

# Collective cognition in context: Explaining variation in the management of Europe's 2015 migration crisis

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## Abstract

Cognition is an essential first step in crisis management. This article conceptualizes crisis cognition as a collective and context-dependent process. Drawing on cognitive sociology, I argue that governmental structures and culture/identity shape cognitive schemas and communicative practices essential for collective cognition. I apply this framework to compare governments' recognition of the 2015 migration crisis in Luxembourg and Germany, which showed a puzzling gap in crisis preparation. The qualitative analysis triangulates interviews and other sources. In Germany, complex responsibilities, adversarial bureaucratic identities, and hubris inhibited cognition. In small Luxembourg, simple government structures and collective identity emphasizing vulnerability fostered timely cognition and preparation. I consider country size as macro-level context that shapes government structures and officials' identities, and critically discuss its role as an underlying explanation. This study introduces a sociological perspective on cognition to public administration, shows through which mechanisms context affects collective behavior, and proposes a comparative explanation for effective crisis management.

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## 1 | INTRODUCTION

Public administration has taken a cognitive turn. Especially research in behavioral public administration (BPA) shows that cognition is central for explaining administrative behavior in various domains. Understanding cognitive processes is particularly important when they affect decisions with far-reaching implications, as in times of turbulence and crisis. Indeed, cognition and sense making are the crucial first step to successful crisis management: before taking action, crisis managers must first recognize and assess crisis signals (Boin et al., 2016; Comfort et al., 2020).

The literature on cognition and crisis management has two central limitations: First, it takes inspiration primarily from psychology and focusses predominantly on individual-level determinants and barriers of cognition, especially among leaders (Boin et al., 2016, pp. 32–41; Comfort and Rhodes, 2022, p. 3; Moynihan, 2012). Yet, cognition and decision making in public administration is typically a collective effort. Second, there is a lack of comparative and explanatory studies on crisis cognition and management (Wolbers et al., 2021). The predominant focus on individual leaders and single exploratory case studies calls for comparative research to better understand the effect of institutions and macro-level context on crisis cognition.

This article starts from an empirical puzzle in one of the most discussed crisis situations of the last decade: the 2015 European migration crisis.<sup>1</sup> While the welcoming of hundreds of thousands of refugees in Germany was widely admired as an act of generosity and proved useful for the domestic economy in subsequent years, the acute crisis management was less successful: at the beginning of the crisis in September 2015 Germany's multi-level government system showed a puzzling lack of preparedness to appropriately receive, register, and house the arriving people (Aust et al., 2015; Bogumil et al., 2016). Authorities in Germany's small neighboring country Luxembourg were arguably better prepared as they had started to develop an emergency plan as early as July 2015 (MFAMIGR, 2016). In the following months, Luxembourg experienced less political controversy and had less visible trouble than Germany in registering and hosting a number of asylum seekers that was comparable<sup>2</sup> with Germany's in relation to overall population (European Migration Network, 2016). This article asks: Why were authorities in Luxembourg better prepared for the crisis than their counterparts in Germany? The article argues that the key to understanding the variation in crisis preparation and management lies in the very first step, cognition, which is explained by macro-level country factors rather than by individual leaders.

This article introduces a sociological perspective on collective cognition to address this empirical puzzle and the conceptual gap in crisis management research. Building on the sociological literature on culture and cognition (Cerulo, 2006; DiMaggio, 1997), I conceptualize crisis cognition as a collective process within governments that is affected by institutions. Collective cognition is more than the sum of individuals' cognition because it builds on government actors' communication and their shared assessment of warning signs. Using a triangulation of different data sources, I analyze and compare the collective processes that led to the recognition of the migration crisis in Germany and Luxembourg. I show that the differences in crisis preparedness were due to differences in collective cognition. To explain these country-level differences, the study employs two analytical macro-level lenses: culture and structure (Bach and Wegrich, 2019; Cerulo, 2006; Fligstein et al., 2017). While culture, consisting primarily of collective identity<sup>3</sup> and shared cognitive schemas, shapes individual and collective

recognition and assessment of information, government structures can delay or accelerate communication. Culture and government structure are not mere context for cognition but rather central building blocks of collective cognitive processes (Boutyline & Soter, 2021; Lizardo, 2017; Vaisey, 2009).

Findings suggest that Germany's lack of preparedness was due to cognitive biases rooted in Germany's fragmented administrative structure and its identity as Europe's leading power, which prevented German authorities from understanding the surging increase in migration numbers. In contrast, the limited specialization of Luxembourg's government fostered shared problem recognition and swift communication. Culturally, Luxembourg's experience as a small country led to a "paradox of vulnerability" (Campbell & Hall, 2017) and cultural schemas that increased awareness for crisis warning signs. The article also employs the literature on country size and small states (Campbell & Hall, 2017; Hooghe & Marks, 2013; Jugl, 2022) to discuss how far the identified patterns in Germany and Luxembourg are representative of large and small states, respectively.

This article makes several contributions. First, it introduces a sociological perspective on cognition to public administration and crisis management, complementing recent advances that build on cognitive insights from psychology. Second, it presents in-depth qualitative accounts of collective cognition processes in two governments, in meaningful real-world settings (Dahl, 1947). In doing so, the study demonstrates that institutions shape cognition, and it shows in detail how cognitive biases vary with national culture and government structures. Rather than aligning with either macro or micro public administration, this study explains how macro-level context factors affect individual and collective behavior through cognitive and communicative patterns. Finally, by following the call to conduct explanatory and comparative approaches in crisis research (Wolbers et al., 2021), the article unveils the contextual embeddedness of cognitive biases.

## 2 | COLLECTIVE CRISIS COGNITION AND CONTEXT-SPECIFIC BIASES

This section outlines the analytical framework that is used to analyze the cases of Luxembourg and Germany. Starting from the core idea of collective cognition, it introduces several concepts to explain variation in collective cognition, particularly the two macro-level dimensions of structure and culture. I also borrow micro-level analytical concepts from cognitive sociology, such as cognitive schemas and identities. Finally, country size is introduced as a complementary and comparative analytical lens.

### 2.1 | Collective cognition, structure, and culture

The crisis management literature identifies cognition or sense making as the first task for public crisis managers and prerequisite for all following steps of crisis management (Boin et al., 2016; Comfort et al., 2020). While many studies in this vein focus on individual cognitive processes and barriers, few have looked at "collective cognition" (Comfort et al., 2020; Comfort and Rhodes, 2022) or "distributed cognition" (Lee et al., 2020), the processes leading to a common understanding of a situation shared across "the minds of members of the group" (ibid. 729). The

present study focuses on collective cognition among those governmental actors whose attention and agreement are needed for a crisis response.

To explain biases in collective cognition, research in public administration and sociology points to the same two dimensions: institutional structure on the one hand, and culture and identity<sup>4</sup> on the other. Public administration scholars explain blunders and failures with “biased attention and coordination problems in the public sector” (Bach and Wegrich, 2019, p. 4) that are rooted in *structure*, especially the division of labor within and between organizations, and in *identity*, which includes concerns about institutional reputation as well as professional backgrounds (ibid., 10–23). Boin et al. (2016, pp. 25–41) argue that intra- and inter-organizational *structures* and capacities can foster or hinder crisis detection and information sharing, and on the other hand, actors' mental frames based on organizational or professional *culture and identity* influence sense making. Research on collective crisis cognition particularly emphasizes *structure* in the form of formal monitoring capacities and information sharing practices (Comfort et al., 2020; Lee et al., 2020). While there are several comparative studies about disaster management structures in European countries (Christensen et al., 2016; Kuipers et al., 2015; Parker et al., 2019), they come to ambiguous results about *structure* and emphasize a general but undertheorized effect of *culture* on successful crisis management. These studies focus on correlations and de jure crisis management structures rather than their de facto functioning, and they do not consider collective cognition specifically.

Similarly, sociological approaches to culture and cognition (seminally DiMaggio, 1997) analyze how aspects of culture and social structure affect cognition and behavior. Cerulo (2006) studies collective cognitive processes that led to failures within and across organizations, for example, the failure to prevent 9/11. She theorizes that centralized social *structures* with rigid channels of communication as well as professional *cultures* that focus on rules and efficiency lead to cognitive biases that impede crisis preparedness (Cerulo, 2006, pp. 187–92, 225–31). Along these lines, Fligstein et al. (2017) explain the American Fed's inability to make sense of the emerging economic crisis of 2008 with homogeneous professional backgrounds and group *identity* as well as hierarchical *structures* and rigid organizational boundaries that facilitated “downplaying and normalizing of discordant facts” (Fligstein et al., 2017, p. 904). The resulting biases in collective cognition make groups focus overly on positive scenarios, a tendency Cerulo describes as “positive asymmetry”: “the worst can become a perceptual blind spot, obscured or blurred by a variety of routine and patterned socio-cultural practices” (Cerulo, 2006, p. 2). Positive asymmetry is a useful concept to refer to biases in crisis preparation and sense making that create “a collective illusion of invulnerability (‘it won't happen here’)” (t Hart, 2013, p. 103).

## 2.2 | Cognitive foundations of collective biases

The sociology of cognition theorizes micro-level links between institutions, culture, and collective cognition. Central building blocks of these explanations are schemas, mental structures related to memory and pattern recognition that shape cognition (Boutyline & Soter, 2021; Cerulo, 2006; DiMaggio, 1997). Incoming information activate mental schemas that help categorize the input and retrieve associations or appropriate reactions stored in memory. Via “neural associations” (Vaisey, 2009, p. 1686) schemas support automated decisions about *which* pieces of information are important and *how* one should think about and react to them.

Schemas are shared across members of a group but not necessarily universal; many schemas are dependent on structure and culture (Cerulo, 2006, p. 231).

Another building block of sociological explanations is identity: Social identity theory predicts that humans identify with the most salient group from a variety of available identities, and sociologists highlight that this salience is context-dependent (DiMaggio, 1997, p. 275). In crisis cognition, conflicting (organizational) identities can impede identification with common goals, lead to bureaucratic politics, and prevent information exchange (Bach and Wegrich, 2019, pp. 15–18; Cerulo, 2006, p. 227). Schemas are also at the core of collective identity in so far as they store ideas about “who we are as a nation” (Vaisey, 2009). For example, the illusion of a community’s invulnerability to crises (Boin et al., 2016, p. 30; ‘t Hart, 2013, p. 103) can be understood as collective experiences stored as a supra-individual schema that shapes or prevents crisis managers’ attention and assessment of incoming information. While crisis research in public administration refers to psychological insights about the role of stored experience for individual cognition (Boin et al., 2016, p. 34), the sociological literature emphasizes how these mental structures are culturally shared: through repeated experience and through more explicit (declarative) mechanisms like language and cultural symbols (Boutyline & Soter, 2021; Lizardo, 2017).

### 2.3 | Country size as macro context

One obvious difference between the cases of Luxembourg and Germany is their difference in size. Therefore, the analysis adopts the working proposition that country size may have made a difference in the two cases, building on the literature on size, governance and crisis management (Campbell & Hall, 2017; Corbett, 2015; Jugl, 2022). On the one hand, this literature suggests that countries with larger populations have larger state bureaucracies (for an overview see Jugl, 2022, pp. 11, 30), resulting in more horizontal and vertical specialization and professionalization (Gerring & Veenendaal, 2020, pp. 227–72). This may lead to large countries’ advantages in crisis cognition as their stronger specialization should allow for more capacities to monitor warning signals, a feature of successful crisis management emphasized in the literature (Comfort et al., 2020; Yen et al., 2022). But specialization in larger states may also inhibit collective cognition; indeed, knowledge on the downsides and biases of modern bureaucracies is based almost entirely on studies of larger states, like the US, the UK or China.

On the other hand, the literature on size emphasizes characteristic features of small states that may turn into advantages or disadvantages. A first, structural feature of small countries and societies is polyvalence and personalized relationships (Corbett, 2015; Katzenstein, 1985, p. 89): Public administrations are smaller and thus less specialized: departments, units, and individuals typically cover a variety of tasks. The small number of people requires individuals to occupy several roles in professional life and private life, leading to limited individual specialization, a more generalist perspective, and overlapping professional and private relations (Jugl, 2022, pp. 14–16). A second, cultural feature of small states is a collective feeling of vulnerability (Campbell & Hall, 2017, pp. 4–13; Katzenstein, 1985, pp. 24, 35, 80). Military, economic, environmental and other threats are particularly threatening to small states given their limited power and material resources (Gerring & Veenendaal, 2020, pp. 305–20), and therefore vulnerability is often described as a core feature of small countries’ collective (national) identity.

Comparative sociologists Campbell and Hall (2017) apply these features to explain the “paradox of vulnerability”, that some small European states managed the financial crisis

comparatively well. They argue that previous experiences of vulnerability motivate small-state governments to develop a professional, expert-based bureaucracy and inclusive, consensual decision-making practices, which should foster sense making and later steps in crisis management. This is in line with earlier arguments that a national identity based on vulnerability fosters willingness for sacrifices and compromise for the sake of the common national good (Katzenstein, 1985, pp. 34–35). My analysis mobilizes these perspectives as analytical lenses for the comparison of a large and small state.

### 3 | RESEARCH DESIGN

#### 3.1 | Case selection

This study employs comparative cases. The comparative case methodology is a common research design to study the effects of macro-level factors, and to do so case selection is paramount (Mahoney, 2004). In this study, I compare how national governments in Luxembourg and Germany made sense of and prepared for the unfolding migration crisis in 2015, focusing on processes of collective cognition among central government actors. Luxembourg and Germany share many similarities: both are wealthy founding members of the European Union (EU), have coalition governments, share a continental European administrative tradition, and are geographic and cultural neighbors. An obvious difference between the two cases is the extreme difference in country size: in 2015, Germany had a population of around 81 million and Luxembourg around 560,000. They also vary in the overall state structure: Germany is a federal and decentralized government system while Luxembourg is unitary and centralized. Importantly, and as I will show in greater detail below, both cases differed in the collective cognition and preparation of the 2015 migration crisis. This setting is appropriate for a comparative research design: there is meaningful variation between the two cases in the outcomes and in some core explanatory factors, while other characteristics are comparable.

#### 3.2 | Data

The study is based on the triangulation of three types of data: 29 primary sources ranging from official documents to memoirs and survey data, more than 30 secondary sources, and expert interviews. All sources are listed in Appendix A1. Expert interviews were conducted in Germany and Luxembourg between October 2018 and August 2019. I conducted 20 interviews with 26 experts ranging from government ministers to journalists, but most interviewees were bureaucrats who were leading or working at the management level of the involved departments or agencies in 2015. Table A1.1 in the appendix lists all interviews. As most interviews were only possible on condition of confidentiality, only the organizational affiliations in 2015 are reported. Interviewees from Germany were chosen based on the mentioning of relevant administrative units in newspaper and research articles (Aust et al., 2015; Bogumil et al., 2016). The choice of interview partners from Luxembourg was based on the mentioning of actors, departments, and agencies in an official report (MFAMIGR, 2016, pp. 150–57). Interviews lasted 55 min on average and most interviewees agreed to recording. Interviews were semi-structured: I first asked interviewees to recount the most important moments and events for preparation and

response to the 2015 crisis from their perspective, and then I asked more specific follow-up questions.

### 3.3 | Analysis

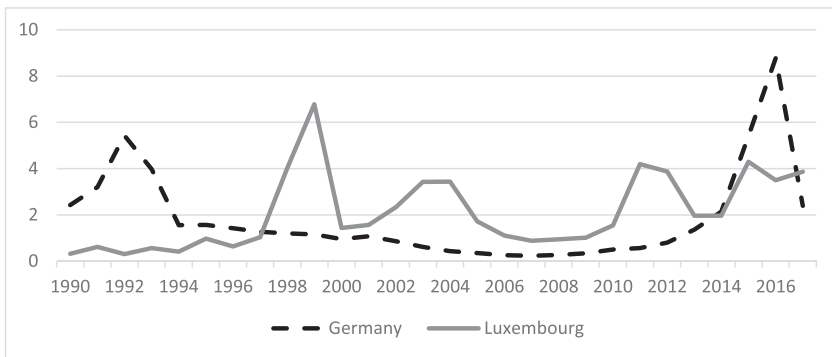
The diversity of sources provides a comprehensive picture of the collective communicative and analytical processes before and during the outbreak of the crisis. Interviews offer nuanced insights into aspects of identity, awareness, and cultural schemas, especially when the analysis pays attention not just to what is said but *how* it is said (Pugh, 2013). This is a considerable improvement over studies in crisis management that infer collective cognition from government action. For the analysis, all interviews were transcribed and hand-coded by the author. I used two descriptive coding schemes (Saldaña, 2014, pp. 593–94): a deductive scheme to organize information along the concepts of the analytical framework, and an inductive scheme to allow for newly emerging themes. I summarized the frequencies of all codes to compare dominant themes in both cases. Appendix A3 presents the list of codes, the quantitative overview of codes per country case and a collection of exemplary quotes. Then, I combined the interview data with primary and secondary sources, carefully checked for consistency, and identified a sequence of steps of government cognition and preparation for each case (see Appendix A2). I complemented this with an interpretive re-reading of the interviews to uncover cultural meanings and schemas (Pugh, 2013, p. 54). This triangulation of sources and perspectives allows for a process analysis of mechanisms (Mahoney, 2004, p. 88) within each case, complemented by the comparison between cases. The empirical sections build on all these data and cite individual sources only if strictly necessary. Where appropriate, quotes are my own translation.

## 4 | BACKGROUND AND OUTCOMES

### 4.1 | The 2015 migration crisis in context

Luxembourg and Germany are both immigration countries and had experienced high numbers of asylum seekers before 2015. Figure 1 shows the numbers of asylum seekers per 1000 inhabitants since 1990. Following EU visa liberalization for Balkan countries in 2009, asylum applications increased in Luxembourg and Germany, although to a different degree. In the years before 2015, migration across the Mediterranean increased as well and led to numerous shipwrecks and fatalities. In 2015, an estimated total of 890,000 asylum seekers arrived in Germany, but due to severe administrative shortcomings only 441,900 could register their asylum application in 2015, shifting the peak of applications to 2016. Luxembourg registered 2300 asylum applications in 2015. In March 2016, a repatriation agreement between the EU and Turkey and the effective closure of the Balkan migration route led to a significant drop in arrival numbers in Luxembourg and Germany.

From the perspective of host countries, the 2015 European migration crisis fulfills the defining criteria of a crisis: perceived threat, urgency and uncertainty (Boin et al., 2016, p. 5). Shortage of appropriate accommodation posed a humanitarian risk to migrants, and many citizens and politicians saw the norm that “we do not leave people without a place to sleep” challenged. Other Europeans perceived the large numbers of incoming migrants as threats to the social and political status quo and some politicians feared the collapse of the EU’s legal



**FIGURE 1** Yearly inflow of asylum seekers per 1000 inhabitants. Numbers for Germany between 1990 and 1995 slightly overstated because they include first-time asylum applications and subsequent applications by same individuals. *Source:* BAMF, MAEE, World Bank.

frameworks on free mobility (Schengen) and asylum (Dublin III). These threats meant that governments urgently had to make decisions, while lacking information about the nature, scope, and consequences of the influx.

## 4.2 | Formal structures and task allocation

Figure 2 summarizes the allocation of government tasks in relevant policy areas. In Germany, responsibilities for immigration and asylum (see Bogumil et al., 2016) as well as those for disaster and crisis management are shared between the national level and the subnational *Länder* level, a superb example of complex, interdependent state structures (Scharpf, 1988). In Luxembourg, responsibilities for both fields lie primarily with national government ministries and agencies (see MFAMIGR, 2016, pp. 150–57). Due to their formal tasks, organizations in Figure 2 are expected to play a central role for recognition and preparation in a migration crisis. Therefore, I interviewed representatives from most of these organizations.

## 4.3 | Variation in the timing of crisis cognition and management

Figure 3 summarizes the timing of cognition and preparation in Germany and Luxembourg. These elaborations are based on the qualitative analysis and detailed case narratives (Appendix A2) and reveal differences in outcomes: in the timing of collective cognition and appropriateness of crisis preparation. The difference in cognition is corroborated by Google Trends data that confirm earlier and more sustained attention to the crisis among Luxembourg's general population compared to Germany's (see Appendix A2.3 for details). The variation in timing is striking given the parallel trend<sup>5</sup> in asylum numbers, as shown in Figure 3.

In particular, Luxembourg's Reception and Integration Agency (OLAI) was reformed in February 2015 before the crisis broke out; the agency and its parent ministry (MFAMIGR) made sense of the imminent crisis around March–April; and the government's central crisis manager and coordinator, the High Commissioner for Civil Protection (HCPN) was entrusted with



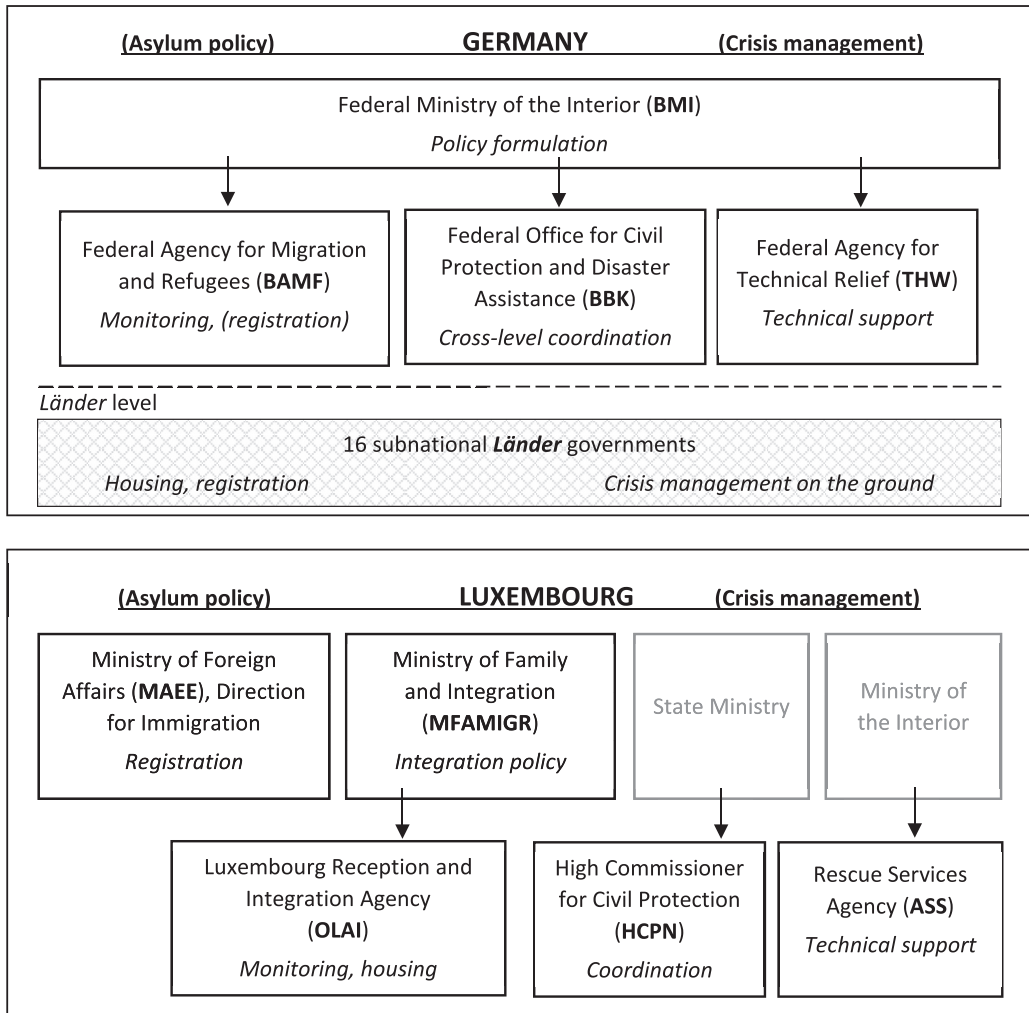
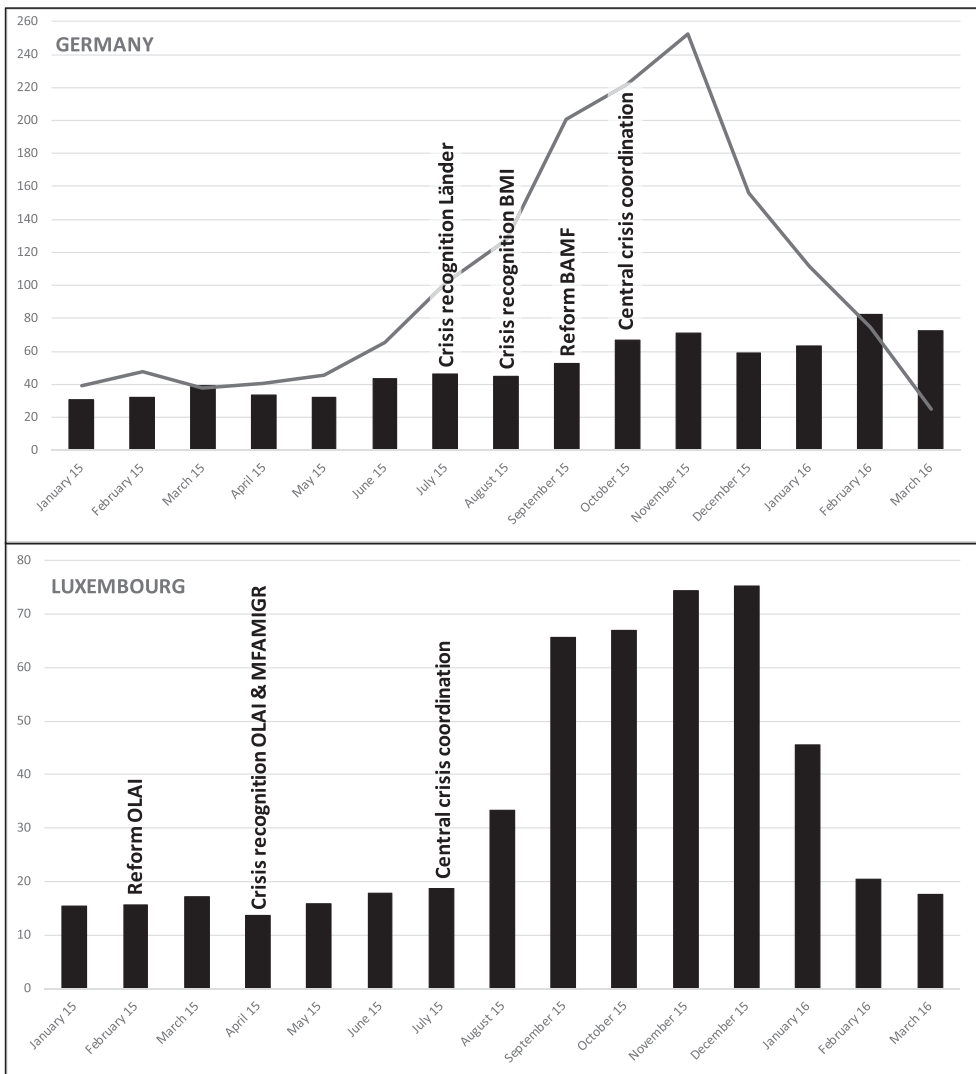


FIGURE 2 Task allocation in asylum policy and civil crisis management in 2015.

general emergency coordination in July. These steps occurred *before* the sharp increase in asylum numbers in September and can thus be regarded as timely preparation, indicating timely collective cognition.

In Germany, by contrast, crisis recognition occurred only after the numbers of migrants and asylum seekers had started to increase. Notably, the national government was slower to understand the situation than the *Länder* with their experience on the ground (around July–August). The much-needed reforms and personnel growth in the national-level Federal Agency for Migration and Refugees (BAMF), which monitors asylum numbers and handles asylum applications, occurred in September, *after* the outbreak of the crisis, and an effective crisis coordination structure at the center of government was installed only in October.

The timing of these sequences is closely related to how well the respective governments coped with the crisis. In retrospect, several German interviewees admit that the urgency of the situation was recognized too late: “At this point, one could not prepare anymore” (BAMF



**FIGURE 3** Arrival numbers and sequencing of crisis cognition and preparation. Bars show monthly asylum applications per 100,000 inhabitants. Solid line shows number of persons with the intent to apply for asylum registered in Germany's EASY system (prone to duplicates and errors). Luxembourgish data exclude those who left the country before filing an application and those arriving through resettlement. *Source:* MAEE, BMI. Key steps of crisis cognition and preparation shown vertically, based on analysis.

official). I argue that the poorer performance of German authorities, in terms of the breakdown of the registration and asylum system and the use of improvised and overcrowded housing in gyms and tents, leading to health and security risks, is a result of belated preparation and belated cognition. Collective cognition differed in the two cases and is central to understanding the lower overall quality of crisis management in Germany compared to Luxembourg (see e.g. comparative report by European Migration Network, 2016, p. 15). Next, I apply the analytical lenses of structure and culture/identity to analyze and explain these differences.

## 5 | COMPARATIVE ANALYSIS

### 5.1 | Effects of structure

#### 5.1.1 | Germany

As expected for a large state with a specialized public administration, Germany had a professional structure available in the BAMF agency to monitor asylum and migration flows and detect crises. About 20 officials regularly compiled projections of the expected number of arrivals for the next months and year, consulting in total “100, 150 sources” (BAMF official). These projections had been a reliable source for the *Länder*'s planning of reception facilities for years. Monitoring was institutionalized as a BAMF responsibility. However, this formal specialization did not result in effectiveness as the BAMF's projection for 2015 was famously wrong. Projections made in February (250,000 arrivals) and May (400,000 arrivals) significantly underestimated real numbers.

The BAMF experts' role as early warning system should have made them focus on or at least consider negative information, here: increasing asylum numbers. However, in a “paradox of specialization”, this nominal role was outweighed by BAMF's rigid and formal organizational practices that are often closely related to specialized structure (Bach and Wegrich, 2019; Cerulo, 2006). This is representative of Germany's rigid administrative culture and practices, shaped by a strong focus on rules and laws, and specialized and restricted professional schemas. For example, many interviewed German officials referred spontaneously to specific laws and regulations to justify their actions. This was not the case among interviewees from Luxembourg despite similar administrative traditions.

It emerges from the interviews that the BAMF's priority was to produce an accurate projection rather than a timely one. Instead of being an early warning system, they were afraid of making mistakes. BAMF and *Länder* officials understood the monitoring of asylum numbers as a formal exercise, a question of getting the numbers and calculations right, not a question of risk and imagination:

At the turn of the year 2014/2015, if one had combined and interpreted several signs, one could have probably realized that something was looming. But [...] somehow no one has done so. And even if one had combined them, there would have been probably five or ten different scenarios of the development. Not a single inevitable one.

(BMI official)

Precisely because it was difficult to make an accurate projection based on ambiguous information, officials left such information out entirely. Interviewed officials from BAMF and the Interior Ministry (BMI) recalled their awareness for the worsening situation in Syria and neighboring refugee camps and for the increasing number of irregular migrants in Southern Europe: “there were enough warnings” (BAMF official). They mentioned these developments repeatedly in reports but were unsure if these would have a strong impact on arrival numbers in Germany and hesitated to include them in their projection:

You don't know whether such a wave [of asylum seekers] is steady and if it will go on and on or possibly end. This means that the usual procedure is for everybody to wait for the time being. [...] So, you wait and see.

(BAMF official)

Instead, in their projections for 2015, BAMF experts focused on declining numbers of arrivals from Balkan countries following recent *legal* changes targeting this migrant group. The experts overvalued this “positive” and “certain” piece of information, resulting in an undersized projection. Paradoxically, the specialized monitoring structure did not value risk or discordant information, but professional practices and schemas inhibited the processing of vague warning signs, and prevented collective cognition in the BAMF agency.

The fatal point was that no one corrected this bias. All other actors, especially BMI and *Länder*, relied so heavily on BAMF’s projections, and trusted them blindly, that they did not give any thought to a potentially critical increase in asylum numbers: “For all these years, the BAMF projection was always the base for us [...] and we have always awaited it” (*Länder* official). BAMF, on the other hand, refused to assume this responsibility: “The *Länder* did not understand [the projection] as binding” (BAMF official). Here specialized structures and division of labor led to interlocking, unclear responsibilities: “The thing with the projection numbers ... it’s a blame game” (another BAMF official). None of the German interviewees outside the BAMF reports having connected the dots by themselves; specialized professional schemas arguably filtered this information out. For many, the actual number of asylum seekers reached in 2015 had been “unimaginable” (BBK official). The fact that many German government actors disregarded the widely available negative information, while Luxembourgish officials took them into account (see below), suggests that the higher degree of specialization and silo thinking fueled positive asymmetry in Germany.

Finally, the communication of relevant information between *Länder* and BAMF agency on the one hand and BMI and national government on the other was impeded by long, rigid formal channels of communication and adversarial identities. Communication between BAMF and BMI essentially failed from 2011 onwards; even when BAMF officials convinced mid-level BMI managers, their calls remained unheard at the ministry’s top. The BAMF’s calls for more resources were ignored and it turned to an alternative communication channel, the press, but again “[the BAMF president] was let down essentially” (*Länder* official). Similarly, the *Länder*’s call for financial and regulatory support remained largely unanswered by the national government until mid-2015.

The national government took a non-cooperative “this is not our business” stance. This attitude rooted in specialized, federal structures leads to a “joint-decision trap” (Scharpf, 1988): the national government’s support was needed to ensure the functioning of the asylum sector but it did not see the bigger picture or its own responsibility. In practice, the *Länder*’s task to house asylum seekers is interrelated with the BAMF’s monitoring and a functioning asylum procedure, which depend on national-level resources. But since the national government and BMI’s top level were not involved with day-to-day asylum management, they were less aware of the worsening situation and need for additional resources. Diverging problem perceptions and compartmentalized mindsets (“us against them”) prevented a common problem understanding and effective communication. Although all relevant information had been available across government units months before the crisis outbreak, the national government only made sense of the situation when the crisis became acute:

The discussions in September became increasingly hectic. And when it was obvious that, suddenly, up to 10,000 refugees were standing at the border per day or per night, then everyone realized: [...] this is a national challenge.

(BBK official)

## 5.1.2 | Luxembourg

Although Luxembourg's structures do not look much simpler than Germany's in Figure 2, the boxes represent significantly smaller organizations with fewer public officials. Interviewees in Luxembourg mentioned the absence of a subnational government level, which facilitated their work compared to Germany. A positive effect of the limited resources (especially personnel) is that organizational responsibilities were generally clear and less interlocking than in Germany. The downside of limited personnel resources, even in a small state as rich as Luxembourg, is a lack of formal capacity. Importantly, there was no professional structure in Luxembourg to formally project immigration numbers before the crisis; the OLAI only reported such numbers in retrospect:

An indication of how many newcomers to expect [...] is certainly a very difficult task, especially for a small agency like OLAI.

(HCPN official)

As politicians and bureaucrats had no formal projection to rely on, and felt that an accurate projection was impossible, they often drew their own conclusions based on international media reports, previous experiences, and intuition. This resulted in the correct and widespread perception in early 2015 (mentioned by six out of 10 interviewees) that Luxembourg would face a very high number of asylum seekers soon: "One has noticed through all available sources that a big wave [of asylum seekers] is on the horizon." (MFAMIGR official).

The behavior of the subordinate agencies differed as well: While the German BAMF was hesitant to forward extreme scenarios, Luxembourg's OLAI pragmatically warned its parent ministry and the government in early summer 2015 that its reception facilities would not suffice in light of the current international developments:

It was clear that a high number would come to Luxembourg. At this point, we had to react, not wait. It was the OLAI's task to sound the alarm.

(OLAI official)

Why was there less bias in collective crisis cognition in Luxembourg? Again, I find a "paradox of specialization": the lack of formal projection capacities in Luxembourg was not a disadvantage but forced all actors to monitor the situation and assess it intuitively. No actor offloaded this responsibility or blame on to the OLAI. Conflicting organizational identities and blame games, dominant in the German case, were virtually absent from accounts of Luxembourg's crisis management in newspapers and interviews. Interviews reveal a strong pattern with a dominance of clear task allocation and responsibilities in Luxembourg and unclear responsibilities in Germany. Due to simple formal structures and clear responsibilities in Luxembourg, all government actors knew their respective tasks (see OLAI official quoted above) and appeared motivated to do their part in a joint government action before and after the outbreak of the crisis. Crisis recognition was not a formal task of a rigid hierarchical structure, but a pragmatic, self-explaining task of all organizations and individuals involved in the asylum sector.

Another difference with the German case is that because of simple structures, limited capacities and clear responsibilities, the integration ministry did not think twice but involved the HCPN's crisis management experts in early summer 2015. Because of HCPN's focus on disasters

and crises, their professional schemas encouraged collective cognition: “As crisis manager, you have the task to prepare for the worst case” (HCPN official). By involving the HCPN, the worst case, that is, very high arrival numbers, became the basic premise for central crisis preparation. The HCPN had crisis management experience and no political stakes in the asylum sector. This contrasts with the German case where the Federal Office for Civil Protection and Disaster Assistance (BBK), which is formally tasked with coordinating crisis management efforts (Christensen et al., 2016, p. 322; Kuipers et al., 2015, pp. 7, 13) and may have fostered a similar focus on negative information, was ignored; the crisis was overseen, instead, by two political heavyweights, BMI and Chancellery.

Finally, the simple setup of Luxembourg's government and society facilitated quick communication. Horizontal crisis communication, from the MFAMIGR to other government ministries, and vertical communication, from OLAI to MFAMIGR and the government, were successful. Interviews reveal that communication contributed to a common understanding by sharing information about the imminent crisis and the need for collaboration. Communication was initiated sufficiently early and recipients took messages seriously. This was facilitated by the shared awareness for vulnerability (see below), the confidence of each organizational level in its own responsibility, and trust in assessments by colleagues or subordinates.

In Luxembourg, communication before and during the crisis was further enabled by a net of personal acquaintances connecting actors from different organizations. Overlapping private and professional roles, which were previously studied mostly in small developing or small island countries (Corbett, 2015), are also apparent in Luxembourg. Interviewees recounted how they came to know other officials or government politicians as childhood friends or through previous jobs: “Everybody has everybody's mobile phone number.” (Red Cross staff). Such informal ties together with short, formal institutional channels of communication were mentioned as enabling factors.

## 5.2 | Effects of national identity

The previous sub-section already identified those identity-related effects on cognition that are linked to macro-level specialization: Stronger structural specialization in Germany results in distinct bureaucratic and organizational identities (especially federal vs. *Länder*) that prevented collective cognition, compared to a more unified identity among officials in Luxembourg that fostered the sharing and shared assessment of warning signs. While that difference was about identification with a specific group, the following section explores the content of collective identity, starting from the role of vulnerability in national identity as suggested by the small-state literature.

### 5.2.1 | Luxembourg

I find that Luxembourg's identity as a small state and repeated experience of vulnerabilities played a crucial role for collective crisis cognition. Several interviewees mentioned that the occupation by its larger neighbor Germany during two world wars strongly shaped Luxembourgish national identity, resulting in the widely-shared self-image and narrative of being vulnerable to external developments:

One thing, which, I believe, has marked Luxembourgers extremely, was the First and Second World War. Not that long ago. [...] We are, of course, a small country. Germany does not have the risk that there will be an invasion soon. But Luxembourg is small and I think it is more acknowledged among Luxembourgers that one day one can be a refugee oneself.

(MAEE official)

Mental structures connecting “Luxembourg” and “vulnerability” were cultivated and activated through repeated experience (Lizardo, 2017). For example, in the months before the migration crisis a referendum about voting rights for non-nationals put the vulnerability of Luxembourg's national identity high on the public agenda (a clear majority of voters rejected the proposal).

The cognition and preparation of the 2015 migration crisis was most obviously facilitated by the experience of a migration crisis in 2011 when 2172 asylum seekers came to Luxembourg (compared to 786 in 2010, see Figure 1). Luxembourg's reception facilities were fully occupied in 2011, tents had to be used and in some individual cases, newcomers were left without a place to sleep. Interviewees from the public and welfare sector mentioned that the failure of the asylum system in 2011 shaped their sensitivity for a potential future migration crisis. It also motivated Corinne Cahen, who became Minister of Integration in 2013, to prepare better for a future crisis: “Nobody wanted to experience a situation as in 2011 again.”<sup>6</sup> Importantly, this opportunity for learning did not occur by chance in Luxembourg (it was largely absent in Germany); it was systematically facilitated by Luxembourg's limited capacities and relative vulnerability to external challenges.

In line with Campbell and Hall's (2017) expectations for small states, these experiences of vulnerability translated into the motivation to be better prepared for a similar situation in the future. Preparation comprised the construction of a new reception facility starting in 2014 and the audit of the OLAI agency that resulted in increased resources, a new OLAI leadership and organizational reforms *before* summer 2015. This contrasts with the German BAMF, which remained understaffed until late 2015 and reorganized only at the peak of the crisis in September. Luxembourgish identity as vulnerable in combination with the little specialization of the politico-administrative system and strong and coherent national identification led to a culture of internal solidarity and cooperative practices that peaked during the 2015 crisis. Several interviewees emphasized the pragmatic consensus among all involved actors from the government to those working on the ground and their willingness to contribute to a joint national reaction.

However, the analysis shows that experience of vulnerability did not only have an effect on cognition and crisis management through learning and institutional reform as suggested by Campbell and Hall (2017) but also through a more direct cognitive channel: I argue that repeated exposure to external risks and challenges and to public narratives about them has imprinted an international perspective and a focus on vulnerability as cultural schemas (Boutyline & Soter, 2021; DiMaggio, 1997, p. 275; Lizardo, 2017). These schemas shape how Luxembourg's citizens and officials perceive the world and act—in two steps.

First, I find indications of a general cognitive schema that emphasizes the connection between Luxembourg and the surrounding world, derived from past experiences of occupation, a resulting preference for European and supra-national integration, but also from the experience of impressive numbers of foreign commuters:

We are very well aware that Luxembourg's wealth also comes from outside, right. [...] Without these 150,000 [commuters] we would still be a small potato country.  
(MAEE official)

Things “beyond the border” appeared ever-present in Luxembourgish officials' thinking and perception. Without being asked, and in contrast with their German counterparts, many interviewees from Luxembourg compared the situation in 2015 with that in other European states and put explanations into an international perspective. This “international perspective schema” in Luxembourg also surfaced in relation with problem perception and crisis cognition: “I think the press, the international press has reported extensively. [...] the problem was discussed very much at the European level” (MFAMIGR official). Metaphorically speaking, the picture frame through which Luxembourgers view the world comprises national and international phenomena and information.

Secondly, the picture frame glass through which Luxembourgers look at this large display detail is tinted in a “vulnerability shade”. This shade or “vulnerability schema” is shaped by past vulnerabilities, leads to an interpretation of incoming information from abroad as carrying potential risks, and can activate “automatic cultural scripts” (Boutyline & Soter, 2021, p. 734) such as “we must act together”. Besides this general, widely-shared “vulnerability schema”, specific awareness for international migration movements has been cultivated as a domain-specific schema based on Luxembourg's 2011 migration crisis. This relatively recent experience channeled officials' attention to specific information and accelerated their crisis cognition in 2015:

This information [from the 2011 migration crisis] was *still in our bones*. That means that one had a *feeling* of what might be on the way. [...] I could also—how should I say?—rely on the stories of OLAI employees in this sense and I could inform myself about *which warning signals* one has to keep an eye on.

(MFAMIGR official, emphasis added)

Of course, interviews primarily capture discursive, deliberate modes of culture and cognition rather than automated ones (Vaisey, 2009). Interviewees' formulations like “warning signals one has to keep an eye on” imply conscious, deliberate cognition. References to collective memory of the world wars also suggest the conscious use of cultural schemas as ex post explanation of automated cognitive processes.

However, some formulations indicate that more subconscious (non-declarative) cultural schemas were at work in parallel, especially formulations relating cognition to bodily and emotional processes (“This information was still in our bones”, MFAMIGR official) or instinct (“It was clear that a high number would come to Luxembourg”, OLAI official). Following Vaisey (2009, pp. 1693–95) and Pugh (2013), I interpret the sequencing of interview statements as evidence that subconscious schemas and automated cognition were decisive for processing information (the growing numbers of migrants) and triggering intuitive reactions that reproduce the schema in situ (reacting *as if* Luxembourg is challenged by these numbers), whereas interviewees used declarative schemas and public narratives in a second step to justify their answer: The MFAMIGR official first referred to emotions (“gotten a feeling that a big crisis is on the horizon”) before mentioning the more rationalized explanation (“warning signals one has to keep an eye on”). As crisis managers act under time pressure, automated cognition and non-declarative cultural schemas should be particularly relevant for crisis cognition.



Taken together, general receptivity for international information, automatic processing of such information and association with risk and vulnerability, and a more conscious focus on warning signs for a potential migration crisis led to an active search for and prompt processing of negative information. This allowed bureaucrats and politicians to recognize the crisis in a timely, bottom-up manner, despite the absence of formal monitoring mechanisms.

### 5.2.2 | Germany

The German case is characterized by the absence of a “vulnerability schema” that contrasts with the Luxembourgish case. In Germany, the remembrance of past migration crises was meager and hence attention to the issue was low before the 2015 crisis. The last time Germany experienced critically high asylum numbers was in the early 1990s, and few public servants and decision-makers recalled this situation directly. Memory and lessons had faded away: “Of course, one can always learn and one learns also in a crisis. But then one also forgets again.” (BMI official) Although, somewhat similarly to Luxembourg, the number of asylum seekers had increased since 2011 and resulted locally in scarcity of accommodation and the use of tents, this was not perceived as a national-scale problem and did not lead to learning effects in the national government or significant adaptations in the asylum policy sector. The national government and the BMI ignored signs of vulnerability and viewed the situation with a positive asymmetry bias:

As I recall it, [until August 2015] there were no additional attempts of coordination with the *Länder* beyond the existing structures. Because the existing structures have covered everything for the time being. [...] And all that has worked well into the summer of 2015.

(BMI official)

Instead of a focus on increasing migration numbers, two other issues dominated the national government's agenda: in the long-term, austerity plans for a balanced budget were of top priority and prevented hiring new public personnel, particularly in the BAMF. In the short-term, the Greek government-debt crisis occupied Germany's political system and public opinion through much of summer 2015:

The Chancellor dealt with things [...]: earlier it was the Greek crisis and after that she had a clear head and saw that something [the migration crisis] is befalling us.

(BMI official)

In the Greek government-debt crisis, the German government and leading newspapers took a strict pro-austerity position toward Greece to enforce Germany's presumable economic interests. While the Greek bailout crisis was also a topic in Luxembourg's public debate, the debate in Germany increasingly focused on Germany's economic and moral superiority based on its role as the EU's largest net contributor. This fixation on Germany's own strength is the opposite of the “vulnerability schema” in Luxembourg. My analysis suggests that the dominant feeling of strength in German public opinion activated existing schemas of national power or hubris (see Bonikowski, 2017 for data on hubris in Germany)—the “collective illusion of invulnerability” (t Hart, 2013, p. 103). And these schemas filtered out negative information

from public official's cognition of the looming migration crisis, precisely the opposite effect of the “vulnerability schema” in Luxembourg.

Google Trends data (see Appendix A2.3) confirm that the German population showed little interest in the migration crisis before September 2015—despite survey data suggesting openness to foreigners in general (see Appendix A2.1). This contrasts with Luxembourg where searches for “refugee camps” and “refugee aid” spiked in spring and early summer 2015. Finding a similar gap in awareness between the countries' general populations supports the existence of a cultural causal channel besides the channel of governmental structure, which can only explain such gap in cognition among public officials. In sum, the metaphorical picture frame was focused mostly on Germany; international news on increasing migration flows were either cut out of the picture or seen through a rose-colored glass tinted by a strong belief in the state's strength.

## 6 | DISCUSSION

### 6.1 | Explaining the puzzle with differences in structure and identity

Through within-case analyses and between-case comparisons, I have unpacked the sequences that led to different outcomes and the role that structure and culture played for collective crisis cognition. In Germany, specialization and formalization of government structures together with conflicting bureaucratic and subnational identities and a collective identity of invulnerability inhibited the processing and communication of warning signs, which delayed collective cognition and left the government overwhelmed with the unfolding crisis. The mechanisms behind the negative effects of structural specialization were professional-organizational identities and schemas, an ensuing formalization and rule-based culture, and rigid barriers to information exchange; as such Germany was an exemplary case of positive asymmetry (Bach and Wegrich, 2019; Cerulo, 2006; Fligstein et al., 2017).

These findings identify a “paradox of specialization” and challenge arguments about the advantages of specialized risk monitoring structures in crisis management (Comfort et al., 2020; Comfort and Rhodes, 2022). Specialization did not undermine an exceptional or cross-cutting task but hindered BAMF's monitoring unit from achieving its main goal: projecting future asylum numbers. Because this formal warning system existed, Germany in 2015 is a *least* likely case for positive asymmetry, but still information was downplayed. Other government organizations' problematic reliance on the BAMF projection resonates with earlier findings on a “paradox of risk management” (Pernell et al., 2017): when risk management is institutionalized in a special unit, others become less risk aware because they shift the responsibility for risk monitoring.

The contrasting case of Luxembourg was characterized by simpler government structures, strikingly similar to Cerulo's (2006, pp. 187–92) “emancipating structures” and practices that prevent positive asymmetry and enable the collective processing and assessment of warning signs: individual autonomy, porous organizational boundaries with short formal and informal communication channels, a service-oriented coordination center (HCPN), and a focus on common goals. These characteristics resulted in more collegial and pragmatic practices that fostered early cognition and preparation before the onset of the crisis.

Besides the effects of structure and the absence of conflicting organizational identities, the case of Luxembourg also highlights the role of collective identity related to vulnerability. In line

with previous literature (Campbell & Hall, 2017; Comfort et al., 2020), I find that the “paradox of vulnerability” with positive effects for crisis management works through learning and institutional adaptation, for example, the OLAI reform and improved collaborative practices. Additionally, this study highlights a second, cognitive channel: cultural schemas that store past experiences of collective vulnerability and foster officials' awareness for and processing of warning signs. The idea that previous crises allow governments to be “on alert” is prominent in the literature but undertheorized (Comfort et al., 2020; Lee et al., 2020); my explanation is based on cognitive sociology and the cultural acquisition and application of a vulnerability schema (Boutyline & Soter, 2021; Lizardo, 2017). The analysis of Luxembourg finds that both channels, institutional adaptation and cognitive schemas, can work in parallel and reinforce each other.

The analysis is limited by the type of data that are available for high-level cases like the European migration crisis: interviews and documents. These provide mostly suggestive evidence for the role of historical experiences, learning, and cultural schemas. Still, I argue in line with Pugh (2013) that the careful and interpretive analysis of such data can provide important information about the cultural meaning making that governed individual and collective cognition.

Potential alternative explanations relate to differences in political factors and attitudes. While the two governments differed in political party composition (liberals, greens and social democrats in Luxembourg vs. conservatives and social democrats in Germany), a majority of interviewees in both countries explicitly ruled out party effects on crisis management, suggesting that all (mainstream) political parties would have acted in a similar way. Another political aspect relates to attitudes to migration and the migration crisis: When faced with the acute crisis in 2015, heads of government in Germany and Luxembourg showed a comparable attitude and determination to tackle the crisis humanely. Luxembourg's Prime Minister Xavier Bettel's “We can master this”<sup>7</sup> is strikingly similar to German Chancellor Merkel's notorious “We will manage it”. Besides the heads of governments, I did not find different attitudes to migration among the interviewed public servants. The self-critical interviewees in Germany openly admitted that mistakes were made, acknowledging a widely shared preference for a humane and prepared approach to the crisis. This is further confirmed by attitudes toward migration among the general public: Representative survey data (see Table A2.1) show that the share of citizens who would not like to have immigrants or foreigners as neighbors is higher among Luxembourgers than among Germans. Thus, such attitudes cannot explain why Luxembourg recognized the crisis and need for preparation earlier.

## 6.2 | A question of country size?

A bolder interpretation of the two cases with varying collective crisis cognition is that the difference in country size is the underlying cause. In Luxembourg, a small population size (560,000 in 2015) went hand-in-hand with a unitary state structure, limited specialization, polyvalence, and objective and perceived vulnerability, which all fostered collective cognition. Germany, on the other hand combined a large population (81 m) with a federal and complex governing system and feelings of national power. Indicators in Table A2.1 confirm that feelings of vulnerability versus power have material foundations rooted in the “sizable” differences in demographic, economic, and historical strength. For example, the migration crisis in 2011, an important opportunity for learning in Luxembourg, is a case in point of an external challenge of comparatively small absolute size (and therefore high probability), that became a challenge and

revealed vulnerability only in relation to the country's limited resources. This is in line with literature linking the "paradox of vulnerability" to various facets of smallness (Campbell & Hall, 2017). Previous studies also confirm a statistically significant relationship between population size on the one hand and specialization, decentralization and federalism on the other (Gerring & Veenendaal, 2020; Hooghe & Marks, 2013). Luxembourg and Germany are fairly representative of the extreme ends of this relationship (Hooghe & Marks, 2013, p. 194). In other words, I interpret the observed degrees in structural specialization and in identity and perceived power/vulnerability as causal channels through which country size affects collective cognition in the two cases.

To identify country size as the distal, underlying cause and ensure internal validity, alternative explanations must be ruled out. In many respects Luxembourg and Germany are reasonably similar: political and government system, administrative tradition, economic context, and EU membership, and the relative severity of the crisis. Differences in politics and attitudes are discussed above. Another rival explanation is the difference between federalism in Germany and unitary state structure in Luxembourg. While I argue based on empirical findings (Gerring & Veenendaal, 2020; Hooghe & Marks, 2013) that such structures follow probabilistically from country size, I acknowledge that this relation is not deterministic and there are exceptional cases of small/medium but federal countries (e.g., Belgium) and large but unitary states (e.g., France, see Hooghe & Marks, 2013, p. 194). In my view these exceptions do not invalidate a probabilistic size argument, but more critical readers may consider federalism or specialization as an alternative explanation to country size rather than a causal channel.

Is country size a generalizable explanation? While external validity of the size argument to other cases remains to be tested in future research, some illustrative examples suggest that it may travel. For instance, some smaller states reacted remarkably quickly to the COVID-19 crisis. Taiwan's early recognition and resolute reaction to the first wave of the pandemic was driven at least partly by relative smallness vis-à-vis neighbor China. The collective experience of health threats (SARS) and military threats from mainland China determined a feeling of vulnerability and risk awareness that made Taiwan "cautious" (Yen et al., 2022) and led to the establishment of an efficient National Health Command Center.

The proposed size argument is probabilistic rather than deterministic and comes with important scope conditions. This perspective emphasizes negative effects of large size and specialization. Of course, some degree of specialization is necessary for government capacity, but the German case is a powerful reminder how such capacities can still turn into a barrier for collective cognition. Other characteristics of large size that may be more favorable are their stronger diversity in terms of socio-demographic backgrounds and cognitive schemas, which can foster collective cognition, but in the German case a uniform rule-focused culture prevailed. On the other hand, this study does not aim to idolize small states. Smallness can only turn into an asset for crisis cognition if both channels, simple structure and identity based on experiences of vulnerability, are active. In Luxembourg, the lack of a specialized monitoring structure was offset by a collective focus on vulnerability, and there were enough economic and government capacities to act on the recognized crisis and prepare accordingly. In less fortunate small states, a lack of specialized monitoring structures may not be offset for example, because the effect of vulnerability and related learning and thick institutions did not materialize (see Campbell & Hall, 2017 on Ireland), or because there may be a lack of resources to prepare and respond to the crisis even if it is recognized early. Another downside of smallness is that personalism and group think may crowd out cognitive deviance. More research is needed to ascertain when positive effects of smallness outweigh the negative ones (Jugl, 2022, p. 73). I propose future

studies to test these size-related propositions in other crises and cultural contexts and with less extreme cases of smallness or largeness.

## 7 | CONCLUSION

This study contributes to the crisis management literature. Previous studies either considered collective cognition but were not comparative (Lee et al., 2020; but see Comfort and Rhodes, 2022) or were comparative but did not focus on cognition in practice (Christensen et al., 2016; Kuipers et al., 2015). I have not only proposed culture and structure as comparative explanations but traced the mechanisms behind them: hindering or fostering communication, and processing or downplaying information. Beyond culture and structure, I propose country size as a macro-level explanation for variation in crisis cognition and management.

The identified “paradox of specialization” has practical implications for building crisis preparedness. The lessons for crisis management in Germany, and potentially other large states, are not to create new coordination or monitoring structures, but to foster a mindset that considers worst case scenarios, for example, by developing a more open and cooperative administrative culture and increase diversity in professional backgrounds and experiences—beyond a single monitoring agency. To achieve collective cognition, top-level decision makers must share a culture of risk awareness and collaboration. However, the analysis suggests that one central foundation of such a risk culture is the repeated collective experience of vulnerability, which (large) states cannot simply copy and public managers cannot manipulate.

The sociological perspective advances our understanding of administrative context (seminally O’Toole Jr. and Meier, 2014), by offering a cognitive explanation for how context affects individual and collective behavior. Identities and culture are endogenous to collective experiences of risk and to collective behavior under certain institutions. These become enculturated in cognitive patterns, which, in turn, shape automated cognition and action. Context affects—and is constructed through—collective behavior. The study illustrates that culture and structure are context-specific, complementing work in BPA. Cognitive biases and dispositions toward overconfidence or toward risk awareness depend on collective experiences, they form culturally shared “national psychologies” (Dahl, 1947, p. 8) and are, thus, neither purely individual nor universal.

The case of Germany approximates the ideal-typical large state and, despite cultural differences, shares important macro-level characteristics with the United States and India, such as federalism, a specialized bureaucracy cultivating conflicting institutional identities and a self-image as a powerful nation. I show that positive asymmetry does not only vary with type of organization, as argued before, but also across countries and national-cultural contexts. Scholars should be aware that administrative characteristics and biases described in the literature (Bach and Wegrich, 2019; Cerulo, 2006) are those of large countries.

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## CONFLICT OF INTEREST STATEMENT

The author declares no conflicts of interest.

## DATA AVAILABILITY STATEMENT

All written sources are publicly available and cited in the supplementary material. Interview codes and exemplary quotes are also available in the supplementary material. Full interview transcripts cannot be shared to ensure interviewees' anonymity.

## HUMAN SUBJECT INFORMATION

The interview data underlying this research were collected in 2018 and 2019 in the context of my doctoral research at the Hertie School when the Hertie School did not have an ethics policy or review. The research followed ethical research practices as outlined in the applicable ethics codex of the German Political Science Association (DVPW). In particular, I obtained informed consent prior to each interview. The interviewed experts were non-vulnerable individuals and interview questions concerned only their professional life and experiences. The research involved no sensitive topics, no harm and no deception. Interview responses are anonymized.

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## ENDNOTES

- <sup>1</sup> I acknowledge the strong politicization of the term “refugee crisis” and use “crisis” exclusively as an analytical concept following the crisis management literature. The terms “migrant” and “asylum seeker” are used interchangeably.
- <sup>2</sup> In 2015, Germany experienced an inflow of 5.4 asylum seekers per 1000 inhabitants compared to 4.1 in Luxembourg (OECD International Migration Outlook 2017).
- <sup>3</sup> In this article, identity is understood as integral part of the broader concept of culture (DiMaggio, 1997).
- <sup>4</sup> I follow DiMaggio's (1997, p. 274) understanding of identity as a part of culture, because some cultural schemas and practices are based on the identification with and self-image of a specific group (Bonikowski, 2017).
- <sup>5</sup> Monthly trends and yearly asylum applications are broadly comparable. In comparison, Luxembourg experienced a smaller per-capita number of asylum applications that increased slightly later in 2015. If anything, these small differences should have worked against the observed temporal pattern because earlier and relatively higher arrival numbers should have accelerated cognition in Germany.
- <sup>6</sup> Cahen, cited in *Lëtzeburger Journal*, September 27, 2018.
- <sup>7</sup> Bettel, cited in *Luxemburger Wort*, October 13, 2015.

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## SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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