# Journal of Emergency Management Structures for collaboration and networked adaptation -Emerging themes from the COVID-19 pandemic1 Title: Structures for collaboration and networked...

Article  *in*  Journal of Emergency Management · May 2023

4 authors, including:

Stian Antonsen
NTNU Samfunnsforskning
72 PUBLICATIONS   1,325 CITATIONS

SEE PROFILE

Torgeir Kolstø Haavik
NTNU Social Research
49 PUBLICATIONS   455 CITATIONS

SEE PROFILE

# Journal of Emergency Management
## Structures for collaboration and networked adaptation – Emerging themes from the COVID-19 pandemic1
### --Manuscript Draft--

| | |
|---|---|
| **Manuscript Number:** | |
| **Article Type:** | COVID-19 LIVE ISSUE |
| **Section/Category:** | Special Issue on COVID-19 |
| **Keywords:** | COVID-19;  Cross-sectoral collaboration;  Coordination;  Wicked problems |
| **Corresponding Author:** | Stian Antonsen<br>NTNU Social Research: Norges teknisk-naturvitenskapelige universitet Samfunnsforskning AS<br>Trondheim, NORWAY |
| **First Author:** | Stian Antonsen |
| **Order of Authors:** | Stian Antonsen |
| | Torgeir Haavik |
| | Tove Frykmer |
| | Gudveig Gjøsund |
| **Manuscript Region of Origin:** | NORWAY |
| **Abstract:** | The COVID-19 pandemic is a creeping and slow-burning crisis, characterized by extreme uncertainty, ambiguity and complexity and presenting and unprecedented need for response across sectors and political-administrative levels. While there has been an explosion of research papers into the national strategies for handling the pandemic, empirical publications on the local and regional management is still scarce. This paper presents early empirical insights into key collaborative functions in Norway and Sweden, with an ambition to contribute to a research agenda focusing on the collaborative practices of pandemic crisis management. |

**Title: Structures for collaboration and networked adaptation – Emerging themes from the COVID-19 pandemic**

# Structures for collaboration and networked adaptation – Emerging themes from the COVID-19 pandemic[1]

**Abstract**: The COVID-19 pandemic is a creeping and slow-burning crisis, characterized by extreme uncertainty, ambiguity and complexity and presenting and unprecedented need for response across sectors and political-administrative levels. While there has been an explosion of research papers into the national strategies for handling the pandemic, empirical publications on the local and regional management is still scarce. This paper presents early empirical insights into key collaborative functions in Norway and Sweden, with an ambition to contribute to a research agenda focusing on the collaborative practices of pandemic crisis management.

Our findings point to a set of themes that are all related to emerging collaborative structures that fill holes in preestablished structures for dealing with crises, and that have been important for being able to effectively deal with the pandemic. At the municipal and regional level, we see more examples of well-adapted collaborative practices than we see the wickedness of the problem causing inertia and paralysis. However, the emergence new structures do indicate a need to adapt organizational structures to the existing problem structure, and the duration of the current crisis allows for significant evolution of collaborative structures within the various phases of the pandemic. The lessons that can be drawn from this reveals a need for reconsideration of some of the basic assumptions of crisis research and practice, in particular the so-called similarity principle that is a cornerstone of emergency preparedness organisation in many countries, including Norway and Sweden.

## 1. Introduction

The COVID-19 pandemic presented an acute situation and an unprecedented call for effective crisis response for nations around the globe. They were being brutally tested on their adaptive capacity – the inherent abilities of institutions to empower social actors to respond to short and long-term impacts, by means of planned measures and/or through encouraging responses from society (Gupta et al. 2010). The pandemic presents a (hopefully) unique "natural experiment" in which data can be gathered both *in situ* and over time. This places the field of crisis research not only at the centre of attention for decision- and policymakers, but with a window of opportunity to advance the research front.

There is a burgeoning literature on the way public authorities have responded to this challenge (e.g. Di Mascio et al., 2020; Janssen & van der Voort, 2020; Moorkamp et al., 2020; Rasul, 2020; Ruiu, 2020; Boin et al., 2021; Eriksson et al., 2021; Penta et al., 2021; Petridou & Zahariadis, 2021; Pollock & Steen, 2021). However, the available empirical analyses mainly provide insight into the national level of analysis. As the spread of infections can be massively different within nations, the adaptive capacities of municipalities and regions play key roles in the management of the crisis, within the strategies developed on the national level. Therefore, considerable research attention should be devoted to this level of analysis.

In this paper, we present central themes emerging from intensive studies of crisis leadership and management in Norwegian and Swedish municipalities and regions. At the time of writing, the pandemic is still ongoing and the grand narratives of failures and successes are yet to be made. By

---

presenting our analysis while the crisis is still ongoing, our aim is to communicate what we believe is an important line of research. Therefore, we present results that are more indicative than conclusive, at a stage where they can inform other researchers studying the pandemic of themes worth exploring and thereby contribute to more comparative and cumulative research. We

We have performed in-depth studies of municipal and regional crisis management in Sweden and Norway, focusing on the strategies and adaptive capacities of local and regional crisis leadership. While doing this, we have observed intensified use of preestablished collaborative structures, reconfiguration of existing structures to fit new purposes, and emergence of altogether new structures. These structures have been key to the adaptive capacities on the local level – capacities that largely can be seen as features of networked relationships. In this paper, we describe some of the structures that have emerged in the process of adapting to the COVID-19 crisis, the competence and social capital in play within these structures, and the actors' reflections around what the lessons from this collaboration mean for organizing both in crises and normal situations.

## 1.1. Background – crisis management principles in Sweden and Norway

Sweden and Norway are in many respects highly similar countries. In addition to speaking more or less the same language and having a history of close relationship, the two countries have similar institutional structures and consist of rather homogenous populations. On matters of societal security, there is also close collaboration, illustrated by the fact that the two countries share a similar set of principles for crisis management. These principles[2] state that

1. the authority, department or agency which is responsible for an area on a daily basis, is also responsible for the necessary emergency preparedness and crisis management in this area (the principle of responsibility)
2. that the organisational arrangement should as far as possible be the same in crises as in ordinary circumstances (the principle of similarity)
3. that crisis management should take place at the lowest possible organizational level (the principle of proximity).

After the terror attacks in Oslo in 2011, a fourth principle was formalized in Norway. This is the principle of collaboration, stating that the public authority, private enterprises or government agencies have an independent responsibility to ensure *the best possible cooperation* with relevant actors and agencies throughout the emergency management cycle (Meld. St. 5 (2020-2021)). This does not have status as a formalized principle in Sweden, but the responsibility for collaboration is described in regulations and seen as part of the principle of responsibility (MSB, 2018). Collaboration can therefore be seen as a working principle also within the Swedish crisis management system. .

The countries also have a similar distribution of authority between the state, regional and municipal levels, although there are differences in which concrete tasks and responsibilities are assigned to the different actors. This makes the two countries quite comparable in terms of institutional arrangements. However, there is one difference that makes a difference between the two countries' approach to managing the COVID-19 crisis. In Norway, the principle of responsibility is synonymous with ministerial rule – the minister is by definition the highest leader of the ministry, meaning that the

---

[2] https://www.regjeringen.no/no/tema/samfunnssikkerhet-og-beredskap/innsikt/hovedprinsipper-i-beredskapsarbeidet/id2339996/

https://www.krisinformation.se/detta-gor-samhallet/mer-om-sveriges-krishanteringssystem/krishanteringens-grunder

ministers will be highly involved in managing crisis. In Sweden, ministerial rule is prohibited by law. This means that the minister is to refrain from intervention in the day-to-day activities of the agencies, thereby placing the government agencies in the driving seat of crisis management. This is an important explanatory factor of the two countries landing on quite different national strategies for handling the pandemic (see Nesse & Frykmer, 2021).

Although there are significant differences between the countries, including differences in national strategies for managing the pandemic that will no doubt be subject to significant research efforts in the years to come, the regional and municipal levels in the two countries are highly similar. In this paper, we will therefore not go into details on the differences between the country, but rather emphasize trajectories of crisis management that are similar across the two contexts.

## 3. Theoretical considerations

A pandemic is an "all-inclusive scenario", being by definition transboundary, involving or influencing all parts of the public and private sectors and cutting across political-administrative levels. In other words, horizontal and vertical coordination and collaboration are bound to be key ingredients in the management of such a crisis. Therefore, our theoretical starting point will be the main strands of research into such collaboration.

### The challenge of wickedness

The adaptive capacity of municipalities and regions must deal with both vertical and horizontal collaboration and coordination challenges. An important vertical coordination challenge lies in the need for communication around the central authorities' guidance, support and procedures, both toward the municipalities and the public. The horizontal *coordination* challenge stems from the fact that successful handling of the situation requires collaboration across sectors and geographic boundaries between municipalities and regions. Such collaboration has proved to be a "wicked problem" in previous studies of societal security and emergency preparedness (e.g. Christensen et al., 2016). The concept of "wicked problems" emerged more than 40 years ago (Rittel & Webber, 1973) and is now a topic in many disciplines, such as policy science, public administration, ecology and economics.

Wicked problems come in many guises, but they are always characterized by a mismatch between problem structures that cut across sectors and levels of political-administrative authority and organisational structures that are based on a specialized sectoral division of labour and hierarchical distribution of authority (Christensen et al., 2013). Wicked problems are also characterized by intractability in the sense that it is hard to reach a shared framing of the nature of the problem, what optimal solutions are, the causal link between problem *and* solutions, and which adverse effects the implementation of a given solution might generate (Rittel & Webber, 1973).

The COVID-19 pandemic fits well into this description: The crisis is probably the most boundary-crossing, multi-level and cross-sectoral challenge the world has seen in peace-time, creating an unprecedented urgency for collaboration and coordination. At the same time, the problem-solving structures of normal organisation within the public sector are highly specialized. In both Norway and Sweden, the principle of similarity is a cornerstone of the organisation of efforts to uphold societal security and manage crisis. The essence of this principle is that the organisation of crisis response should be similar to organisation under normal conditions. While this principle has an intuitive appeal (one rarely has the time to invent new ways of functioning when crises emerge), it presupposes that the structures developed for normal operation are actually suited for dealing with an unforeseen

situation. With the COVID-19 case being an outlier on virtually every categorization of crisis, the fit between preestablished structures and need for ad hoc adaptation remains an empirical question.

## Collaborative governance

While the literature is brimming with descriptive examples of coordination difficulties between levels, sectors and nations, the question of how to deal with such problems has not received the same attention. This research gap is partly addressed in the literature on collaborative governance (Ansell & Gash 2008, 2018). Collaborative governance is a mode of collective action aimed at achieving some common goal (here, societal safety/security) broadly defined as "the processes and structures of public policy decision making and management that engage people constructively across the boundaries of public agencies, levels of government and/or the public, private and civic spheres" (Emerson, Nabatchi & Balogh, 2012:2). This is a research approach that places great emphasis on the way different public and private actors engage in problem exploration, solution seeking or decision-making, by means of collective arenas with a single purpose (Ansell & Gash 2008) or more general collaborative platforms (Nambisan 2009). Although it can sometimes be suspected that establishing a forum is a mere symbolic measure to show that "something" has been done to compensate for poor organisation and role unclarities, collaborative arenas can nevertheless play an important part in the actor networks of societal safety and security.

Nambisan (2009) distinguishes between three distinct types of collaborative platforms: 1) Exploration platforms where problem-solvers convene to frame and investigate problems, 2) experimentation platforms where the goal is to explore possible solutions to identified problems, and 3) execution platforms aiming for collaborative implementation of measures. In addition to Nambisan's categories, In their meta-analytical study of collaborative governance, Ansell & Gash (2008) highlighted conditions under which collaborative governance was found to be more or less effective as an approach to policy making and management. Their analysis resulted in a model with four broad variables that influenced the quality of collaboration: starting conditions, institutional design, leadership and properties of the collaborative process (figure 1).

Ansell and Gash (2012) also identified leadership roles within successful collaborative governance, called stewards (helping to convene collaboration and maintain the integrity of collaboration), mediators (contributing to managing conflict and arbitrating exchange) and catalysts (helping to identify and realizing value-creating
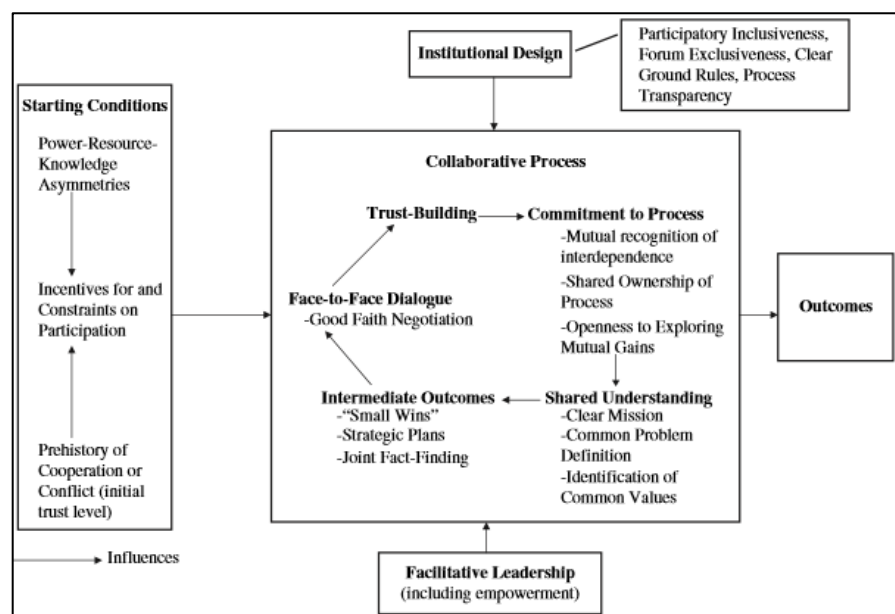


potential). In addition to the leadership roles within the collaborative arenas one might imagine that there are several other critical functions in the broader network that facilitates successful collaboration, although this has not received that much attention in the literature. Examples of this

could be bridging and brokering between different networks and different forms of liaison roles and activities within networks.

## Methods

Our analysis is based on data from a project called "Coordination, response and networked resilience (CORNER)", funded by the Research Council of Norway. This is a nationally comparative study of crisis leadership on different levels, and the diverse interpretation and responses to the crisis and risk reduction measures from groups in the countries' populations. In addition, two national projects associated with CORNER, producing two reports on regional and municipal collaboration involved in managing the COVID-19 crisis (see Frykmer et al., 2021; Antonsen et al., 2021) also provide empirical basis for the analysis.

The empirical work is done by means of comparative case studies in Norway and Sweden. Case studies means investigating "a contemporary phenomenon (the "case") in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident (Yin, 2014: 16). This approach provided in situ, in-depth knowledge on the selection of different strategies for crisis response and the rationales behind them. Such case studies have played an important role in creating the key concepts, models and theories in safety and crisis research field, and doing this comparatively and based on broad and varied data is an important strategy for further development of the field (Antonsen & Haavik, 2021).

We conducted interviews at national level (employees involved in crisis management on behalf of ministries and government agencies, regional authorities (crisis leaders in the regions), regional health authorities, municipalities (members of crisis management teams) and municipal interest organisations in both countries. In total, we conducted 33 interviews in Sweden and 59 in Norway that all had regional and municipal leadership and adaptive capacity as a core topic. The interviews on municipal level focused on one of the larger cities in both countries. In Norway, the municipal data material also consists of non-participatory observations of 43 status meetings in a municipality's top crisis management team, as well as 22 meetings in a cross-sectoral sub-group in the same municipality. In total we observed more than 50 hours of crisis management meetings. The regional data consists of interviews with representatives of two Norwegian and three Swedish regions. In Sweden, regional data also included a questionnaire and regional/municipal data collected through a workshop on horizontal and vertical coordination challenges (see Frykmer et al., 2021).

The interviews were all semi-structured, lasting 1-1,5 hours, and all interviews were digitally recorded and subject to thematic analysis (Bryman, 2008). The observations followed an observation guide that aimed to document the key topics of the meeting, the ways of working in each meeting, any controversies arising in the meeting, as well as the perceived function of the groups' activities in terms of situation awareness, reactive/proactive adaptation and external alignment related to managing the crisis. In sum, we have spent more than a year in interaction with municipal and regional stakeholders, either by means of interviews or by being direct observers of how they were adapting to the complex and uncertain situation. In light of Barley and Kunda's (2001) diagnosis of organization research and the challenge they rise to bring more empirical and practise-oriented studies into organisation science, we believe the empirical data provided through this study is quite unique.

In the thematic analysis, categories emerged partly as a result of the key topics in the interview guide (which was revised in iterations based on continuous empirical findings) and partly as topics emerging from the informants themselves. The interviews and observations were coded by two or more

members of the research team and the analytical categories were discussed and aligned in dedicated project meetings.

## Results

The results presented in this paper is *not* a final analysis of all the data gathered in the project. As already indicated, the aim of the analysis is primarily to describe a set of emerging themes serving as early empirical input for a research direction for other researchers on pandemic crisis management. We have identified three such themes:

- Emerging organisational structures for managing crises

- Competence and social capital

- What to do with the lessons from collaboration?

### Theme 1 – emerging organisational structures for managing crises

Crisis theorist Patrick Lagadec is widely cited for his statement that "*the ability to deal with a crisis situation is largely dependent on the structures that have been developed before chaos arrives*" (Lagadec, 1993:5). This is based on a belief that organisations will have a hard time developing structures for management in the midst of crisis, and that the key to successful crisis management lies in preparation. We do not disagree with the prudence of this position as a general ambition of preparing for crisis, particularly for crises that occur suddenly and lasts for a limited period of time. However, the COVID-19 crisis has some traits that calls for extra consideration of the relationship between preestablished structures and the adaptation to specific needs of the crisis situation. The COVID-19 crisis is both "creeping" in its onset (Boin et al., 2020), and of extreme duration. While the initial phase of crisis management triggers pre-established routines of establishing a formal crisis management team, lines of communication to other stakeholders and the like, our data also portray the emergence of *new* collaboration structures for dealing with the crisis. The temporal dimension of the COVID-19 crisis provided both reorganisation and innovation of crisis response.

In the Norwegian municipality, it was quickly realised that the management of the pandemic involved significant cross-sectoral coordination challenges. Re-allocation of personnel from other sectors into the health sector, in particular in connection with testing, infection tracing and vaccination, was a pressing need, as was matters of finance, IT systems for working from home, harmonisation of employee-related procedures, and internal information around risk-reducing measures. These were all needs for problem solving that required unprecedented collaboration across the different areas in the municipality. As a response to this, a Coordination Group (CG) was established to facilitate necessary coordination across the municipality service areas. The members of the group were more or less hand-picked from the municipality's line organisation, based on their competence within their respective sectors, interpersonal networks across sectors, and the level of trust placed on them from the municipality's management group. The group consisted of mostly lower-level officials with little formal authority, apart from two technical domains that were represented by middle managers. The group had no formal decision-making authority, but became a central intermediary between the crisis management and the municipal service areas during the pandemic, both for the translation of leadership decisions/advices into operable guidelines for the different municipality areas, and increasingly also for supporting/advising the crisis management on how to work more effectively to ensure sufficient operative capacity during a long lasting crisis. Importantly, this group did not exist in the municipality's preparedness plan, nor its ordinary organisational structure. It was an ad hoc structure tailored to meet the most pressing challenges associated with the internal continuity

challenges related to this particular crisis. However, it was a structure that made sense in light of a long history in the municipality of not devising separate emergency preparedness structures but rather empowering the line organisation to step up also in times of crisis. Thus, while the CG was not a continuation of formal structures established before crisis emerged, it could be seen as a continuation of informal structures and a form of path dependency in this respect.

The Swedish municipality strived to adhere to the principle of similarity and create a management organisation that was similar to everyday management. They did this by structuring its crisis management organisation according to a plan that was only recently developed and had therefore not been executed before, but which nevertheless was seen to represent everyday management. With this form of crisis management structure, the aim was to keep the regular decision-making structures rather than create a separate structure for COVID-19 decisions.. A group on strategic level was however created to meet the needs of directing and coordinating the municipal work. This group consisted of the director of the municipality, his adviser on crisis management issues and representatives from the municipal functions, organized in clusters. Even though the group gathered regular decision makers in municipal functions, it was not mandated to make formal decisions about the municipality's activities, but should rather serve as a guiding forum, pointing to an organisation as close as possible to everyday structure. Nevertheless, much of the work in this group explicitly informed and affected the decision making of "regular channels" and can thus be seen as a new structure but still similar to a staff function supporting a special COVID-19 structure.

The Swedish county boards' coordination office (CBCO) was a regional example of a establishing a collaborative arena staffed by a group of skilled and networked people. In the case of the CBCO, however, it was more formalised and agreed upon by the 21 counties than the Norwegian municipal coordination group mentioned above. The CBCO can be seen to meet the vertical and horizontal collaboration and coordination challenges that were acknowledged before but became a more pressing matter during the pandemic.

Our analysis indicates that emergent structures of collaboration have played a key role in dealing with the pandemic on the regional and municipal level. However, much more research is needed for this phenomenon to be understood in crisis research. First, there is a need to understand the contextual preconditions for the emergence of such structures. Sweden and Norway differ from other countries as they are usually regarded as high-trust societies, with working life arrangements allowing considerable autonomy and leverage for taking own initiative (Kalleberg et al., 2009). This might look very different in other countries. Second, there is a need for in-depth studies of the leadership functions played by such emerging structures. Our study indicates that the various groups' mandates are perceived as somewhat unclear, both by their members and their surroundings. They might be important 'free roles' in flexibly adapting to complexity and uncertainty, but they may also contribute to unclarities in the chain of command of the emergency preparedness organization. Understanding their functions thus require in-depth studies, not only of the collaborative groups themselves but also the relationship to their organisational surroundings.

### Theme 2 –Competence and social capital

While organisational structures are important for organising work, both under normality and crises, sound organisational structures as such do not warrant sound coordination and adaptive capacities. Indeed, our data indicate that a large portion of the groups' 'successes' are ascribed to qualities of the members and their work form.

As already indicated, groups at both the municipal and regional level in Norway and Sweden had a somewhat informal status, providing sufficient leeway for working through informal channels. A

common denominator for the group members was their large social/professional networks, allowing for short and effective communication lines both horizontally between sectors and vertically in the chain of command. This quality was partly brought into the group by each member, partly cultivated and developed through the informal work form in the group over time, so that we may ascribe these qualities to the groups as such, not only the members.

The groups work within comprehensive networks. For instance, at the regional level in Sweden the CBCO group members served to lubricate the communication internally within the county boards, between county boards (horizontal) and between county boards and external actors in the crisis management system (horizontal and/or vertical). Importantly, this is not only a matter of having access to the networks, they also need the abilities to utilise them and operate across the various formal and informal structures and communication channels. This constitutes a form of social capital which has made a difference in dealing with the pandemic. Both county boards and other actors within the crisis management system report that the CBCO has played an important role in the handling of the pandemic in serving as one point of contact and representing "one voice" from the county boards. In combination with the diverse area of knowledge and responsibilities of county boards, being one point of contact meant that the CBCO could provide the Swedish crisis management with a forum for questions or issues that had no clear point of reference. In addition, the CBCO could also contribute to resource effectiveness for both the county boards and other actors, by providing a means for effective coordination and communication across sectors and governmental authorities.

The crucial role of informal networks is well-known within the literature on organisational safety (e.g. Rochlin, 1989) societal security (e.g. Almklov et al., 2014) and crisis management (e.g. Fischbacher-Smith & Fischbacher-Smith, 2014). The novelty in this respect is that the various coordination groups in many ways make the informal networks more formal, visible and potentially more accessible. We suspect that this can contain important lessons for crisis research. By not only acknowledging the existence and importance of such networks but actively and openly providing them with roles and responsibilities, the emergent structures for coordination contains a potential for innovation and targeted exploitation by bridging the formal and informal sides of crisis management.


## Theme 3 – what to do with the lessons of collaborative efforts?

During the interviews, several of the informants pointed to a need for drawing lessons from the collaborative efforts during the crises. The lessons were seen both in relation to the ongoing crisis, future crises and a future normal situation. The perceived need for generalization of the collaborative experiences into future crises is not very surprising, since the general notion in the interview data is that the efforts have been largely successful for dealing with the COVID-19 situation. This is the case for both the CBCO and the municipal collaboration groups.

More surprising is the perception that the lessons from dealing with the crisis could have important implications for the way collaboration is carried out in the normal situation. This was particularly visible in the Norwegian municipality. We interpret this as a sense of having achieved something unusual and important with regard to cross-sectoral collaboration, and that this pointed to an Achilles' heel that was not only related to the ability to cope with crises but equally to the ability to effectively organize work, service production and preparedness activities in the municipality at large. Part of the positive experience is related to the fact that the duration of the pandemic allowed the cross-sectoral group to work closely together, with frequent meetings and activities, over a long period of time. This meant that it was more feasible that the group developed a form of cross-sectoral identity and internal cohesion, and that the cross-sectoral tasks were prioritized in competition with the sector's more

isolated core tasks. It is also important to note that the largely digital work form was also a factor, by facilitating a higher frequency of interaction and shaping the groups work processes.

In any case, the feeling that the crisis can be used as a springboard to change normal organisation is an embryo of double-loop learning (Argyris & Schön, 1996) where members of the organization start questioning the fundamental principles underlying their organisation's activities. This question can be framed in several ways. It can be a matter of direct continuation of the same group into the normal mode of organisation, it can be a generalization of the work form and functions from the crisis situation to normality, or it can be seen as a need to reshape the organisation's governing principles. For all these framings, the million-dollar question is whether it is possible to recreate or reshape the collaboration capacities once the urgency of the crisis is taken out of the equation. It might be that the urgency of both the "problem" and its "wickedness" is the key source of success in the collaborative efforts. We suspect that a key ingredient in making a problem wicked in a normal situation, is that although it has been acknowledged as a problem over time, its solution or resolution is *not* seen as urgent by the stakeholders. However, this is an empirical question. The "normalization phase" after crises is often under-estimated as a distinct focus of empirical crisis research, and this is where urgency disappears, and the need for learning appears. This is also where our data point to a theme where research into the COVID-19 crisis have unique opportunities in building new, empirical knowledge.

## Discussion

The themes described above, while not being conclusive on the way multi-level, cross-sectoral collaboration have played out in Sweden and Norway, indicates that the COVID-19 pandemic challenges several of the basic, deeply-rooted assumptions around societal security and crisis management in the two countries. We suspect that this may be the case also for other countries, hence our ambition to present our analysis while the crisis is still ongoing in order to contribute to forming a research agenda around the pandemic. In the following we will discuss three analytical points which we believe could point to a direction for theory development in crisis research.

### Filling structural holes

As should be clear by now, we see a pattern of structures emerging at different levels – structures that were established solely for the purposes of increasing the adaptive capacity toward the COVID-19, and that were all explicitly aimed at providing arenas for collaboration. What are these examples cases of? We see them as examples of "structural holes" (Burt, 2004) that needed to be filled or overlapped, with the purpose of creating or lubricating wider networks. They are examples of organized behaviour in the response to crisis, where the situation calls for a reconfiguring of both structures and tasks. This is by no means a new phenomenon. For instance, more than 50 years ago, Dynes (1970) presented a typology of organized behaviour according to whether (1) the tasks performed were regular or nonregular and (2) the post-impact structure developed to handle the tasks was new or old.

In our study, we have identified organisational solutions that can be categorised as emergent organisations, i.e. new structures formed to perform nonregular tasks: The collaboration group in the Norwegian municipality, the strategic coordination group in the Swedish municipality and the Swedish CBCO. We suspect that one will find similar structures also on the national level, although this remains a question for further research. Related to collaborative governance, the emergent organisations can be seen as stewards which help to convene and maintain collaboration (Ansell & Gash, 2012). In this

case, however, the fact that the emergent organisations have not previously existed and is, at least initially, unknown to other actors may create challenges for effective collaboration.

Moreover, studying these collaborative structures is not restricted to understanding the genesis of the structural *arenas for* collaboration. It is also a matter of studying the *practices of* collaboration. The COVID-19 pandemic provides a unique situation for building knowledge on such practices, revealing that collaborative practices can also develop significantly in the process of adapting to the slow-burning crisis. In this way, close-up studies of collaborative structures over time can inform not only ongoing and future crises but also organisation in normal circumstances by seeing the contextual conditions within which cross-sectoral collaboration takes place.

The competence and social capital in play in and around the collaborative arenas (knowledge of the organisation, a significant social network, and abilities to operate across formal and informal channels in the organisation to make things happen) has previously been described by Burt (2004) as a quality of entrepreneurs working in the "structural holes" within or between organisations. We found a specific form of knowledge employed by the group members and the group as such to fill holes where there otherwise was a lack of direct contact between people or organisational entities. The structural hole theory describes how people operating near structural holes have opportunities for innovation. This is a good description of the coordination groups we have studied; the groups and their members had their working radius very near to the structural holes that they were actually established with the purpose of filling. The structural hole perspective could offer a fresh way of both understanding the emergence of collaborative structures, and a new way of looking at the intersection between formal and informal qualities in the organisation of crisis management efforts.

## Preestablished structures vs. flexible reconfiguration – the principle of similarity

Our data in many ways challenge the axiomatic principle of similarity, stating that the organisation of crisis response efforts should be as similar as possible to the normal mode of organisation. The collaborative structures we have come across are *not* reflected in the normal mode of organisation. This calls for some reflection around the differences between normality and crisis.

The dualism of the term 'normality' and 'crisis' is deeply rooted in our life experiences and language and is also reflected both in the academic literature and governing principles for crisis management. One way of contrasting crises with normality, and why organisations and societies may have problems to manage crises is through the term *wicked problems*, described above as situations where problem structures do not match organisational structure. This implies that the switch between normality (and its corresponding organisational structures) and crisis (with its corresponding problem structure) is a sudden move from one state to another, and that the ability to deal with crises is "*largely dependent on the structures that have been developed before chaos arrives*" as is famously described by Lagadec (1993:5).

There is an obvious need for following some pre-existing structures, but this does not necessarily mean extending the structures of normality into managing the problems appearing in times of crisis. After all, within the canon of safety science the capacity of spontaneous reconfiguration from centralised to decentralised modes has been described as a key capacity to remain in control over demanding situations (La Porte & Consolini, 1991; Weick & Sutcliffe, 2007). While this view opens for organisational reconfiguration, it also rests on the position that crises have different structures than normality, and therefore require (preparation for) different organisational modes.

These perspectives seem to be contrasted by Resilience Engineering thinking (e.g. Hollnagel et al., 2006), where one of the central premises is that the mechanisms leading to crises are generally the

same as the mechanisms for coping successfully with a complex normality, namely normal variability[3]. It is when this variability of different functions give rise to *functional resonance*, that crises materialise. An implication of this is that the resources and the structures involved in crisis and normality respectively are not necessarily different. What is different is whether or not the variability give rise to functional resonance. Crisis management in both Norway and Sweden is guided by the same principle of similarity. The similarity of organization in crises and normality suggested by this principle, tacitly oppose to the description of wicked problems in the transition between normality and crisis. Rather, the similarity principle supports the view that the intensity and duration of crisis can be managed not by reconfiguring structures, but by reconfiguring priorities and adapting work forms within these structures. This is the reasoning behind the principle of collaboration that exists in the two countries, albeit with different levels of formalization; that the public authority, private enterprises or government agencies have an independent responsibility to ensure *the best possible cooperation* with relevant actors and agencies throughout the emergency management cycle. These latter perspectives on crises suggest that crises do not require qualitatively different organisational structures, but quantitatively more robust structures in order to tackle the intensity and potentially long duration of crises.

The principle of similarity, at least as it is stated in Norway and Sweden, points to a one-way relationship between organisation in normal situations and crises: The crisis organisation is to resemble the normal organisation structure. There is an obvious paradox in the principle's underlying assumption that staying close to the structures of normal organisation is the salient solution for crisis management and leadership. While the breakdown of authority structures is likely to be devastating for the ability to effectively deal with crisis, simply extending the ordinary mode of organisation as a means for dealing with extraordinary situation is not the only alternative. There is also a question of whether the normal organisation structures are similar to the ones you need in a crisis that is rarely discussed within crisis research[4]. Lagadec's quotation that formed the point of departure for this part of the discussion, lends support to both the directions involved. On the one hand, we may read him as asserting that crises require different organisational structures than normal, day-to-day tasks do, and that they may therefore not be in place when they are needed: On the other hand, we may interpret his position as stating that one will profit from other types of structures in crises that under normal conditions, but that these structures must have been developed in advance for them to be effective.

Based on our data, it can be argued that the principle of similarity is to a large extent taken as a given, without addressing the potential lack of symmetry between the organisational needs of normality vs. crisis situation, and how this is understood and incorporated into the organisational design in the first place. Instead of asking "how can we organize in crisis in a way that is similar to the normal situation", there is also another question to be asked – "How should we organize in the normal situation to be rigged for managing crisis". There is a subtle difference between seeing the principle as one of similarity compared to a more symmetrical principle of *parity*. In this respect, the study of emerging

---

[3] Variability here connotes to a complexity and cybernetical perspective and Ashby's (1956) statement that only variety can destroy variety.

[4] One subject that was much discussed in the CG was *work form*: how can work forms across the different areas in the municipality be developed to provide better support not only to crisis management, but also to improve work and innovation under normal conditions? While these discussions seem to be compatible with the core of the similarity principle, they importantly also direct attention to the fact that the established 'normal' structures may not be perfectly suitable for crisis management. And indeed, the similarity principle does not say anything about the qualities of 'normal' structures. It does not say that normal structures *will* sufficiently facilitate crisis management. What should really be read from the principle is that normal structures *should be shaped* to also work well in times of crises. This is a reading of the similarity principle that has to date not been much discussed in the research literature.

structures for collaboration in managing the COVID-19 crisis can serve as a means for reconsideration of one of the established truths of crisis management, and thus a means of theoretical development grounded in empirical observation.

## O wickedness, where art thou?

A final reflection coming out of our study has to do with the concept of "wickedness". A search on the term "wicked problems" on Google Scholar returns more than 60 000 hits. While only a portion of this voluminous literature is related to crisis research, there is an abundance of descriptions of policy problems related to societal security and crisis management, and the wickedness of the COVID-19 problem has already been described in the literature (e.g. Schiefloe, 2020).

Although there is little doubt that the transboundary, multi-level and cross-sectoral nature of the crisis ticks all the boxes in the categorization of a wicked problem, our data does *not* paint a picture of structural silos or bureaucratic infighting. In many ways, this is not surprising, since we do not study the problem in itself, but the efforts put into place to manage it. Nevertheless, with the wickedness of the problem, one would expect to find more collaboration or coordination difficulties than what characterizes our data. One could even ask – have the municipal and regional actors ever collaborated more and better? If this is the case, why is it so? We see at least two possible explanations. One is that the emerging collaborative structures are examples of "provisional solutions" increasing the individual actors' prospects of reaching an understanding about what to do (Head & Alford. 2015). When uncertainty, ambiguity and complexity is extreme, finding decisions and solutions that are consolidated among several actors may be a source of security for decision-makers who are no longer alone in their interpretations of the situation or strategies of response. Another possible explanation is that the difference between the wickedness of the problem and successfulness of response is a result of our level of analysis. The literature on wicked problems is firmly rooted in the field of policy analysis, meaning that the emphasis is on overarching structures and high-level policymakers. The further down in the political-administrative levels an actor is located, the more the tasks will be influenced by the continuous production of services, not the production of policies. Thus, our data are gathered at a level where the emphasis is on the ongoing problem solving, regardless of this occurring in spite of or because of the overarching structures.

Irrespective of the possible explanations, the emergence and effects of the collaborative structures for dealing with the COVID-19 pandemic illustrates that there is a huge difference between "mess" and "managed mess", to paraphrase Emery Roe (2013), and the messes occurring around wicked problems can be managed much more professionally than what is acknowledged by policy analysts. The COVID-19 crisis presents opportunities to study the management of mess as professional work (Barley & Kunda, 2001), as cases of collaborative governance "on the ground". This is where the wickedness of problems, policies and structures fades into the background, in favour of the study of professionals and their problem-solving practices.

## Conclusion

The COVID-19 pandemic is a "creeping crisis" where it is hard to define a clear beginning and end (Boin et al., 2020), characterized by extreme uncertainty, ambiguity and complexity, but where there is a need of urgent response on different political-administrative levels. The aim of this paper was to present early empirical insights into key collaborative functions as a way of contributing to the cumulative development of knowledge on the crisis.

Our findings point to a set of themes that are all related to emerging structures that fill holes in the preestablished structures for dealing with crises, and that have been important for being able to effectively deal with the pandemic. All the emergent structures we have identified have to do with the horizontal and vertical collaboration between the multitude of actors that are in one way or another involved in managing the crisis. This is perhaps not surprising, both since a pandemic is in its nature a transboundary, multi-level and cross-sectoral crisis, and since this is a well-known Achilles' heel in crisis management. Still, the fact that the structures emerge around collaborative challenges and not command and control issues, presents the crisis research community with an opportunity to address and reconsider some of the underlying assumptions of our field of study.

We see the themes we have described in this article as embryos of a research agenda aimed at developing new theoretical perspectives and practical improvements that are empirically grounded and internationally comparative. As argued by Wolbers et al. (2021: 385), there is a need to move beyond the study of singular cases, and increase the ability of crisis research to "harness and theorize underlying patterns and build evidence that connects across single occurrences". In particular, the pandemic presents an opportunity to study not only the micro- and meso-level arenas for collaborative governance, but also the professional practices going on inside these arenas. This has the potential for increased understanding of the structures that organisations develop before crises occur, the way these structures are adapted during crises, and the way such structures are translated into (new) organizational philosophies of normal operation.

## References

Almklov, P., & Antonsen, S. (2014). Making work invisible: New Public management and operational work in critical infrastructure sectors. Public Administration, 92(2), 477-492.

Ansell, C., & Gash, A. (2008). Collaborative Governance in Theory and Practice. Journal of Public Administration Research and Theory, 18(4), 543-571. Doi:10.1093/jopart/mum032

Ansell, C., & Gash, A. (2012). Stewards, mediators, and catalysts: Toward a model of collaborative leadership (Vol. 17).

Ansell, C., & Gash, A. (2018). Collaborative Platforms as a Governance Strategy. Journal of Public Administration Research and Theory, 28(1), 16-32. Doi:10.1093/jopart/mux030

Argyris, C., & Schön, D. A. (1996). Organizational learning II: theory, method, and practice. Reading, MA.: Addison-Wesley.

Antonsen, S., Gjøsund, G., Haavik, T. K., & Størkersen, K. (2021). Samordnet beredskapsarbeid i Trondheim kommune. Økt trygghet og redusert sårbarhet Trondheim: NTNU Social Research.

Antonsen, S., & Haavik, T. (2021). Case studies in safety research. In K. P. Gould & C. Macrae (Eds.), Inside Hazardous Technological Systems. Methodological Foundations, Challenges and Future Directions. Boca Raton: CRC Press.

Barley, S. R., & Kunda, G. (2001). Bringing work back in. Organization science, 12(1), 76-95.

Boin, A., Ekengren, M., & Rhinard, M. (2020). Hiding in Plain Sight: Conceptualizing the Creeping Crisis. Risk, Hazards & Crisis in Public Policy, 11(2), 116-138. doi:https://doi.org/10.1002/rhc3.12193

Boin, A., McConnell, A., & t'Hart, P. (2021). *Governing the Pandemic. The Politics of Navigating a Mega-Crisis*. Cham: Palgrave Macmillan.

Bryman, A. (2008). Social Research Methods (3rd ed.). Oxford University Press.

Burt, R. S. (2004). Structural holes and good ideas. American journal of sociology, 110(2), 349-399.

Christensen, T., Lægreid, P., & Rykkja, L. H. (2013). Wicked problems and the challenge of transboundary coordination: the case of emergency preparedness and crisis management in Norway. Bergen: COCOPS Working paper.

Christensen, T., Lægreid, P., & Rykkja, L. H. (2016). Organizing for Crisis Management: Building Governance Capacity and Legitimacy. Public Administration Review, 76(6), 887-897.

Di Mascio, F., Natalini, A., & Cacciatore, F. (2020). Public Administration and Creeping Crises: Insights From COVID-19 Pandemic in Italy. *The American Review of Public Administration, 50*(6-7), 621-627. doi:10.1177/0275074020941735

Dynes, R. R. (1970). Organized behavior in disaster. Lexington, MA: Heath Lexington Books.

Emerson, K., Nabatchi, T., & Balogh, S. (2012). An Integrative Framework for Collaborative Governance. Journal of Public Administration Research and Theory, 22(1), 1-29. doi:10.1093/jopart/mur011

Eriksson, K., Staupe-Delgado, R., & Holst, J. Drawing lessons from the COVID-19 pandemic: Seven obstacles to learning from public inquiries in the wake of the crisis. *Risk, Hazards & Crisis in Public Policy, n/a*(n/a). doi:https://doi.org/10.1002/rhc3.12240

Fischbacher-Smith, D., & Fischbacher-Smith, M. (2014). What Lies Beneath? The Role of Informal and Hidden Networks in the Management of Crises. Financial Accountability & Management, 30(3), 259-278. doi:https://doi.org/10.1111/faam.12038

Frykmer, T., Hassel, H., Cedergren, A., Fredholm, L., Uhr, C. & Wester, M. (2021). Forskningsstudie av arbetet i länsstyrelsernas samordningskansli som etablerats med anledning av covid19 [Research study of the county boards' coordination office that was established for covid19]. Avdelningen för Riskhantering och Samhällssäkerhet, Lunds Universitet.

Gupta, J. et al. (2010). The adaptive capacity wheel: a method to assess the inherent characteristics of institutions to enable the adaptive capacity of society. Environmental Science & Policy, 13(6), 459-471.

Head, B. W., & Alford, J. (2013). Wicked Problems: Implications for Public Policy and Management. Administration & Society, 47(6), 711-739. doi:10.1177/0095399713481601

Hollnagel, E., Woods, D. D., & Leveson, N. (2006). Resilience Engineering - Concepts and precepts. Aldershot: Ashgate.

Janssen, M., & van der Voort, H. (2020). Agile and adaptive governance in crisis response: Lessons from the COVID-19 pandemic. *International Journal of Information Management, 55*, 102180. doi:https://doi.org/10.1016/j.ijinfomgt.2020.102180

Kalleberg, A. L., Nesheim, T., & Olsen, K. M. (2009). Is participation good or bad for workers? Effects of autonomy, consultation and teamwork on stress among workers in Norway. Acta Sociologica, 52(2), 99-116.

Lagadec, P. (1993). Preventing Chaos in a Crisis: Strategies for Prevention, Control, and Damage Limitation: McGraw-Hill.

La Porte, T. R., & Consolini, P. M. (1991). Working in Practice but not in Theory. Journal of Public Administration and Theory, 1, 19-47.

Meld. St. 5 (2020-2021). Samfunnssikkerhet i en usikker verden. White paper on societal security, Ministry of Justice and Emergency Preparedness. https://www.regjeringen.no/contentassets/ba8d1c1470dd491f83c556e709b1cf06/no/pdfs/stm202020210005000dddpdfs.pdf.

Moorkamp, M., Torenvlied, R., & Kramer, E.-H. (2020). Organizational synthesis in transboundary crises: Three principles for managing centralization and coordination in the corona virus crisis response. Journal of Contingencies and Crisis Management, 28(2), 169-172. doi:https://doi.org/10.1111/1468-5973.12294

Nambisan, S. (2009). Platforms for Collaboration. Stanford Social Innovation Review, 7(3), 44-49.

Penta, S., Kendra, J., Marlowe, V., & Gill, K. (2021). A disaster by any other name?: COVID-19 and support for an All-Hazards approach. Risk, Hazards & Crisis in Public Policy, 12(3), 240-265. doi:https://doi.org/10.1002/rhc3.12213

Petridou, E., & Zahariadis, N. (2021). Staying at home or going out? Leadership response to the COVID-19 crisis in Greece and Sweden. Journal of Contingencies and Crisis Management, 29(3), 293-302. doi:https://doi.org/10.1111/1468-5973.12344

Pollock, K., & Steen, R. (2021). Total Defence Resilience: Viable or Not During COVID-19? A Comparative Study of Norway and the UK. Risk, Hazards & Crisis in Public Policy, 12(1), 73-109. doi:https://doi.org/10.1002/rhc3.12207

Rasul, G. (2020). A Framework for Improving Policy Priorities in Managing COVID-19 Challenges in Developing Countries. Frontiers in public health, 8, 589681-589681. doi:10.3389/fpubh.2020.589681

Rittel, H. W. J., & Webber, M. M. (1973). Dilemmas in a General Theory of Planning. Policy Sciences, 4, 155-169.

Rochlin, G. I. (1989). Informal organizational networking as a crisis- avoidance strategy: US naval flight operations as a case study. Organization Environment, 3(2), 159-176. doi:10.1177/108602668900300205

Roe, E. (2013). Making the Most of Mess. Reliability and Policy in Today's Management Challenges. Durham: Duke University Press.

Ruiu, M. L. (2020). Mismanagement of Covid-19: lessons learned from Italy. Journal of Risk Research, 23(7-8), 1007-1020. doi:10.1080/13669877.2020.1758755

Schiefloe, P. M. (2020). The Corona crisis: a wicked problem. Scandinavian Journal of Public Health, 49(1), 5-8. doi:10.1177/1403494820970767

Weick, K. E., & Sutcliffe, K. M. (2007). Managing the unexpected: resilient performance in an age of uncertainty. San Francisco, Calif.: Jossey-Bass.

Wolbers, J., Kuipers, S., & Boin, A. (2021). A systematic review of 20 years of crisis and disaster research: Trends and progress. Risk, Hazards & Crisis in Public Policy, 12(4), 374-392. doi:https://doi.org/10.1002/rhc3.12244

Yin, R.K. (2014). Case Study Research: design and methods. Sage, Thousand Oaks