 as an approximation of a natural experiment. In any case, as is well known when assessing natural experiments and thus also “when evaluating near-random research designs, the key methodological issue is whether the treatment is unrelated to unmeasured determinants of the dependent variable,” (Gerber & Green, 2013, p. 1125). Hence, given the imperfect randomization of treatment, though exogenous, the study therefore also includes several important controls.

as elections approach. In contrast, in this paper, I show that poor crisis response in the midst of a mandate period could turn previously long-standing party support into long-lasting punishment.

Moreover, for the 2006 parliamentary election, my most conservative estimate is of a magnitude that equals the largest bloc-transfer of voters in Swedish history. This is particularly interesting as it also corresponds to an increase in voter support for M in the same election. On the one hand, this could simply suggest that many voters found the incumbent S party less competent in governing during crisis than the conservative opposition of M. On the other hand, voters could possibly have been voting against their ideology because of profound disappointment, or they could potentially have viewed M, ideologically that is, as the new S. However, from previous research, we know that M marketed itself as the new worker's party in the election campaign while also moving closer to S policy-wise (Oscarsson & Holmberg, 2009), which supports the latter proposition and seems like a much more important contextual factor for understanding the findings presented here. In fact, this insight into the contextual change in Swedish party politics that preceded the 2006 parliamentary election makes it plausible that voters could have voted based on a valence issue, such as competence in crisis response to natural disasters, among other things since the ideological gap between S and M had narrowed. This insight also lends further credibility to my findings, since it speaks against the possibility of random chance generating the identified punishment effects on S and increased support for M over Gudrun.

Furthermore, the insight into the political context of Swedish party politics that preceded the 2006 parliamentary election also makes it seem far-fetched that voters changed ideology, i.e., from socialism to a more conservative view. However, given the traditionally entrenched and distinct ideological differences on income-tax policy between S and M, which intensified in the 2006 election campaigns by M pushing hard for income-tax reductions, the possibility of a ideological shift, while seeming rather counterintuitive, cannot be completely ignored. In short, while it is difficult to know exactly how those voters who made the shift from S to M conceived of their ideological placement in relation to their vote choice, since the ideological gap between S and M had narrowed before the election, it seems quite plausible that the political context opened up for Gudrun to play a part in that decision. That is, the political context was right for a natural disaster like Gudrun to have a major effect on the election outcome since the ideological gap between S and M was smaller than before. In any case, however, this study contributes with a new perspective of the historic 2006 Swedish parliamentary election outcome, which according to previous research by Oscarsson and Holmberg (2009) largely resulted in a regime shift due to the largest bloc-transfer of voters in Swedish history.

These findings may be read through Key (1955) and Key (1966). In the case of the former theory (Key, 1955), Gudrun may be understood as a critical event, which just like the Great Depression during the 1930s in the U.S. pulled incumbent party supporters out of their voting habits to re-assess their party standing, making the 2006 Swedish parliamentary election a critical election. According to the latter perspective (Key, 1966), this was a totally rational retrospective assessment. In fact, just like Key (1966), I find that voters indeed may abandon their party based on political evaluation. At least for the case of Sweden, this finding contradicts recent findings and propositions made by several studies that suggest partisan biases dwarf retrospection (see, for example, Schickler & Green, 1997; Green et al., 2002; Kayser & Wlezien, 2011; Niemi et al., 2011). Furthermore, in contrast to what has been argued by the literature thus far, the findings from this study implies that retrospective voting, as an accountability mechanism, may actually be powerful enough to induce long-term effects on vote shares. Consequently, such effects may encourage swift and skillful crisis response to future large-scale natural disasters, like Gudrun, which would necessitate informed long-term investments into disaster preparedness.

Paper 2.

The second paper is called *When Legitimacy Drowned: Waves of Blame in the 2006 Swedish Parliamentary Election*. In this paper, I report on new findings that add to our knowledge concerning electoral accountability in the crisis response to natural disasters. By means of a Difference-in-Differences design, I exploit the Swedish government's poor crisis response to the 2004 Indian Ocean Boxing Day Tsunami to investigate the geospatial coverage of voter retrospection in the 2006 Swedish parliamentary election.¹⁸ As the tsunami struck on the other side of the world where many Swedes were vacationing, the findings from this case demonstrate that voter evaluation of crisis response can include natural disasters that take place outside of a government's national jurisdiction. In particular, I find that a government can be held accountable for its poor crisis response to a natural disaster on the other side of the planet. This is significant because it suggests geospatial expansion of accountability beyond the borders of the nation state.

This study thus highlights a very specific empirical finding, which sug-

¹⁸ In contrast to paper 1, this study may not be regarded as an approximation of a natural disaster since there is nothing exogenous nor random about who decides to travel to South East Asia, which was the case for those who became victims of the 2004 Boxing Day Tsunami. Nonetheless, the analysis in paper 2 is very similar to that performed in paper 1, though here I only use a DiD design. While this approach does not approximate a near-random research design, given that proper controls are in place, the DiD approach alone still yields high reliability for causal inference. In this regard, and perhaps most importantly, the fact that the tsunami occurred abroad allows for a much-desired isolation of the punishment effect of crisis response from other factors.

gests that citizens of a modern welfare state can make accountability claims on their government outside of its national jurisdiction. This analysis departs from a perspective of international law, which allows us to understand how different interpretations of the Vienna Convention on Consular Relations (1963) underpins this case of extraterritorial accountability. That is, via the Vienna Convention on Consular Relations (1963), which stipulates the consular rights of a state toward its citizens on foreign territory as well as the consular rights of its citizens in relation to the state while abroad, the nature jurisdiction of the sovereign extends beyond state territory. This understanding, furthermore, creates a space where the legal obligation of the state to provide international crisis response is open for interpretation. Findings from this study suggest that Swedes may have disagreed with the interpretation of their government over what is to be regarded as a legitimate crisis response, as it concerns the relation between rights and obligations of citizen and state. While Swedes on average are unlikely to have had a detailed understanding of international law at the time of the tsunami, affected Swedes on the disaster scene were nonetheless able to observe the counterfactual scenario of good international crisis response by other European welfare states to their citizens.

Furthermore, in highlighting the role of international law for extraterritorial accountability, the finding that Swedish voters punished the S-incumbent party for its poor crisis response to affected citizens on the other side of the planet can be regarded as an entirely rational retrospective assessment in the tradition of Key (1966). And, as previous studies have solely focused on disasters that take place within the national jurisdiction of the sovereign, the most central contribution of this paper is the geospatial dimensions of electoral accountability in natural disaster contexts. Finally, as the results imply extraterritorial accountability, the findings from this paper may also have implications that raise concern for public policy, as it regards the relation between citizen and state on foreign territory. In particular, the international legal dimension in combination with extraterritorial accountability may have implications for how we may conceive of international crisis response in modern welfare states.

Paper 3.

The third and final paper in this thesis is named *Waves of Blame and Winds of Change: Challengers, Effective Representation, and Electoral Accountability in Response to Parallel Crises*. In this study, I use the retrospective voting mechanism to examine voter and party congruence on the very specific issue of crisis response to natural disasters. Specifically, I explore whether voters in a multi-party setting select those parties that effectively represent them on the issue of crisis response to natural disasters. This approach allows for an analysis of the electoral effects of the 2004 Boxing Day Tsunami and the 2005 Storm Gudrun on the parties other than S and M in the Swedish

multi-party system, which may be read through the retrospective voting tradition of Key (1961 and 1966). Specifically, the former account (Key, 1961) places an emphasis on the minority party as a challenger to the incumbent party, which allows for investigating the critical issue of representation on crisis response by a challenger party. When combined with the latter perspective (Key, 1966), it also allows for electoral accountability by having voters switch to the challenger of the record. While a two-party setting may make such a switch easy for voters, it could potentially happen regardless of the degree of representation by the main opposition party. However, in a multi-party setting, such a switch could potentially become more complicated, as there are several party alternatives to choose from when the leadership competence is low. This study is thus, to my knowledge, the first to investigate whether voters select the representative party that challenges the incumbent party based on its crisis response. Hence, this study contributes to the literature on retrospection and natural disasters by extending the analysis to include small parties and thereby shifting the focus from an accountability perspective to a question of representation.

This study also stands out in comparison to the other two papers presented in this thesis, as it rests on a mixed-methods approach. Specifically, I start out by exploring the S government's executive logic and strategy behind its poorly evaluated responses to the 2004 Indian Ocean Boxing Day Tsunami and the 2005 Storm Gudrun. To accomplish this, in a first step, I perform a text analysis of newspaper articles covering the tsunami and Gudrun, in which I identify a coherent line of rhetorical strategy conveyed by the S leadership responsible for the crisis response to each disaster, respectively. In both cases, the strategies reflect great similarities. I also identify the diametrically opposed rhetorical strategy used by one of the small key-oppositional parties, the Center Party (C), which formed part of the new government in 2006. I then triangulate this information by means of personal interviews with the S-party members responsible for the crisis response to Gudrun, as well as the party leader of C and a congressman of C. In a second step, I proceed to quantitatively test for the potential comparative success of the C party's strategy on crisis response in relation to S. I do so by conducting an approximation of a natural experiment on the change in party support for C over Gudrun, and a Difference-in-Differences for the same over the tsunami.¹⁹

The results indicate that C was able to anticipate the political consequences of inaction by interpreting both crises as issues of democratic representation. In contrast, S failed to represent the electorate by engaging in a rhetorical blame game where the aim was to externalize the responsibility of

¹⁹ Methodologically, the quantitative part of paper 3 thus combines the two separate approaches used in papers 1 and 2. Please see the two foregoing footnotes for explanations of the terminology used and the methodological advantages of the application of these approaches in each study, respectively.

crisis response in pushing for accountability by the electorate and private sector. In particular, S argued for individual storm insurances, private sector compensations for storm-driven disruptions in energy supply and for travel agencies to bring their customers home from Southeast Asia. In contrast, C argued for government action to reduce individual costs caused by storm damage and accountability by means of the vote of no confidence in the context of the tsunami.

Contrary to the traditional literature on representation, the empirical findings from the third paper suggest that the representation process in democratic government also ought to be understood as something that is ongoing in between elections and that may fall outside the traditional ways of measuring congruence in representation. That is, representation research typically uses opinion data, representative of both citizens and political elites, on established policy issues and left-right orientation to examine the opinion agreement between citizens and elites. In contrast, the findings from this study show that from time to time, representation is every bit as much about effective party representation in crises response as it is about ideological and policy preferences when crises are absent. Hence, by introducing the retrospective voting mechanism to the study of effective representation in crisis, this study also provides a new way of thinking about how we empirically may test for representation. This is so as natural disasters tend to strike in a somewhat random fashion, affecting citizens regardless of their ideological preferences or party standing.

The mixture of methods used in this paper, moreover, such as qualitative text analyses of news articles from the daily press combined with elite interviews and OLS regression analyses, makes it the first, to my knowledge, to connect the study of electoral retrospection with qualitative data on how the political elite reason regarding crisis response to natural disasters. This approach contributes with very unique insights that may help explain why, in particular, Storm Gudrun, as the most costly natural disaster in Swedish history, was handled as poorly as she was. In fact, the poor crisis response to Gudrun is more easily understood when placed in the shadow of the tsunami and the media attention the tsunami received over the incumbent S party's poor crisis response. After all, the storm occurred only two weeks following the tsunami, at which point the tsunami was already receiving much attention by national media.

IX. Conclusion and policy implications

This thesis has offered a foray into the study of the role of natural disasters in Swedish elections, which has pointed to various findings specific to Sweden. While one should be careful when generalizing these findings to contexts other than where they were found, it is nonetheless plausible to think

that they may be valid in similar contexts of other welfare states. That said, with respect to what the implications of the findings presented here might be for policy on crisis response to natural disasters, they should first and foremost be understood as inferences made from data representative of the Swedish context, and therefore the recommendations ensuing from the analysis also must pertain to Sweden.

From the first paper presented in this thesis, we have learned that the crisis response to Storm Gudrun was perceived as poor, which given the contextual party politics, among other things including the re-orientation of M closer to S, in all likelihood gave rise to substantial and negative electoral effects for the incumbent S party. From the qualitative records presented in both papers 1 and 3, moreover, we learn a great deal about why this may have been the case. For example, there were noteworthy insufficiencies in the central SOS system when Gudrun struck, which points to a serious vulnerability of Swedish society during crisis, along with extended disruptions in electricity supply and telecommunication systems following the storm. In addition, we also learn that the storm impacted, though in different ways, the personal economies of individual voters. This was particularly evident for people who lost their forest, functioning as pension funds to be sold off as timber upon retirement. Yet others suffered financially from power outages that demanded that they use their savings to cover costs for alternative ways of generating power.

From a leadership perspective, paper 3 informs us of the strategy of the S-leadership responsible for the crisis response to Gudrun, as well as the diametrically opposed position held by the leadership of the C party, which viewed the crisis response to Gudrun as a policy issue in need of democratic representation. Moreover, in the introduction to this thesis, I made a distinction between horizontal and vertical accountability, which is important to understand particularly in relation to papers 2 and 3. Keeping this distinction in mind, from an accountability perspective, the findings from papers 1, 2, and 3 allow us to theorize over the comparative persistence of the electoral effects of Gudrun and the tsunami. That is, as regards paper 2, we know that there was a *de facto* extended horizontal accountability process in place in between the 2002 and 2006 parliamentary elections. Specifically, this process concerned the mishandling of the S government's crisis response to the tsunami. In light of this knowledge, we may expect the vertical accountability effects of the tsunami to be short term since accountability had already largely been accomplished. In particular, this finding suggests that both of the available horizontal accountability mechanisms, involving monitoring and reporting requirements (by opposition parties and mass media) alongside institutional checks (i.e., hearings by the Committee on the Constitution and investigations by the Crisis Commission), likely functioned as legitimate accountability mechanisms in the eye of the public. And, as we know that the Foreign Minister, Laila Freivalds, resigned following these processes, it seems plausible that the electorate assessed that justice had largely been

achieved. Consequently, while we may expect to see punishment effects of the tsunami in the 2006 parliamentary election, there is no immediate reason to believe the effects to be long lasting over more than one election. In contrast, however, as it concerns papers 1 and 3, we know that only the first out of the two horizontal accountability mechanisms were activated in the case of Gudrun, i.e., monitoring and reporting requirements. In the absence of institutional checks, therefore, voters may possibly have felt a more long-lasting dissatisfaction with the S party over its poor crisis response to Gudrun, comparatively speaking, that is. For this reason, we may also expect longer-lasting vertical accountability effects in the case of Gudrun. These findings suggest that there is legitimate value in the horizontal accountability mechanism as well as the vertical mechanism of elections, even when they pertain to the same case. That is, they are not necessarily mutually exclusive processes of accountability.

In brief, these findings point to certain aspects of the accountability mechanisms in Swedish representative democracy that function well, while also identifying aspects of crisis response that could be improved. The areas in need of improvement given the findings presented here pertain to both preparedness for future disasters as well as the responses that need to be activated when they have happened. Of course, these findings must also be placed in the new context of the improved Swedish crisis response system, as several measures were indeed taken by the incumbent government to improve preparedness for future storms following Gudrun.

In fact, there has been one very important and impressive crisis preparedness measure initiated by the incumbent S government following Gudrun. That is the commencement of a nation-wide restructuring of the electrical grid, which is enforced via legislation and demands that the electricity suppliers provide disruption-free technology. In practice, this implies that the entire grid is to be moved underground. Surely, this measure will most likely mitigate weather-related power outages in the future. However, it is still unclear whether it will be sufficient to meet the public's expectations on crisis response when future disasters strike. This is simply the case as we have yet to see a disaster of the magnitude of Gudrun hit the improved Swedish crisis response system. Therefore, we cannot compare the resilience of the Swedish crisis response system before and after improvement to the same kind of shock, i.e., Gudrun.

Nonetheless, there is one aspect of crisis response that seems to have been left unattended following Gudrun. That is the issue of direct transfers, consisting of compensatory payments to storm-affected individuals. This is not a controversial idea. In fact, it is common practice to issue disaster aid in many countries. We know, for example, that the German government issued such compensatory payments following the 2002 Elbe flooding (Bechtel & Hainmueller, 2011). And, in the U.S. one may even apply for it online (Disaster Assistance. Gov., 2016). Still, we do not have such a system in Swe-

den. Hence, it seems that compensatory transfers in disaster contexts is an area that the Swedish crisis response system could possibly benefit from implementing. Of course, in order to consider if a similar system would benefit Sweden, it ought to be assessed in relation to how such systems work in other countries as well as how Swedes were affected by Gudrun. Because, as we know that Gudrun is the most costly natural disaster in Swedish history, she is the best case we have to learn from to prepare for future events, as well as to understand how she affected the individual economies of Swedes in different ways. After all, from the findings presented here, it seems that there was a void in representation regarding the crisis response to Gudrun, which the C-party leadership anticipated and acted upon.

Similarly, the C party also took a very strong opposition against the S leadership regarding its crisis response to the 2004 Boxing Day Tsunami. This is best illustrated by the C party's push for a vote of no confidence, which we learn from paper 3 may have been a representative act that the C-party was rewarded for at the polls in the 2006 parliamentary election. The policy implications we may draw from the findings that pertain to the tsunami, however, are best understood in the context of paper 2. Just as in the case with Gudrun, in paper 2, we learn of the implementation of new legislation following the tsunami, which is designed to assist Swedes abroad when many citizens are exposed to crisis. This, of course, should be understood as an improvement of the Swedish international crisis response system. And, in all likelihood, it will support people in need of assistance during future events, which also enhances extraterritorial accountability. However, while it is clear that we now have domestic legislation that supports the initiation of crisis response by the Swedish state to its citizens on foreign territory, what is less clear is how these laws would be enforced in situations where the relation between the Swedish state and the other states in question would be of a more delicate nature. This may suggest potential implications for current policy on international crisis response as it pertains to bilateral and multilateral relations. How or when this may be a problem is something that ought to be carefully assessed and considered as a preparedness measure of international crisis response to future events.

In sum, the results presented here indicate that regardless of when in the election cycle or where on the planet natural disasters may occur, the crisis response by the state will likely be evaluated by its citizens and have electoral effects. In any case, good preparedness will yield better prospects for good response, which matters to our welfare. Thus, it is highly recommended that policymakers carefully consider existing knowledge from natural disaster science for better preparedness, when making a cost-benefit analysis of preparedness spending vis-à-vis relief spending, or lack thereof. Because regardless of which political party may govern when a disaster strikes (and they do in all likelihood strike randomly with regards to the geographical distribution of the partisanship of voters), and regardless of the historical partisan support of the incumbent party, voters will probably evaluate. It

seems, at least in the cases of Storm Gudrun and the 2004 Boxing Day Tsunami, that the average Swedish voter had quite a high expectation for crisis response.

That said, this study should not be interpreted as research that aims to give advice to politicians in terms of how to win elections. Rather, it should be understood as an empirical investigation that points to the importance for democratically elected officeholders to deliver what the people expect of them. Because if they do not, as it seems, voters are rational enough to judge by the ballot. And, after all, that is what electoral accountability is for.

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