

The implications of disruptions for interest group stability: how changes in *Energy* and *Area* impact organizational survival

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Extended Abstract

A resilient interest group community is an essential feature of a functioning system of democratic participation. Yet to date we know too little about how individual interest groups, as well as entire group communities, cope with external shocks. Population ecology theory, which currently represents a widely accepted framework to study interest group communities, stipulates that, although rare, the death and dissolution of interest groups is the result of a stabilizing mechanism between supply and demand forces. Using the theory's language, events that disrupt the habitat (*area*) or available resources (*energy*) for interest groups negatively impact the system's carrying capacity, which can cause interest group numbers at the system (or macro) level to drop over time. At the micro-level, however, it remains poorly understood how these changing circumstances in an interest group's environment actually affect an organization's stability and survival.

To shed light on these mechanisms, we modify the renowned Energy-Stability-Area (ESA) model and explore how disruptions in the *Area* and *Energy* term of the model affect individual interest groups' internal stability. Empirically, we combine cross-country data, including a survey experiment among 1,351 participants in 8 European polities, with longitudinal data on the Danish case (up to 436 observations) from two survey waves conducted during the COVID-19 pandemic, followed up with phone interviews. To measure interest group instability, we use a combination of three proxies: mortality anxiety, loss of staff and actual organizational termination.

Our analyses treat the pandemic as a case to observe interest group responses to disruption, both in the survey experiment and in terms of actual organizational changes over time. In line with the model, we find evidence that disruptions to the legislative energy (the demand side of lobbying) affect two of our three indicators of interest group stability. More specifically, when organizations lose access

to insider venues of policymaking, they, first, perceive their organizational survival is at risk, second, they are found to lose staff, but are not systematically associated with organizational termination.

In contrast, habitat disruption (the supply or constituency side of lobbying) impacts our outcome variables in the *opposite* direction than the ESA model predicts. Constituency disruption, instead of being the lifeblood of interest group stability, is found to have the potential to increase an organization's perception that survival is at risk. However, this fear does not systematically translate in actual organizational instability or termination. In the current times of 'turbulent politics', these findings shed light on the potentially negative, but also less worrying, implications of changes in the interest group environment for the entire system of interest representation.

Introduction

Interest group communities, including business interest organizations, labor unions, associations of citizens and professionals, and non-governmental organizations (NGOs) and charities, are a cornerstone of political representation and legitimate policymaking (Jordan and Maloney 2007). The composition, diversity, stability, and resilience of these communities are important subjects of study in political science, because interest groups sustain, complement, and impact the governmental process in many important ways. The seminal Energy-Stability-Area (ESA) model by Gray and Lowery (1996) represents an established approach in such studies. This population ecology model of interest groups has been an instrumental framework to understand the mobilization of societal and economic interests (Berkhout and Lowery 2010; Gray et al. 2005b; Lowery and Gray 1995), as well as the density and diversity of systems of interest representation (Berkhout and Lowery 2011; Labanino, Dobbins, and Horváthová 2021; Messer, Berkhout, and Lowery 2011). The model proposes that changes in the *Energy* (legislative activity), *Stability* (occurrence or lack of shocks to the interest group system), and *Area* (strength of the constituency interests) in a political (sub)system will result in changes in the size and composition of the interest group population. It helps explain the life cycle of interest groups, ranging from their mobilization to their potential death, as well as the overall (in)stability in the numbers of interest groups in different sectors or over time.

Despite its wide application in the extant literature, some of the key features of this theory remain untested or underexplored. First, the stability term, understood as the (absence of) fluctuations in the environment that can stress organizations, is often assumed to be constant and is rarely operationalized (Labanino, Dobbins, and Horváthová 2021). Second, since ESA takes a macro approach to population ecology, it does not provide insights into the micro-foundations that link variations in energy and area to the interest group's life cycle (Berkhout et al. 2018). Regarding interest group death, for instance, only few micro analyses of their dissolution exist (Halpin and Jordan 2009; Imig 1992; Nownes and Lipinski 2005). Instead, most studies in the population ecology literature link organizational instability to density (assuming that volatility and dropping numbers of interest groups at the macro level mean 'death' at the micro level). Alternatively, the few existing micro-level analyses focus on mortality anxiety which captures the *perception* that organizational survival is at risk (Gray and Lowery 1997; Halpin and Thomas 2012). The relationship between interest groups' *actual* and *perceived* internal instability remains poorly understood (Witjas et al. 2020).

For these reasons, existing empirical studies based on the ESA model currently fall short of providing us, first, with an answer to the question of how organizational stability is affected by crises (i.e. disruptions to the ESA terms). Second, they fail to unveil the micro foundations behind what causes drops in the number of interest groups at the macro-level. In other words, it remains unclear whether and how interest groups survive disruptions in the model's terms.

We argue that each of these knowledge gaps deserve attention, not least because they have high practical relevance in times of 'turbulent politics' and the multiple crises currently facing political systems (Ansell et al. 2017). Interest group activities in crisis circumstances have long been understudied (for exceptions see: Birkland 1998; Crepez et al. 2022; Eady and Rasmussen 2022; LaPira 2014). Other than affecting access to decision-makers and influence of interest groups (Junk et al. 2022), crises may pose risks for organizational stability and survival. Arguably, crises can be both disruptors and catalyzers of interest representation, depending on whether interest groups manage to continue to exist and represent their constituents' interests, despite the (different kinds of) disruptions that a crisis brings about.

This paper studies the organizational effects of such disruptions at the micro level of individual interest groups. To assess the effects of disruptions on the dynamics described in the ESA model, we analyze the crisis circumstances faced by interest groups during the COVID-19 pandemic. We hereby operationalize COVID-19 as a shock or focusing event tilting the interest group system towards instability. We assess the effects of this shock in terms of the short and long term-implications for 'energy', that is, legislative demand for interest group input, and 'area', i.e. constituency concerns at the supply side, at the level of individual interest groups. We use data from a cross-country survey, including a survey experiment with almost 1,400 interest groups active in 8 European polities, complemented by extensive interview data and multiple survey waves conducted with more than 230 interest groups in Denmark. In the former cross-country surveys, we use *mortality anxiety*, that is the perception that organizational survival is at risk, and actual fluctuations in the number of general and lobbying staff employed by the organization as indicators of instability. In the latter Danish case study, we measure mortality anxiety, staff loss *and* actual organizational termination.

The results suggest that disruptions in the energy term do impact organizational stability. When organizations lose/reduce access to policymaking, they fear more for survival and reduce their number of staff. However, access loss does not make their dissolution more likely. This finding aligns with our expectations based on the ESA model whereby organizational stability is a function of legislative energy.

Disruptions to the area term, however, produce effects in contrast to ESA. Constituency disruption, instead of being the lifeblood of organizational survival, is found to undermine it. When organizations are strongly affected by the COVID-19 pandemic, they consistently report *higher* mortality anxiety. It is important to stress that we do not find such significant association when indicators of *actual* organizational instability are concerned.

These findings validate the usefulness of a macro-theory such as ESA in studying micro-level dynamics. At the same time, however, they stress a potential oversimplification of how the effect of disturbances and constituency disruption are generally interpreted in interest group theory.

Theory: A group-level take on Energy, Stability and Area

The population ecology model, which will soon mark its 30th anniversary, has been one of the central theories in the interest group literature (Gray and Lowery 1996, Lowery and Gray 1995), arguably sparking the empirically-driven, large-N area of research into interest groups and their role in politics together with Baumgartner and Leech's (1998) book on "Basic Interests". A somewhat unfulfilled potential, however, lies in linking the dynamics in the population ecological approach to implications of the model at the group-level.

Interest group instability and death

Interest groups do not live forever. On the contrary, quite a high number of them *die* or cease to exist. By focusing on group-level covariates of organizational dissolution such as age, size, resources, professionalization and specialization, scholars have analyzed when such organizations are disbanded (Hager, Galaskiewicz, and Larson 2004; Halpin and Jordan 2009; Halpin and Thomas 2012; Heylen, Fraussen, and Beyers 2018). While useful from an organization theory point of view, this approach says relatively little about interest group populations. As Gray and Lowery (1997) put it by borrowing from the biological sciences, understanding how animals breed is not conclusive when we want to understand how many there are of them. Similarly, understanding how they die of disease or natural causes reveals little about the stability of their population. As population ecologists that apply this logic to interest groups put it, it is through the study of their *environment* and their interactions with *other actors* within this environment (such as policymakers, members and other interest groups) that one can make sense of many of the key factors that cause organizational instability and termination.

At the heart of this approach are the availability of resources and the means for interest groups to access them. Scarcity of resources and increasing competition for their obtainment has

systematically been associated with interest group death, as well as anxiety or fear of organizational termination (Halpin and Jordan 2009; Halpin and Thomas 2012; Heylen, Fraussen, and Beyers 2018). Among these resources, scholars include ties with policymakers, understood as a relational resource, which helps organizations to get what they want in terms of policy objectives, but also consolidates their existence and legitimacy within the system of interest representation (Bolleyer and Correa 2020; Gray et al. 2005a; Halpin and Thomas 2012).

Other studies put emphasis on environmental factors which concern the interest groups' constituencies. These are the lifeblood of interest groups: According to pluralist theorists, social and economic concerns in society should naturally lead to representation through groups (Truman 1951). When these concerns are eliminated, groups should dissolve again. Relatedly, changes in the constituency's size, its interests and priorities, and its relationship with the organization are associated with the group's survival or dissolution, including fears related to its continued existence (Heylen, Fraussen, and Beyers 2018). Notably, these approaches imply that when constituency concerns are heightened, or the size of the constituency expands, we would expect longevity, and perhaps the expansion of existing group numbers.

Population ecology is a useful approach to study these sets of factors at the demand side of policymakers and the supply side of a groups' constituency. More specifically, the well-known Energy-Stability-Area model introduced by Gray and Lowery (1996) outlines these environmental factors that explain population stability and instability. In short, the legislative energy, the size of the potential constituency and the uncertainty behind policy change determine the carrying capacity of an interest group system, and, therefore, the number and composition of active groups (Messer, Berkhout, and Lowery 2011).

What is less clear in current applications of the model is how a *disruption* to these terms affects population instability. While macro-level approaches have documented ebbs and flows in the number of active interest groups (Berkhout and Lowery 2011; Labanino, Dobbins, and Horváthová 2021; Messer, Berkhout, and Lowery 2011), research dealing specifically with interest group instability is in fact mostly cross-sectional in nature and unable to capture the dynamic process which links the ESA model to interest group instability (Bolleyer and Correa 2020; Gray and Lowery 1997; Halpin and Thomas 2012; Heylen, Fraussen, and Beyers 2018). One reason behind this empirical gap is the difficulty of studying groups that have ceased to exist. The secretariat of a dissolved group does not answer the phone, does not answer surveys, nor answers interview questions. This is why the majority of studies relies on mortality anxiety (the fear of organizational death) as a proxy (Bolleyer and Correa

2020; Gray and Lowery 1997; Halpin and Thomas 2012; Hanegraaff and Poletti 2019; Heylen, Fraussen, and Beyers 2018). However, the perception of the *risk* that a given organization will disappear is only one indicator for (potential) interest group instability. As Witjas et al. (2020) have pointed out, mortality anxiety does not translate into actual organizational disappearance because interest groups react to fear with survival strategies (Imig 1992). Therefore, mortality anxiety needs to be linked to other indicators of actual organizational changes, such as downsizing or actual termination, in order to speak to the mechanisms underlying the ESA model.

To date only a handful of studies exist that observe *actual* organizational termination (Imig 1992, Nownes and Lipinski 2005, Halpin and Jordan 2009). Through carefully conducted case studies, these works show that a crowded issue area endangers organizational survival due to fiercer competition (Nownes and Lipinski 2005) and shed light on the survival and adaptation strategies groups employ (Imig 1992; Halpin and Jordan 2009). While these works take changing circumstances into account, such as ‘unfriendly’ government change (Imig 1992) or paradigm shifts in a policy area (Halpin and Jordan 2009), they do not link them to broader system-level developments such as described in ESA model. We see this as a missed opportunity, because we reason that the population ecology approach can be highly insightful to understand (in)stability of individual interest groups. The next section builds on these works to develop a modified version of the ESA model to study how changes in the Energy and Area term affect interest group instability at the micro level.

ESA revisited: Group-level implications of Area and Energy Disruptions

Here we understand *disruptions* as changing political, societal or economic circumstances as a consequence of a major event or external shock (cf. Sabatier, 1998; Kingdon, 1984). Most typically, *crises* are examples of severe disruptions triggered by such events, leading to a situation in which ‘a community of people – an organization, town or nation – perceives an urgent threat to core values or life-sustaining functions, which must be dealt with under conditions of uncertainty’ (Boin and Hart 2007, 42).

Crises such as the Chernobyl disaster, 9/11 or the Great Recession of 2008–2009 have, despite their different nature, many things in common in terms of the consequences they produce: they can lead to ‘rally around the flag effects’, i.e., particularly high levels of public opinion trust and confidence in government, as well as a temporary halt to partisan conflict (Oneal and Bryan, 1995; Kritizinger et al., 2021), a concentration of power in political executives (Lodge and Wegrich, 2012; Bolleyer and Salat, 2021), as well as the use of specialized task forces and expert panels to deal with

situations of uncertainty (Rosenthal and Hart, 1991; van Niespen and Scholten 2017). Finally, crisis policy, despite seeking to resolve crisis circumstances, is always costly, particularly for some constituencies that may ‘suffer’ more while muddling through the crisis. For example, austerity exerts disproportionately heavier negative effects on lower-income classes and individuals who rely more on public services (Ortiz and Cummins, 2021).

These changing circumstances alter the opportunity structures for political organizations, including interest groups (Princen and Kerremans 2008). Most intuitively, if decision-making power shifts from parliament to specialized task forces, then organized interests lobbying parliaments may no longer have incentives to do so (cf. Junk et al 2022). Similarly, if an economic shock causes disproportionately large increases in unemployment and poverty rates, unions and poverty NGOs will have greater incentives to mobilize.

We argue that these disruptions can be translated into the terms of the ESA model in order to help understand interest group instability and potential death in times of crisis. Essentially, such reasoning already seems to lie behind the models’ *Stability* term, which, is the part of the model that is rarely the focus of empirical analyses. Earlier on, we defined stability as *the absence of fluctuations in the environment – like shocks and focusing events – that can stress systems of interest representation*. By definition, a *crisis* is a change in the stability term that tilts the systems of interest representation towards uncertainty. We expect this tilt to affect the equilibrium in the interest group population by provoking *disruption* in the political system, which affects the model’s two other terms: Energy and Area.

System-level disruptions

First, macro-level instability is likely to spill-over to the *Energy* and *Area* terms at the system level. Regarding the *Energy* term, this is generally operationalized as the volume of legislative activity (Messer, Berkhout, and Lowery 2011). This represents the demand side of the model, whereby political demand feeds into the density of the interest group system. Clearly, a disruption such as a crisis will affect this demand-side of the model: a crisis changes policymakers’ demand for and ability to conduct consultations with interest groups, as well as their legislative activities, for instance the relative attention placed on different policy areas.

The *Area* term of the ESA model represents the habitat, space or breadth of the niche in which interest groups form and maintain themselves (Messer et al. 2011). It constitutes the supply side of the ESA model, where societal interests feed into the (size and form) of the population of interest

groups. This is also likely to be affected by disruption (a change in the *Stability* term), for instance in form of a crisis. Such crisis will affect the set of and balance between social and economic interests in a system or sector, thereby changing the ‘supply’ of interests that interest groups represent. Different constituencies will be affected (in varying ways) by the crisis, which will affect the types of concerns that are salient in society, i.e. interests that groups represent on behalf of their (potential) members.

Importantly, we argue that these macro-level disruptions trickle down to the level of individual interest groups. Our adjusted ESA-inspired framework, therefore, translates the population-level relationships in the ESA model to implications at the micro level. We expect both the system-level *Energy* and *Area* disruptions to be experienced by individual interest groups, i.e. in their interactions with policymakers and constituents. An individual-level analysis has the advantage of taking into account that the implications of a crisis or other disruption are not *uniform*, but vary between interest groups. Still, the dynamics described in the ESA model help to formulate hypotheses about how the demand and supply side disruptions (that are *actually experienced* by individual groups) affect their organizational stability. The next sections present our testable hypotheses about how these group-level disruptions affect the groups’ stability.

Group-level Energy disruption

First, we expect the system-level disruption to legislative energy to translate into changes in political access for individual interest groups. Some groups will experience this disruption, because they lose access to policymakers, for instance because the issues they represent are down-prioritized compared to other (crisis-related) issues. This understanding of a group-level *energy disruption* relates to group survival, because an organization’s access to the policymaking process on issues of concern to it represents a resource dimension that defines the fundamental niche of an interest group (Gray and Lowery, 1996: 96). We therefore argue that disruption to the energy component of the model – induced for example by a sudden stability-shock at the macro-level – may cause organizational instability at the micro-level by constraining access to an interest group. Other than affecting the group’s opportunities to influence policies, loss of access to inside venues of policymaking, such as the executive and legislative arena, can erode an organization’s ability to extract resources from the state in the form of funding and other instruments of distribution, and/or gain legitimacy in front of the organization’s constituency. Based on this reasoning, we expect that a demand-side disruption in

form of the loss of access to inside venues will increase organizational instability. We summarize this expectation in hypothesis H-Energy.

H-Energy: In situations of systemic instability, the loss of access to inside venues of policymaking increases the interest group's organizational instability.

Group-level Area disruption

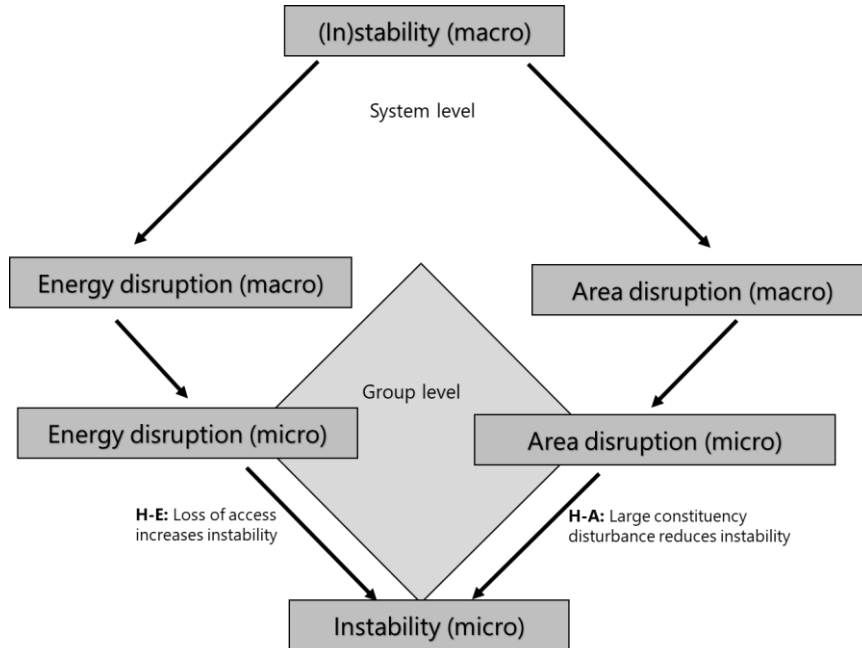
Disruption in the group's habitat takes the form of factors directly affecting an interest groups' constituency. Where these are highly affected by the disruption, one can expect an increase in the need for or urgency of interest representation on behalf of the constituency. For example, an economic shock causing inflation will put pressure on a broad variety of professions and businesses who will seek representation from associations and other organizations in the hope to resolve and alleviate the disturbance. Such area disruption should, based on the reasoning in the ESA model, be a catalyst of (supply-driven) interest group activity, and thereby increased stability.

When a crisis affects a group's constituency, the organization has strong incentives to be responsive to its constituents' concerns, because proving its use in difficult times is likely to help maintain or attract members. Conversely, if organizations fail to represent 'disturbed' interests, they run the risk of losing access to key resources for their survival, such as legitimacy, membership and membership fees and general support from volunteers and other stakeholders (Gray and Lowery 1995; Nownes and Lipinski 2005). This danger alone should provide a key incentive for organizations to prioritize and voice member interests in times of crisis. We therefore expect supply-side disruptions which affect an interest group's constituency to reduce organizational instability, as expressed in our Hypothesis H-Area.

H-Area: In situations of systemic instability, a larger disturbance of an interest group's constituency reduces the group's instability.

Figure 1 sums up our theoretical framework that translates ESA-model dynamics in situations of system-level instability to the group level.

Figure 1 – Proposed theoretical framework.



Research Design

To test these micro-level hypotheses, we chose to focus on the case of the COVID-19 pandemic in Europe. The pandemic, which erupted in Europe in early 2020, represented a major shock to European countries, their health care systems, their economy and communities. Moreover, it is now well-documented how this global health crisis, and the lockdown measures put in place to tackle it, have posed serious challenges for interest groups worldwide, affecting their ability to access policymaking (Junk et al. 2022; Eady and Rasmussen 2022) and their ability to communicate, recruit and mobilize members (Crepaz et al. 2022).

We therefore treat the COVID-19 case as an extreme case that magnifies the disruption to the terms of the ESA model to the entire interest group population. While rarer, this *exceptional* circumstance allows us to take a broader empirical approach that includes many different interest groups active in different sectors, and therefore add quantitative, cross-sector and cross-country analyses to the few existing case studies which focus on very specific organizations and issue areas (Imig 1992; Nownes and Lipinski 2005; Halpin and Jordan 2009).

We see the global COVID-19 pandemic as an example of system-level *Instability* that impacts the *Area* term, because constituents are hit by new, severe problems that they hope interest groups will voice for them. At the same time, this crisis has exerted a shock on the *Energy* term at the system

level by requiring many decisions on a range of emergency issues, and arguably overwhelming or distracting policymakers from other topics (Crepaz et al. 2022; Eady and Rasmussen 2022).

In our analysis, we use multiple data sources to study how these system-level changes have impacted individual interest groups. Specifically, we study short- and long-term disruptions to *energy* (demand) at the group-level by investigating the effect of deprivation of *access* (to policymaking). Moreover, we investigate group-level implications regarding the *area* (supply), by looking at how *affected* the interests represented by the group were by the pandemic. We understand this as the size of the ‘disturbance’ generated by the pandemic for the constituency interests of the organization.

Importantly, we are interested in how these two types of organization-level disturbances relate to organizational stability, which we measure in form of several proxies, namely mortality anxiety (measuring the perception of insecurity), as well as the number of staff that the organization can sustain (assuming that staff loss is an indicator for instability), as well as actual organizational termination.

To put our hypotheses to a stringent test, we include these different operationalizations of organizational instability in analyses that employ a combination of survey and interview data we collected as part of the InterCov project between 2020 and 2023.

The project fielded two waves of a cross-country survey in 7 European countries plus the European Union¹. The first wave was implemented in summer 2020 and helps us understand the early effects of the COVID-19 pandemic on lobbying and other activities of interest groups and firms. The research team relied on a sample of almost 6,000 organizations compiled from population lists found in European lobbying registers, yearbooks and other official organizational repositories (Crepaz et al. 2022; Junk et al. 2021). The response rate to this first survey wave across these polities was 22.7%. One year later, we fielded a second wave of the survey with an adjusted and updated list of approximately 5,700 organizations. The response rate to this second survey wave was 14.3%².

Finally, in 2023 we followed up on over 300 Danish organizations who had taken our first survey and conducted phone interviews to understand how they were fairing almost three years since the start of the COVID-19 crisis. Such a longitudinal approach is rare in interest group survey research, however often welcomed as innovative in this research area (Aizenberg and Hanegraaff 2020).

¹ Survey 1 included two additional countries, which, however, could not be included in Survey 2.

² For country-level response rates, which varied considerably, see Appendix 1.

In the following analysis section, we use these data to test our two hypotheses in multiple steps, namely: 1) a cross-country analysis of how access and affectedness relate to staff size and mortality anxiety (up to two observations per group) in two points in time (2020 and 2021), 2) a cross-country survey experiment on the effect of access disturbances and higher affectedness on mortality anxiety, and 3) a longitudinal study of three points in time on the effect of changes in access and affectedness on mortality anxiety, staff loss and actual organizational termination in Denmark (up to 3 observations for per interest group).

Table 1 summarizes the design of these three parts of our analysis. Further details on the operationalization of variables are included in the next sections that first present our cross-country analysis (1. & 2.) and then the country level analyses of the Danish case (3).

Table 1 – Structure of the research design

	<i>Independent variables</i>	<i>Dependent Variables (operationalizing (in)stability)</i>	<i>Number of obs. per interest group / year (up to)</i>
1. Cross-country survey data	Level of Inside Access Level of Affectedness	Staff size (general) Staff size (lobbying) Mortality Anxiety	2 (2020, 2021)
2. Cross-country survey experiment	Level of difficulty to attain Inside Access (high/low) Size (duration) of disturbance (long/short)	Mortality Anxiety	1 (2020)
3. Country data (Denmark)	Loss of Inside Access Change in Affectedness	Staff loss Mortality Anxiety Organizational termination	3 (2020, 2021, 2023)

Analysis: Interest group instability after the outbreak of Covid-19

Our analyses are presented following the three stages shown in Table 1. We employ various statistical techniques to predict levels of interest group instability measured by using different proxies. Our independent variables are always different operationalizations of *access to inside venues* and the *level of affectedness* by the pandemic.

Cross-country analyses: Survey and Survey Experimental Evidence

First, we zoom in on a first indicator of interest group (in)stability: staff size, both in terms of all employees in the organization and, secondly, in terms of staff working only on lobbying, public affairs and communication. The first is measured in six categories (from lowest to highest: *less than*

10 (1); 10-50 (2); 51-100 (3); 101-500 (4); 501-1,000 (5); More than 1,000 (6)). The second is measured using five categories (from lowest to highest: >1 (e.g. one part-time) (1); 1-4 (2); 5-10 (3); 11-15(4); More than 15 (5)). We are aware that measuring fluctuations in the number of staff using brackets is not ideal and less precise than measuring actual numbers. However, we have learned from previous experiences with surveys research where questions asking for the precise number of staff in FTE terms can lead to missing observations (Beyers et al. 2016). Moreover, fluctuations in our ordinal variable are more likely to indicate *actual* (in)stability instead of capturing small fluctuations due to other (more volatile) factors. To illustrate, by comparing staff sizes in period 1 (2020) and 2 (2021) in our data, we show that 10.71 percent recorded a loss of general staff and 16.02 declared a loss of public affairs staff. The distribution for these variables for both years can be accessed in Appendix 3 in Table A3.1.

In addition to staff size, we use a perception-based proxy for instability: mortality anxiety. This is measured on a scale, whereby 0 indicates *lowest anxiety* and 10 *highest anxiety*. Its average level for 2020 was 4.43 and dropped to 2.42 one year after (see Table A3.1). In survey research, this measure widely used proxy of organization instability (Bolleyer and Correa 2020; Gray and Lowery 1997; Halpin and Thomas 2012; Hanegraaff and Poletti 2019; Heylen, Fraussen, and Beyers 2018). Existing studies also use very similar question formulations as well as comparable answer categories. Mortality anxiety is, however, only a proxy for instability as it measures the perception that organizational survival is at risk. It is assumed that policy-practitioners answering elite surveys are well capable of gauging actual risk of instability. Nevertheless, the extent to which mortality anxiety translates into actual instability has been questioned (Witjas et al. 2020). The mismatch between the two may be related to the fact that fear of organizational termination pushes organizations to adopt survival strategies and counter instability. In sum, it is true that mortality anxiety captures instability. However, it also captures what organizations are doing about it. This is why, next to mortality anxiety, we use indicators of actual instability throughout the study.

We relate these outcomes of instability to what we conceive of as individual-level implications of the *Energy* and *Area* terms, namely *Access* to decision-makers in inside venues of policy-making (government, parliament and bureaucracy) on a five-point scale from “Never” to “Almost on a daily basis” and *Affectedness* by the pandemic on a five-point scale from “much less affected” to “much more affected” compared to other stakeholders in the country³.

³ For exact wording used in the survey, see Appendix 2.

Between our two survey waves fielded in 2020 and 2021, we observe interesting variation in both *the level of access* and the *level of affectedness* of organizations partaking in our study. For example, in both time periods there is a small percentage, equal to 22.5 percent in survey 1 and 8.2 percent in survey 2, of organizations with high levels of insider access (above level 4 on a 1 to 5 scale). A larger share has no or little access (below level 2 on a 1 to 5 scale): 23.2 percent in survey 1 and 28.1 percent in survey 2. If the two surveys are compared, the percentage of organizations with *at least monthly* access (equal to 3) to inside venues moves from 48.0 to 30.6 indicating a substantial temporal loss of access. Similar variation can be observed for our other independent variable, the level of affectedness: 39.4 percent of organizations declared to be more affected than other organizations at the start of the pandemic and this percentage dropped to 32.2 percent one year later. For detailed distribution see Appendix 3 Table A3.2.

We try to link this variation to the two indicators of organizational instability described above. This first analysis is purely correlational as having only two points in time, does not allow us to determine the direction of the relationship, namely whether access and affectedness cause organizational instability or the other way around.

The left-hand side of Figure 2 summarizes the result of this analysis (control variables: group type, organization age not shown in the figure, see Appendix 3 Table A3.3 for full results). We fit a linear regression using a General Least Square estimator with random effects and robust standard errors clustered by country. Given there are only two periods in our data, we are not concerned about autocorrelation, which tends to be problem in long panels. Clustered standard errors in our model correct heteroskedasticity in the errors while the control variables capture otherwise unexplained variation increasing the model fit (Woodridge 2010).

The random effect GLS regressions shows, based on up to two observations per organization (2020, 2021), that higher access (i.e. legislative energy for each individual group) is related to a higher staff size, both in terms of the overall number of employees, and when only looking at lobbying staff ($p < 0.001$). Moreover, there is evidence that higher affectedness is related to higher mortality anxiety ($p < 0.001$) and a lower general staff size (but $p = 0.02$)⁴.

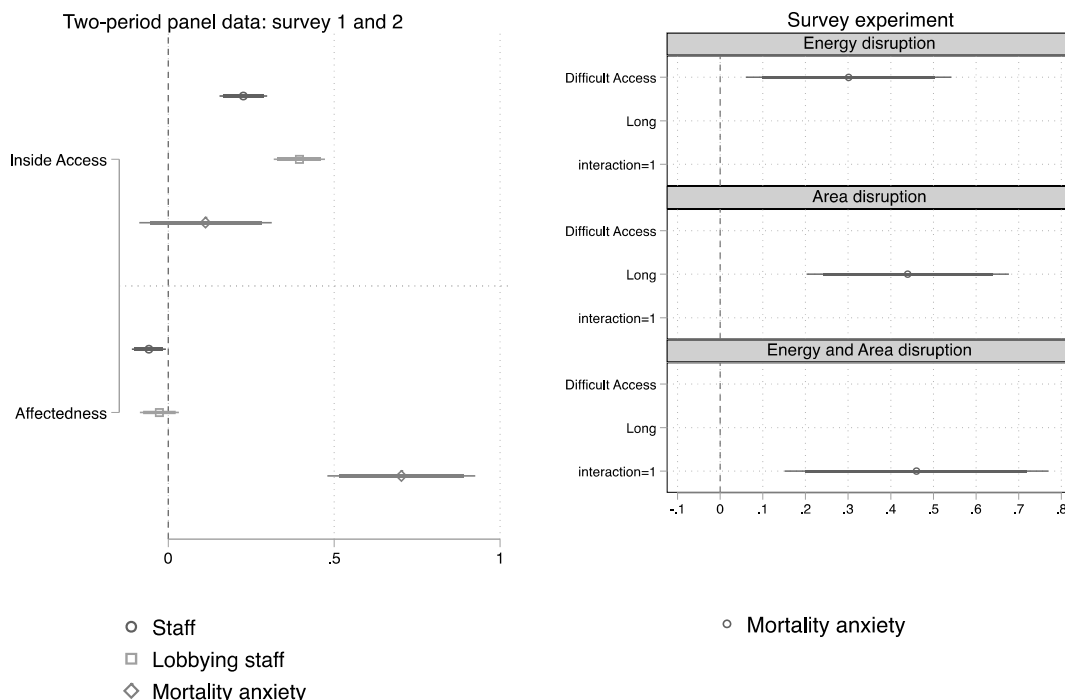
As already mentioned, the direction of causality is difficult to ascertain here. However, this data is consistent with one of our expectations based on the ESA model (H-Energy): access, our take on the *Energy* term, is positively related to staff size and therefore stability, which would be in line

⁴ It looks like the access finding is driven by between organization differences, and the affectedness finding by within group variation. One could follow up on this.

with the ESA model. In contrast, *Area*, here operationalized as how affected the group’s interests were by the pandemic, does not behave as we expected based on the ESA model. Looking at the strongest finding (mortality anxiety as outcome variable), an increase in affectedness is associated with large and highly significant *increase* in levels of mortality anxiety, i.e. an effect in the opposite direction than H-Area expected. This is a first indication that area-disruptions at the macro-level may not automatically translate into the micro-dynamics we would expect based on the ESA model.

Moreover, it needs to be stressed that government access (Energy) is related to organizational stability in terms of staff size, but not in terms of mortality anxiety. Vice-versa, affectedness (Area) relates to mortality anxiety but not consistently to all measures of organizational stability for the number of staff. This points towards the complexity of applying this theoretical framework to individual group dynamics. In other words, so far, H-Energy is only partially supported while H-Area is rejected.

Figure 2 – Results of GLS regression using two-period panel data for survey 1 and 2 linking three indicators of organizations instability to inside access and levels of affectedness (left); Survey experiment using OLS to predict mortality anxiety with energy and area disruptions (right).



Notes:

Left: Random effects GLS Regression with robust standard error clustered by country (see list of countries in Table A3.3), number of

observations: 1566 (Model 1); 1558 (Model 2); 1555 (Model 3), number of groups: 1168 (Model 1); 1165 (Model 2); 1163 (Model 3), R-squared: 0.16 (Model 1); 0.25 (Model 2); 0.09 (Model 3).

Right: Model 1 above (Energy disruption), $N = 1,273$, $R\text{-sq.} = 0.05$; Model 2 middle (Area disruption), $N = 1,273$, $R\text{-sq.} = 0.05$; Model 3 below (Energy and Area disruption), $N = 1,273$, $R\text{-sq.} = 0.05$. Country fixed effects for all models and robust standard errors (see full model in Table A4.3).

To explore the potential causal mechanism behind these patterns, we follow up on these findings with results from a survey experiment, which we conducted in our first survey wave (2020). The ability to tackle reverse causation is one of the advantages of conducting experiments compared to observational research. Because we treat the participants in our survey with area and energy disruptions *before* organizational instability is measured, we are able to determine whether the former causes the latter.

Our experiment manipulated the *area* and *energy* disruptions following a *hypothetical* shock to the interest group system’s stability. More specifically, we asked participants to imagine a [at that time] hypothetical scenario of a second wave of COVID-19 (which happened only a few months after we fielded the survey experiment). In this context, we varied two characteristics of the scenario: 1) the level of difficulty in reaching policymakers (*energy disruption*, where this is **extremely difficult** compared to **not particularly hard**) and 2) the duration of lockdown-related restrictions that affect all kinds of constituents (*area disruption*, where this is long (**a year**) compared to short (**two months**)). We combined these manipulations following a 2x2 design and randomly allocated each participant to one of our four treatment groups. Table 2 summarizes the treatment conditions and relationship to theorized relationships. In Appendix 4 Table A4.2, we provide the full vignette texts as well as tests of successful randomization.

Table 2 – Summary of Survey Experiment Design

		Difficulty of Gaining Access	
		Low (not particularly hard)	High (extremely difficult)
Duration of Affectedness	Short (2 months)	<i>Low Energy and Area disturbance</i>	<i>High Energy Disturbance</i>
	Long (1 year)	<i>High Area disturbance</i>	<i>High Energy and Area disturbance</i>

As outcome variable, we use mortality anxiety. We measure this by employing a post-treatment survey item that asked respondents to evaluate how likely, on a scale from 0 to 10, it would be for their organization to ‘cease to exist’ as a result of the hypothetical scenario presented to them. In this part of the analysis, we cannot measure staff size as in the previous cross-country analysis, as our scenario is purely hypothetical and could only capture how participants *would* respond to it. We assume that in this instance, mortality anxiety will also capture considerations that organizations may (or may not) make about organizational strategies of maintenance, including that of potentially reducing the number of staff.

The results of this analyses are displayed on the right-hand panel of Figure 2 (full models in Appendix 4 Table A4.2). This shows that both types of disruptions have significant effects on mortality anxiety. The results can here be interpreted causally. When it comes to the *energy disruption* (top panel), the effect is again in line with the ESA model: high difficulties in reaching policymakers causes significantly higher mortality anxiety compared to easy access ($p=0.001$). However, the findings here apply to mortality anxiety as proxy for instability, whereas in the previous analysis this held only for staff size. This difference is most likely due to the relatively extreme scenario we depict in the vignette experiment, whereby groups faced a sudden and complete loss of access. In the previous cross-country analysis, fluctuations in access between the two observed periods were more moderate compared to the hypothetical scenario drawn in the experiment (with 49 percent losing ‘some’ access, and only 14 percent experiencing more severe loss). This variation is probably not sufficiently stark to provoke a systematic increase in levels of mortality anxiety, however, large enough to impact strategies of organizational maintenance.

Regarding the *area disruption* (mid panel), the effect is confirmed to be in the opposite direction from the one we expected based on the ESA model (cf. left side panel). The effect is highly significant ($p>0.001$) and can also be interpreted causally (within the survey experimental design): a longer *hypothetical* disruption to constituency interests (compared to a shorter one) leads to more mortality anxiety. Finally, the combined effect of disruptions (low panel) shows that when combined, energy and area disruptions cause a systematic increase in levels of mortality anxiety.

Taken together, these are important findings, because they validate the applicability of a macro-theory such as ESA to micro-level dynamics of organizational instability as far as the Energy term is concerned (H-Energy is confirmed again). At the same time, they point to a potential blind-spot in the demand/supply mechanisms described in the ESA model. The model expects that when societal interests are disrupted, support and resources for (much needed) interest representation by

the group are boosted. We find that this itself is not enough to bolster group stability (H-Area is rejected). It seems that the constituency disruption can also trigger organizational problems that threaten stability. These findings are consistent across both sets of analyses. More precisely, both the cross-country survey data and the results of the experiment consistently point to the difficulties that arise when extreme shocks to the area-term entail the need to express constituency concerns during a crisis. We see this evidence as a first indication, that the ESA model underestimates the difficulties of representing constituency interest in times of crisis. To shed further light on how the model's terms behave during a crisis, the next section adds a further analysis based on data from one of the countries. Focusing on only one country allows to reduce the data collection effort and add another temporal data point to our series as well as measure *actual* organizational termination next to indicators of instability.

Country study: Longitudinal data from Denmark

The final stage of our research design builds on the data extracted from our two surveys complemented by data from telephone interviews to follow up on longer term organizational stability. Due to the high time investment it requires to conduct these interviews, we selected one country for this part of the study, which we see as a *least likely case* for organizational instability: Denmark.

Denmark has a corporatist interest group system with a strong history of associations, in which citizens participate actively (e.g Boje and Ibsen, 2006; Svendsen et al., 2009). About 90% of the Danish population are members of at least one association, and 70% have participated actively in one (UIM 2015: 111). Denmark also has high levels of trust in institutions, as well as a well-functioning welfare state. All these institutions arguably make stability a likely outcome for organizations, even in times of crisis. We selected this case, because finding similar patterns as in the previous analysis in the longitudinal analysis of Denmark would provide strong support for the validity of those results.

In the first wave of our study, we count 304 Danish organizations completing the survey while 173 have taken our second survey and 147 of these have completed both. To complement this data on the Danish case from our two surveys, we add data collected from phone interviews with survey participants in Denmark conducted in 2023. We reached out to the 304 organizations partaking in the first wave and conducted interviews with 233 of them (response rate 77%). We also followed up on all organizations that could not be reached to find out whether any of them had stopped existing (i.e. 'died' or merged with other organizations). Based on this, we add 11 organizations that have taken

part in (one or both of) our survey(s) but not in the phone interviews because they have *ceased to exist* (either due to death or merger).

Combined all these data create a time varying account of up to 330 unique interest groups active in Denmark between 2020 to 2023.

Like in the first analysis, we measure the *Area* disturbance as the *level of affectedness* by the COVID-19 pandemic relative to other groups on a 1 to 5 scale ranging from “much less affected” to “much more affected”.⁵ We operationalize a change in the *Energy* term more dynamically as in the first analysis, as the *change* in the group’s access. To do so, we compare pre- and during-pandemic access to inside (government, parliament and bureaucracy) venues (first observation per group, based on survey 1), and pre-pandemic and medium-term access (second observation based on survey 1 and 2), as well as pre-pandemic and longer-term access (third observation, based on phone interview)⁶. We then transform this difference into a categorical variable taking different values for “*no change in access*”, “*decrease*” and an “*increase in access since the start of the pandemic*”.

With up to three data points between 2020 and 2022, we can operationalize the *change in access* and the *level of affectedness* at different points in time over these three years. The distribution for these variables is found in the Appendix 5 in Table A5.1.

We use three DVs in this stage of the analysis to measure organizational instability. In line with the previous analyses, we take two dimensions of instability into account: staff resources and mortality anxiety. As far as the former is concerned, we take the difference between staff size recorded during the first and the second wave of the survey. To this we add a datapoint from our phone interviews, in which asked respondents to declare if (since the ‘end’ of the pandemic) they had let go of staff, hired new staff or if there had been no change. In the analysis, we treat this as a binary measure: distinguishing an organization that reported a loss of staff (1) from those who managed to keep or increase their staff size. Because we do not have records of staff size before the pandemic, this variable takes the value of zero during the first period. In period 2 (2021), 3.0 percent of the

⁵ Note that we only have two observations of affectedness in period 1 and 2. Given our third data point was collected after the end of the pandemic, we assume that affectedness at $t_3=t_2$ and used this in the model.

⁶ In both of our surveys, we asked respondents to self-report the frequency of access to ‘politicians at any level of government’, ‘members of parliament and their staff’ and the ‘bureaucracy in government department or state agencies’ during the pandemic. In our first survey, we also asked respondents to report about access to the same venues *before* the pandemic. To operationalize change, we take the difference between the frequency of access during the pandemic and before the pandemic. In the phone interview, we asked directly about the change in access, by asking respondents: “Has your organization’s direct access to politicians (for instance through meetings, advisory committees, hearings) changed compared to the level of access before the pandemic?”

organizations in our panel declare a loss of staff resources, while in 2023 this percentage increases to 5.7 (See Appendix 5 Table A5.2).

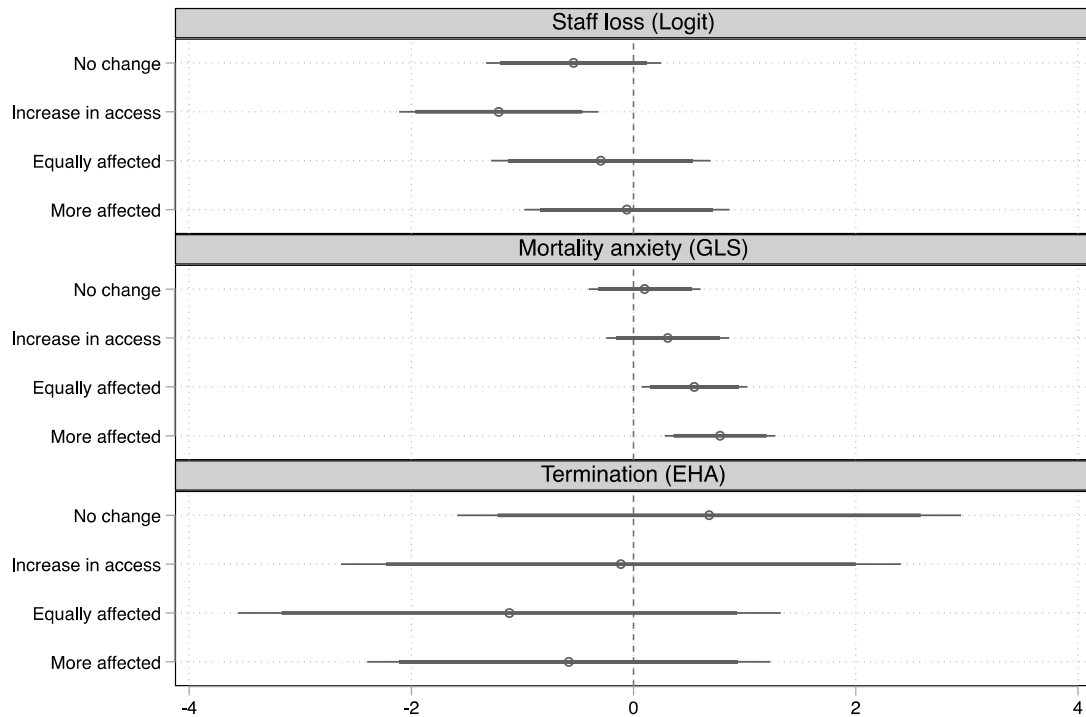
To construct our second dependent variable, we asked to rate levels of mortality anxiety on a 0 to 10 scale for which we have observations for all three periods. Average mortality anxiety among Danish organizations in our study was 3.07 in 2020; it then dropped to 1.9 in 2021 and 2.1 in 2023 (see Table A5.2).

To this perception of risk of organizational failure, we add a third indicator of instability, namely *actual* organizational termination. We browsed the internet in the search of the organizations that did not answer to our phone call for information. In three instances, we conclude that organizations had dissolved their structures, and in eight instances we found evidence (often confirmed in phone interviews) that they had merged or dissolved *into* a new organization. We treat these as instances (both deaths and mergers) of organizational termination and code them as 1, whereas 0 entails continued, independent existence of the organization (no termination – or simply *survival*) (Berkhout and Lowery 2011). Overall, three of these instances happened in 2020, three in 2021 and five in 2023 (See Appendix 5 Table A5.2).

Our three dependent variables are therefore *staff loss*, *mortality anxiety* and *termination*. We model the likelihood of the occurrence of staff loss by means of a Logit model. Then we model mortality anxiety using GLS estimator with random effects and robust standard errors. Finally, we model termination as a rare event using event history analysis. For all three estimation techniques, we use *change in access* (energy disruption⁷) and *affectedness* (area disruption) as key predictors. In our analyses we control for *group type* and *organizational age* during the studied times as these could help explain the outcomes of instability.

⁷ We term this disruption (with a negative connotation). However, there are of course ‘winners’ that have ‘gained’ access with the crisis. The majority experienced no change. See Table 3.

Figure 3 – Results of GLS regression using three-period panel data linking three indicators of organizations instability to loss in inside access and changes in affectedness in Denmark (2020, 2021, 2023)



Notes:

Model 1 (top) predicts the likelihood of incurring in staff loss using Logit model. Control variables: group type, age. N = 838; Number of groups = 306; Prob. Chi-sq. = 0.22

Model 2 (middle) predicts levels of mortality anxiety using GLS with random effects and robust SE. Control variables: group type, age. N = 672; Number of groups = 306; Prob. Chi-sq. = 0.05; R-sq = 0.02.

Model 3 (bottom) predicts failure (termination) using Weibull survival model of event history analysis. Control variables: group type, age. N = 883; Number of subjects = 306; Number of failures = 7 (loss of 4 failures due to missing data in covariates). Prob. Chi-sq. = 0.42.

Figure 3 plots the coefficients of our models shown in Table A7. First and foremost, we confirm the validity of H-Energy when staff loss is the DV. Compared to a decrease in access, an *increase* in insider access decreases the likelihood of staff loss, and therefore of organizational instability. However, this finding does neither hold for perceptions of instability like mortality anxiety, nor for actual organizational termination. While these findings are in line with the results of the cross-sectional and experimental analyses, they point at the complexity of studying organizational (in)stability: Loss of access to decision-making does negatively impact group stability in the Danish case; However, staff reduction, other than an indicator of instability, could have been used by groups in Denmark as an adjustment instrument allowing them to increase their chances of survival and

reduce pressures thereof. This may explain such different findings across DVs that are so consistent across the three steps of our analysis.

Finally, as far as the Area term is concerned, the analysis of the Danish case clearly rejects H-Area. Again, this is in line with the cross-sectional analyses and experimental evidence. Affectedness does not positively impact staff loss but does trigger increased levels of mortality anxiety. Interestingly, however, this does not translate into higher chances of *actual* organizational termination. Overall, this suggests that ESA may not be a helpful framework to understand organizational pressures in the relationship with their constituency in crisis circumstances. We identify at least two possible interpretations: first, it is possible that the unexpected effect of area disruptions affects only perceptions rather than actual instability. While it is true that we find said effects only in relation to mortality anxiety, our analyses do find a null (rather than positive) association between affectedness and actual stability. We find this interpretation plausible but less likely based on our data given that no evidence of a positive effect was found; second, constituency disruptions cause organizational problems, but these remain unobserved here still threatening stability. These could be of financial nature or less tangible ones, like organizational legitimacy. While our data does not allow us to capture these directly other than through mortality anxiety, these are less likely to cause actual organizational termination, as the analysis of the third DV in the Danish case confirms.

It is, however, important to stress that *none* of our key variables, whether related to Area or Energy, correlate with actual organizational termination. This could indicate that there is a wide gap between perceptions of risks of organizational termination and actual death (as already indicated in the literature) but also between other phases of instability within the life cycle of an organization and its end. In other words, it could be a while before an organization - that has lost staff and other resources - is forced to dissolve its structures. This finding could also indicate that, even in profound crises circumstances and stressed by staff loss and other instabilities, interest groups are remarkably resilient. We cannot know for sure without more data on these 'dead' organizations (as these were not interviewed). However, when in our phone interviews we asked organizations that had merged with others (or even declared to have lost staff) what the causes of the internal changes were, almost none of them indicated the COVID-19 crisis as the main cause behind these trends. This could be an indicator of resilience, which we expected to be high in Denmark to begin with given the stability of its interest group system. Finally, we invite to read the findings concerning organizational termination with care. Ideally, event history analysis would include longer time periods and more failures and the

quality of the data used here needs to be improved to provide a more definitive answer on the question of survival of interest groups. We discuss ways to improve the quality of this type of data in the conclusions.

Taken all together, these findings show the usefulness of theories like ESA to observe implications for interest groups at the micro-level. At the same time, they stress the complexities behind applying macro-approaches to dynamics internal to interest groups. Challenges, implications and avenues for future research are discussed in the final section.

Conclusions

Our paper applied the well-established macro-theory Energy-Stability-Area (ESA), developed by Lowery and Gray (1996) to study interest group populations, to micro-level dynamics of interest group stability in crisis circumstances. More precisely, using the global COVID-19 pandemic as a starting point of instability in the interest group system, we investigated the effects of energy and area disruptions, which we operationalized as loss of access during and affectedness by the pandemic, on the stability of individual interest groups. Our analyses relied on three analyses: the first, a cross-country study of 1,351 organizations active in seven European countries plus the EU; the second, an online survey experiment conducted with the same organizations in the same polities; the third, a longitudinal analysis of 233 organizations zooming into one of the countries in the study, Denmark. Throughout these analyses we investigated the impact of variations in insider access (Energy) and affectedness (Area) on organizational stability. Stability was measured with a combination of indicators which relate to staff size, mortality anxiety (perceived risk of organizational death) and actual organizational termination. The data used for the study was collected by means of two survey waves conducted in 2020 and 2021 (cross-country study and survey experiment) and phone interviews with selected interest groups (longitudinal analyses). All data stemmed from the *InterCov* project (Junk et al. 2021).

Overall, the analyses provided strong evidence that energy and disruptions provoked by a major crisis at the macro-level impact the stability of individual interest groups. First, consistent with our theoretical expectations based on the ESA model, we found that variations in insider access (energy) determine an organization's staff size. Organizations with low access or that lost some of their access capacity consistently registered lower staff size, both general and specialized on lobbying. Moreover, our experiment suggested that when such access loss is described as extreme and sudden,

it also triggers an organization's mortality anxiety. However, such trigger did not apply to other analyses using survey data and phone interviews where less extreme loss of access is reported.

Second, the effects of area disruptions, measured as an organization's affectedness by the pandemic, did not follow the direction predicted by ESA. This constituency disturbance generated by the crisis, instead of triggering more stability thanks to increased mobilization, was consistently found to decrease stability by means of higher levels of mortality anxiety. This unexpected finding however related to perceptions of instability only, while the effects of area disruptions were null when actual instability was measured in terms of staff size or organizational termination. We treat this as initial evidence that the Area term of ESA may not be applicable at the micro-level in the same way the macro-approach suggests. Instead, constituency disturbances, especially when triggered by crises, may pose more problems to organizational stability than the theory assumes, and we are unable to capture them here. It was suggested that these may relate to, for example, the loss of fees, donations, volunteers or even of legitimacy. This finding stresses the importance of studying group-level implications of system-level theories because their translation is less straightforward than expected.

Moving beyond single-issue case studies, our analysis provided a template for the study of cross-sectional and longitudinal dynamics of interest group stability. We also expanded the horizons of quantitative research on this topic with the use of indicators of organizational instability other than mortality anxiety. The different findings in relation to each one of these indicators demonstrate the validity of a previously made claim that mortality anxiety does not necessary relate to organizational termination (Witjas et al. 2020). We echo this claim and show that, in crisis circumstances, organizations are less anxious about losing access than losing their ability to represent their constituency. The absence of fear is however not necessarily indicating stability. On the contrary, organizations may be forced to reduce their staff size as a result of the crisis. In this case, staff loss is both an indicator of instability but also a strategy of organizational maintenance, which may reduce mortality anxiety.

With these implications in mind, we suggest a few avenues for future research. First, we would encourage interest group scholars to conduct more studies on actual organizational termination to better understand its determinants. We acknowledged the challenges in observing organizational death already and propose that researchers fielding surveys with interest groups could follow up with automatic replies and bounced emails to document when and if an organization has ceased to exist. If done regularly, this could improve the overview of the ebbs and flows in interest groups systems than the current approaches relying on transparency registers and public registers (Berkhout and

Lowery 2011; Labanino et al. 2021). Second, we would welcome more... Finally, we would see benefit from a closer look at disturbance theory to better understand the effects of constituency disruptions on organizational behavior and survival. We do not dispute that (policy) disturbances trigger interest group mobilization, stability and then dissolution once the disturbance is resolved. However, it could also be that policy disturbances cause other forms of disturbances (organizational or reputational) that then destabilize organizations. Studying these specific mechanisms may refine the application of current interest group theories to a variety of circumstances.

A straightforward limitation of our study is its focus on the exceptional and rather unusual case of COVID-19. While we cannot prove external validity of our findings to other circumstances, we do not have reasons to believe that they would not apply in other contexts. COVID-19 magnified the disruptions studied here and allowed us to consider their effect across policy area and country. However, zooming into the, e.g., agricultural or environmental sector to study the effects of energy and area disruptions caused by the avian flu is likely to produce comparable theoretical frameworks, data and possibly also results. What is less clear is how one would extrapolate the approach developed here to non-crises contexts or, even more complicated, to scenarios where crises have cumulative effects and multiple disruptions need to be operationalized.

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Appendix ESA paper

The implications of disruptions for interest group stability: how changes in *Energy* and *Area* impact organizational survival

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Appendix 1 – Response rates to surveys used in cross-country analysis

Table A1.1 – Response rates by country and by survey wave

	Survey 1			Survey 2		
	Surveys Sent	Completed	Response Rate (%)	Surveys Sent	Completed	Response Rate (%)
DK	730	304	41.6	684	205	30.0
SE	650	225	34.6	600	125	20.8
IE	652	177	27.1	668	90	13.5
NL	700	161	23.0	677	90	13.3
DE	549	97	17.7	495	60	12.1
AT	617	98	15.8	609	86	14.1
EU	1,407	207	14.7	1,386	122	8.8
IT	640	82	12.8	651	46	7.1
Total	5,945	1,351	22.7	5,770	824	14.3

Source: Crepez et al. (2022)

Appendix 2 – Wording of survey and interview questions used in the analysis

Survey questions used for variable construction

Wording used in the survey for variable construction.

Interview guide (Original Language)

Interviewguide:
Organisationers modstandsdygtighed
Version efter test

Mit navn er XX. Jeg er forskningsassistent på Institut for Statskundskab på Københavns universitet. Jeg arbejder for intercov-projektet, der undersøgte interessevaretagelse under covid-19 pandemien. Ringer jeg på et dårligt tidspunkt, eller har du tid til at svare på nogle spørgsmål?

Først lidt baggrund: Nogen i din organisation – måske dig - var en del af respondenterne til vores spørgeskemaundersøgelse i 2020. Vi vil igen gerne takke dig og din organisation for at have støttet vores forskning i den her svære periode. Støtten har muliggjort en række forskningsartikler og en bog om interessevaretagelse under corona. Publikationerne er alle offentligt tilgængelige og man kan finde dem på projektets hjemmeside.

Nu overvejer vi en opfølgende undersøgelse, hvor vi gerne vil undersøge organisationers modstandsdygtighed, både efter corona, men også i den mere aktuelle kontekst af energikrise og høj inflation. Har du mulighed for at svare på få korte spørgsmål som en pilotundersøgelse til denne undersøgelse? (*Hvis respondenterne tvivler: Det drejer sig mest om organisatoriske ændringer i de sidste to år. Har du arbejdet her i denne periode? Er der en af dine kollegaer, der ville være oplagt at tale med i stedet for?*)

Det vil ikke tage mere en 5-10 minutter.

1. Har din organisation mistet eller fået flere ansatte siden coronapandemiens udbrud (mellem 2020-22)? (*det er også muligt at besvare spørgsmålet ift. frivillige, hvis det er mere relevant*)
2. Har der været større organisatoriske ændringer som f.eks. sammenlægninger med andre organisationer, nye samarbejdspartnere, eller interne ændringer i organisationens afdelinger siden pandemiens udbrud? (*Kunne du kort nævne de vigtigste?*)
3. Har din organisations finansiering eller indtægter (fra medlemmer, donorer, salg...) ændret sig overordnet set siden pandemiens udbrud? Ville du sige, at den er steget/faldet eller er den cirka det samme?
4. Hvor bekymrede er folk i din organisation i øjeblikket for organisationens fremtid og dens opretholdelse? (0 = ikke bekymret; 10 = meget bekymret) (*Vi mener bekymringer om i hvor vidt organisationen fortsat kan opretholdes og gøre sit arbejde*)
 - a. Hvad ser du som de vigtigste årsager til disse bekymringer:
5. Og så det sidste spørgsmål: Har din organisations direkte adgang til politikere, f.eks. i form af møder, rådgivende udvalg eller høringer, ændret sig i forhold til niveauet før pandemien? (*Hvad sammenlignes der med? Tænk på gennemsnitlig adgang i året før pandemien og gennemsnitlig adgang siden*)

Debriefing/ spørgsmål omkring brugen af data:

Jeg har noteret dine svar om din organisation, men i al forskning vil de blive brugt anonymiseret.

Mange tak for din tid!

Appendix 3 – Cross-country analysis

Table A3.1 – distribution of Dependent variables in cross-country 2 period panel analysis

	Answer categories	2020 N (%)	2021 N (%)
Staff general	<i>less than 10</i>	678 (50.0)	307 (52.5)
	<i>10-50</i>	302 (22.3)	141 (24.1)
	<i>51-100</i>	96 (7.1)	42 (7.2)

	<i>101-500</i>	121 (8.9)	45 (7.7)
	<i>501-1,000</i>	37 (2.7)	12 (2.1)
	<i>More than 1,000</i>	122 (9.0)	38 (6.6)
	Total	1,356 (100.0)	585 (100)
Staff lobbying	<i>1 (e.g. one part-time)</i>	453 (33.7)	203 (35.0)
	<i>1-4</i>	580 (43.2)	241 (41.6)
	<i>5-10</i>	174 (13.0)	85 (14.7)
	<i>11-15</i>	44 (3.3)	18 (3.1)
	<i>More than 15</i>	92 (6.9)	33 (5.7)
	Total	1,343 (100.0)	580 (100.0)

	2020	2021
Mortality Anxiety – average (Sd)	4.4 (2.9)	2.3 (2.4)
N of observations	1,393	583

Table A3.2 – distribution of independent variables of Energy and Area used in in cross-country 2 period panel analysis

	Variable description	Answer categories	2020 N (%)	2021 N (%)
Inside Access (Energy)	<i>Average of access to government, parliament and bureaucracy measured on a 1-5 scale from 'never' to 'almost on a daily basis'</i>	> = to 1 but < 2	279 (23.2)	161 (28.15)
		> = to 2 but < 3	346 (28.8)	236 (41.3)
		> = to 3 but < 4	307 (25.5)	128 (22.4)
		> = to 4 but < 5	230 (18.1)	45 (7.7)
		= to 5	53 (4.4)	3 (0.5)
		Total		1,203 (100.0)
Affectedness (Area)	<i>Level of affectedness measured on a 1-5 scale from 'much less affected' [than other stakeholders] to 'much more affected'</i>	1 (much less)	98 (7.0)	51 (8.49)
		2 (less)	248 (17.6)	118 (19.7)
		3 (equally)	509 (36.2)	238 (39.7)
		4 (more)	318 (22.7)	115 (19.1)
		5 (much more)	234 (16.7)	79 (13.1)
		Total		1,407 (100.0)

Table A3.3: Models corresponding Figure 2 (left) – Results of GLS regression using two-period panel data from survey 1 and 2

	(1) Staff	(2) Lobbying staff	(3) Mortality Anxiety
Government Access	0.23***	0.40***	0.11

	(0.04)	(0.04)	(0.10)
Affectedness	-0.06*	-0.03	0.70***
	(0.03)	(0.03)	(0.11)
Group type (Ref: Business & firms)			
Profession groups & unions	-0.75**	-0.13	-0.53+
	(0.26)	(0.12)	(0.27)
NGOs & citizen groups	-0.81**	-0.08	0.40*
	(0.27)	(0.09)	(0.16)
Age (Ref: < 21 years)			
21-50 years	0.35***	-0.01	0.01
	(0.08)	(0.07)	(0.19)
more than 50	0.95***	0.29**	-0.18
	(0.19)	(0.10)	(0.18)
Constant	1.77***	1.00***	1.41***
	(0.19)	(0.15)	(0.22)
<hr/>			
Number of Cases	1,566	1,558	1,555
R-sq. (Overall)	0.16	0.25	0.09

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Notes: GLS estimator with random effects and clustered standard error by country (Austria, Denmark, Germany, Ireland, the EU, the Netherlands, Italy, Sweden).

Appendix 4 – Survey Experiment

Vignette used in Online Experiment








Country example: IE wording

You have now reached the final part of this survey. We now present you with a hypothetical future scenario concerning the Coronavirus pandemic. Please read through the scenario carefully and try to imagine the situation as if you were actually experiencing it. Due to a second wave of the Coronavirus that hits Ireland in September, the Government of the Republic of Ireland announces to reimpose the same restrictions as were implemented during the first wave. This time, restrictions are imposed for a period of [**two months**] // [**one year**]. In this situation, it is [**not particularly hard**] // [**extremely hard**] for your organization to come into contact with politicians to express your organization's interest.

In this scenario, how likely do you think the following outcomes would be for your organization?

Not likely at all Almost certain to
happen

0 1 2 3 4 5 6 7 8 9 10

My organization would invest additional resources in our political work	
My organization would set its political work on hold until the end of the crisis	
My organization would join forces with like-minded organizations, for instance in coalitions or mergers	
My organization would run public and/or media campaigns to get attention	
My organization would engage in protest activities to stop the restrictions	
My organization would support non-compliance with government measures	
My organization would cease to exist	

EU sample wording

You have now reached the final part of this survey. We now present you with a hypothetical future scenario concerning the Coronavirus pandemic. Please read through the scenario carefully and try to imagine the situation as if you were actually experiencing it. Due to a second wave of the Coronavirus that hits Europe in September, the EU announces now a comprehensive set of restrictions as were implemented by national governments in high-risk countries during the first wave. This time, restrictions are imposed for a period of **[two months]** // **[one year]**. In this situation, it is **[not particularly hard]** // **[extremely hard]** for your organization to come into contact with EU institutions to express your organization's interest.

In this scenario, how likely do you think the following outcomes would be for your organization?

Not likely at all Almost certain to
happen

0 1 2 3 4 5 6 7 8 9 10

My organization would invest additional resources in our political work on EU affairs	
My organization would set its political work on EU affairs on hold until the end of the crisis	
My organization would join forces with like-minded organizations, for instance in coalitions or mergers to work on EU affairs	
My organization would run public and/or media campaigns on EU affairs to get attention	
My organization would engage in protest activities to stop the EU restrictions	
My organization would support non-compliance with EU measures	
My organization would cease to exist	

Table A4.1 - Tests for successful randomisation - Multinomial Logistic Regression with four treatment conditions as outcomes

Short and Easy (Baseline)	(1) Long and Easy	(2) Short and Difficult	(3) Long and Difficult
Government access	-0.02 (0.09)	0.04 (0.09)	0.14 (0.09)
Affectedness	-0.08 (0.08)	-0.03 (0.08)	-0.13 (0.08)
Staff	0.10 (0.07)	0.13+ (0.07)	0.13* (0.07)
Lobbying staff	-0.03 (0.10)	-0.10 (0.11)	-0.17 (0.11)
Group type (Ref: Business & firms)	0.00 (.)	0.00 (.)	0.00 (.)
Profession groups & unions	0.03 (0.22)	0.21 (0.22)	-0.18 (0.22)
NGOs & citizen groups	0.41+ (0.24)	0.28 (0.24)	0.47* (0.23)
Age (Ref: < 21 years)	0.00 (.)	0.00 (.)	0.00 (.)
21-50 years	0.27 (0.24)	0.44+ (0.24)	0.42+ (0.25)

more than 50	0.15 (0.24)	-0.08 (0.24)	0.40+ (0.24)
Country (Ref: Denmark)	0.00 (.)	0.00 (.)	0.00 (.)
Sweden	-0.08 (0.26)	-0.14 (0.26)	-0.09 (0.26)
Germany	-0.01 (0.36)	0.05 (0.36)	0.07 (0.36)
Ireland	0.12 (0.29)	-0.05 (0.29)	-0.12 (0.30)
Italy	-0.32 (0.39)	-0.13 (0.37)	-0.24 (0.38)
Netherlands	0.13 (0.29)	0.11 (0.30)	0.10 (0.30)
Austria	0.04 (0.35)	-0.04 (0.36)	-0.03 (0.35)
Constant	-0.11 (0.40)	-0.34 (0.41)	-0.24 (0.41)
Number of Cases	1,051		

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Table A4.2 - Models corresponding to Figure 2 (right) – OLS regressions, fixed effects for country, robust standard errors in all models.

	(1) Mortality anxiety	(2) Mortality anxiety	(3) Mortality anxiety
Energy disruption	0.30* (0.12)		
Area disruption		0.44*** (0.12)	
Energy & Area disruption			0.46** (0.16)
Country (Ref: Denmark)			
Sweden	0.07 (0.15)	0.05 (0.16)	0.06 (0.15)
Germany	0.35 (0.24)	0.33 (0.23)	0.34 (0.24)
Ireland	1.36*** (0.25)	1.34*** (0.25)	1.36*** (0.25)
Italy	0.95** (0.35)	0.95** (0.35)	0.94** (0.35)
Netherlands	0.56** (0.20)	0.55** (0.20)	0.56** (0.20)
Austria	0.37 (0.26)	0.35 (0.26)	0.36 (0.26)
EU	0.61** (0.19)	0.59** (0.19)	0.60** (0.19)
Constant	0.52*** (0.12)	0.45*** (0.12)	0.56*** (0.11)

Number of Cases	1,194	1,194	1,194
R-sq	0.05	0.05	0.05

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Appendix 5 – Longitudinal analysis of Danish interest groups

Table A5.3: Models corresponding to Figure 3 – Logit mode (1), GLS regression with random effects and robust standard errors (2), and Weibull survival model (3).

	(1) Loss of staff	(2) Mortality Anxiety	(3) Organizational Termination
Government Access (Ref: Decrease)			
No change	-0.54 (0.40)	0.10 (0.26)	0.68 (1.16)
Increase in access	-1.21** (0.46)	0.31 (0.28)	-0.11 (1.29)
Affectedness (Ref: Less affected)			
Equally affected	-0.29 (0.50)	0.55* (0.24)	-1.12 (1.25)
More affected	-0.06 (0.47)	0.78** (0.25)	-0.58 (0.93)
Group type (Ref: Business & firms)			
Profession groups & unions	0.09 (0.37)	-0.19 (0.24)	-1.02 (0.85)
NGOs & citizen groups	-0.43 (0.51)	-0.07 (0.29)	-16.71 (2489.44)
Age (Ref: < 21 years)			
21-50 years	0.56 (0.66)	-0.02 (0.34)	-0.15 (1.24)
more than 50	0.70 (0.63)	-0.04 (0.32)	-0.08 (1.12)
Constant	-2.84*** (0.72)	1.92*** (0.37)	-4.85** (1.61)
/			
Insig2u	-10.30 (22.02)		

ln_p			0.74*
			(0.37)
Number of Cases	838	672	834
Number of groups	306	306	306
Prob. chi-sq.	0.22	0.05	0.48

+ p<0.10, * p<0.05, ** p<0.01, *** p<0.001