Double Capacity Building as Response to Wicked Policy Problems

The Danish Emergency Management Reform

Dorthe Pedersen
Copenhagen Business School
dp.mpp@cbs.dk
&
Carsten Greve
Copenhagen Business School
cagr.ioa@cbs.dk

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Abstract

Transboundary challenges, risk and wicked problems have become part of a major reform agenda in public sector policy. This paper undertakes an in-depth case study of a single reform – the Danish emergency management reform in the period 2012-2017 occasioning various efforts towards efficient response, structural adjustment, an overall risk analysis framework, cross-sectoral crisis management capacities, prevention and resilience strategies. Multiple and ongoing reform initiatives stands out as a case of a public policy reform making focusing on tackling wicked problems with complex and second order strategies of building organizational, collaborative and self-governing capacity.

Instead of observing reform efforts as response strategies to a certain typology of wicked problems, we suggest that problems of reform are historical and contextual embedded configurations and that most governing strategies should be viewed as dynamic and contested, often developed in ongoing and multi-level processes of reforming. Our main argument is, that reform responses to wicked problems are most evidently characterized by a certain kind of double capacity building occurring as a duality of re-centralization and a ‘back-to-the-state’ approach on the one hand and an involvement and mobilization approach that seek to embed notions of collaborative governing and civic engagement on the other.

Applying a discursive-institutionalist approach to policy analysis and drawing on insight from network theory, governance and governmentality studies a set of key tensions in the problem configurations and institutional arrangements of the emergency management reform-complex are identified as the diagnostic impetus to consider the dynamics of doubled capacity building and implications for how to conceptualize wicked problems on central dimension as value diversity, institutional complexity and mode of risk and uncertainty.

We suggest that reform dynamics and the double capacity building centered around handling complex and wicked problems should be viewed as dynamic and layered and their development and outcomes open and complex.
1. Introduction

The main claim of this paper is that processes of public sector reforms often create double capacity building in a multi-level governance structure as response to wicked policy problems. We analyze the recent reform of the emergency management system in Denmark as an instance of such double capacity building at both central government agency level and in the local governments’ emergency services as well as in private sector organizations and civil society. We understand “double capacity building” as a duality of a ‘back-to-the-state’ approach focused on centralized regulatory capacities on the one hand and an involvement and mobilization approach that seek to build local and self-governing capacity on the other hand. Thus, double capacity building is not about delegation within a functional hierarchy, but about new dynamics of central and local governing.

The reform opens up various value perspectives in formation of problems and solutions which are formed by way of multi-actor and multi-level processes involving different political and bureaucratic design and responses. The empirical evidence for this is the policy design and institutional arrangement developed and decided upon in a recent emergency management reform in Denmark. The argument is that we can observe a certain kind of ‘doubling’ (abstraction and differentiation) of both problem configurations and institutional arrangements, which again imply certain dimension of wickedness and interdependencies in a multi-layered governance structure.

We hereby address a gap in the literature: Rather than tracing the “optimal institutional design” to wicked problems and transboundary challenges and observing reform efforts as short-term rational response to pre-defined or identified problems, our approach is different. We set out empirically to explore the way reform problems are formed including the wicked character of dominant problem configurations, their discursive construction and implications for notions of risk as well as analyzing the type of institutional complexity and mode of interdependencies in the multi-layered institutional arrangements of reform.

The paper is an in-depth case study of a single reform: the Danish emergency management reform in the period 2012-2017. It includes a dramatic, but still autonomous and locally formed institutional change, from 87 to 24 cross-municipal emergency service agencies. The case study is based on interviews and document analysis. We draw on political agreements, consultancy and evaluation reports, internal analysis, available official documentation, presentations and information from web sites, as well as two background interviews (we plan to do more interviews in the autumn of 2018).

Adopting a discursive institutional approach to policy analysis we draw on discourse analysis and governmentality studies (Dean, 1999; Foucault, 2000; 2005; Miller and Rose, 2008; Lentzos and Rose, 2009; Bacchi, 2012), as well as theories of institutional design and institutional change of multi-level governance structures in networks (Koppenjan & Klijn 2004).

We will focus on two research questions:
1. How is the problem discourse of the Danish emergency management reform being observed and formed into different sets of problem-solution configurations implicating different notions of risk?

2. How does the institutionalized multi-level governance structures change due to the institutional design in the Danish emergency management reform?

For the first question, we propose that the problem discourse and notions of risk attached to it implicate certain forms of capacity building according to different problem-solution configurations based on categories as ‘effective preparedness services that builds protection and a robust society’; ‘coordinated crisis management that builds a safe society’ and ‘co-created prevention that build a resilient society’. These configurations form different value horizons for preparedness that are to be redeemed through complex adaptive processes of relational coordination and attentiveness to emergent risk issues of concern. For the second question, we propose that multi-level governance structures are being built and developed around a variety of collaborative institutions such as ‘multi-level rescue and preparedness services’; ‘cross-sectoral cooperation on national crisis management’, ‘a resilient society’, ‘volunteer organizations’ with accompanying modes of coordination and interdependencies. We argue that both problem configurations and institutional arrangements designate dynamics of double capacity building.

The paper is structured as follows: After the introduction, a brief literature review and the theoretical framework is presented. This is followed by a short presentation of the empirical case study. The analysis proceeds after that, followed by a discussion section before the conclusion.


Since 11 September 2001, most European governments invested heavily in protecting populations and critical national infrastructure against terrorist attacks. The terrorist threat has been crucial to the restructuring of emergency preparedness in many countries from being local service emergency agencies to be still more highly specialized national task forces. Emerging risks in the 21st century are also covering wicked policy problems and transboundary challenges such as geomagnetic storms, pandemics, financial crisis, cyber-attacks, biological weapons, biosecurity and irregular migration (OECD, 2003, 2011). Many countries experienced an increased number of floods, big fires and the number of natural disasters has generally been increasing. In all, this has meant that the countries’ emergency services have to deal with and build preparedness to more comprehensive and complex threats and unknown risk than in the past. Finally, the emergency services in many countries have focused more and more on improving crisis management systems, prevention and enforcement of fire safety regulations through inspections, advice, educational programs, cooperation with new partners as well as resilience strategies and collaborative capacity building.

This section offers a short review on the literature on wicked policy problems. Scholars of public administration, public policy and public management have currently shown an increasing interest in
‘wicked issues’ that contain cognitive and normative complexity, uncertainty and divergence (Jessop, 2000; Durant and Legge, 2006; Head, 2008; Ferlie et al 2011; Head and & Alford, 2015, 2015a, Alford & Head 2017; Termeer et al. 2015).

The discourse of wicked problems emerged in the 1970s mostly as a critique of the rational-technical idea of decision making and the ‘engineering’ approach to societal matters of social planning and public policy in favour of revitalizing classic insights into complexity and notions of ambiguity (March and Olsen, 1989; Pressman and Wildavsky, 1973; Rittel and Webber, 1973). When it comes to definition, Rittel and Webber (1973) initially pointed out ten characteristics to define wicked problems i.e. as contested, unique and with no definitive solutions. Basically, wicked problems are defined as a binary concept of tame problems characterized by a clearly defined problem and a likely solution, though without forming any analytical framework for empirical observation. And for the last two decades, the wicked problem discourse has been strongly connected to the turn towards public policy network and the emergence of notions of collaborative governance, and public value management (Castells, 1996; Clarke and Stewart, 1997; Roberts, 2000; Newman, 2001; Jessop, 2000; Jessop, Brenner and Jones, 2008; Koppenjan and Klijn, 2004; Bennington and More, 2011; Torfing et al, 2012; Head and Alford, 2015, 2017; Pedersen, 2016; Geuijen et al. 2017).

Drawing on Herifetz’s (1994) proposed typology of different situations confronting managers Head (2008) and Head and Alford (2015a) offer a conceptualizing of wicked problems as a combination of the dimensions of ‘complexity’, ‘uncertainty’ and ‘value diversity’ of stakeholders involved. “Wicked problems are generally seen as associated with social pluralism (multiple interest and values of stakeholders), institutional complexity (the context of inter-organizational cooperation and multilevel governance), and scientific uncertainty (fragmentation and gabs in reliable knowledge)” (Head and Alford, 2015:713). In their recent article, Head & Alford (2017) present an additional table that focus on the degree of wickedness and the number of actors involved. This allows them to place “complex problems” in the middle of the 3x3 table, and the really wicked problems with no clear solutions, and the presence of numerous actors as “super wicked problems” (right hand corner in their table).

When it comes to solutions or response to wicked problems some scholars argue for a normative approach according to efficiency and legitimacy due to a certain rationale and degree of wickedness of the problem of concern, while others argue for a pragmatic approach of dynamic contestation, trial and error. Due to the more finely grained typology of problems Head and Alford argue that by implication there must be different kind of tailored response to type of wickedness (Head and Alford 2015a, Alford & Head 2017). Many point to collaborative governance and a network model of public management as the most relevant policy response to different kind of wicked problems. Ferlie et al. (2015) address policy networks as a nascent solution to wicked problems and argue for a shift from vertical management to lateral leadership. Addressing wicked problems in a global context has also preoccupied scholars, who investigate how public value theory might help to understand and guide an effective and just response to global wicked problems by suggesting a set of multi-dimensional criteria for evaluating value creation as well as an institutional fit of collaborative innovation structures in which multiple strategic actors can learn and adopt their combined efforts (Geuijen et al. 2017). Weber & Khademian (2008) also stress the importance of collaboration and they point out managers as ‘collaborative
capacity builders’, aimed at ‘building long-term collaborative problem-solving capacity’ (p. 334). Termeer et al. (2015) go further and discuss four governance capabilities: reflexivity, resilience, responsiveness and, revitalization as the most relevant implications. Others talk of ‘boundary spanners’ as mechanisms essential for an effective transboundary response (Williams, 2002; Ansell, Boin and Keller, 2010) in order to explore skills and competencies aimed at managing inter-organizational relationships and ‘building inter-organizational capacity’ in the face of wicked issues.

With regard to emergency management in particular, Boin and Lodge (2016) point to the fact that public administration research in general is missing out on core issues of transboundary challenges concerning risk and argue that the time has come to incorporate insights from crisis and disaster management into the field of public administration. They present a set of important key issues for further research in the face of wicked problems such as terrorism, refugee crisis, climate change and unknown new threats agents, and they raise urgent questions regarding the political and administrative feasibility of governing these particular risk. Reflecting the turn toward risk as ‘the unknown-unknowns’ they focus on complex questions of how to design national and international institutions for building transboundary crisis management capacities. Especially, the challenges of building resilience by both establishing formal contingency management structures and at the same time developing critical capacities as responsiveness, adaptability and improvisation is addressed as a key tension for the role of public administration (Boin and Lodge 2016: 293-94).

The question of organizing for crisis management and governance capacity and legitimacy has also recently been addressed by Christensen, Lægreid and Rykkja (2016). They provide a good overview of the field in public administration, and mention that there is no single right way to response to a crisis. Instead they believe researchers should focus on matching governance capacity and legitimacy in any crisis management system. While their approach follows some of the same lines that Boin and Lodge have identified, their approach is focused on capacity building and the ways that governments in a crisis situation is viewed as legitimate and trustworthy. While the approach is inspirational, we are more focused on understanding the discursive construction of problems of reform and the changes of governance relations between different administrative levels and broader governance structures by way of an inductive empirical investigation, whereas we are less focused on the instrumental or normative question of whether a robust and well-functioning crisis management system is, or ought to be, within reach for current governments.

3. Analytical Design

Existing literature within public administration on disaster and crisis management seems to focus on optimal organizational design, or a more context-based approach that combines structural and cultural explanations of adequate, effective and legitimate reform efforts and response strategies to identified wicked problems.

Our approach is different. We set out to open up the question of both problem discourse and institutional design for empirical investigation. So the aim here is to present another understanding
based on a discursive-institutional approach to policy analysis, combining discourse analysis and institutional analysis of multi-level governance network arrangements (Schmidt, 2015).

Instead of unfolding a normative and conceptual critique and suggesting alternative binaries of policy problems and managerial solutions our aim is rather to open up the categories, rationalities and interrelations for empirical investigation. The aim is explore the epistemological formation of wicked problems by way of a policy analysis that focus at a specific reform framework, its discursive problem configurations and institutional arrangements. The point of the discourse analysis is not to look for the one correct response to an issue but to examine how it is questioned, analyzed, classified and regulated in a specific policy context (Bacchi, 2012). Through this analysis, we purpose to trace the problem discourse by way of distinctive problem-solution configurations in the emergency management reform and the way cross-boundary issues and wicked problems as situated in certain institutional arrangements of reform are addressed and observed in the gaze of these configurations. We focus on the discursive formation of reform problems, their value perspectives and notions of risk and, implications for form of capacity building.

Then we look at the institutionalization process and how multi-level governance institutional arrangements are being developed as the reform unfolds. This consists of a dynamic development of both central governance mechanisms and self-governing capabilities. The changed institutional design implicate certain regulatory and governing principles corresponding to a certain set of (wicked) problem-solution configurations by building double governing capacities. We here adopt the perspective of Koppenjan & Klijn (2004), when they analyze how to manage networks and strategies for institutional design. As they state:

“Policy games around wicked problems do not proceed in a vacuum, but in an institutional context where lasting rules, interaction patterns and stable patterns of perceptions can influence the interactions between the involved parties. Attempts at managing uncertainty can stretch into the institutional aspects of networks. We call this institutional design: efforts to adapt existing institutional provisions to new circumstances or to develop new provisions” (Koppenjan & Klin 2004: 212).

Our approach is based on three claims:

1) Wicked problems can be observed as historical social constructs of problem-solution configurations implying different problematizations of risk and emergency issues of concern
2) Policy reforms can be observed as institutional designs, forming complex and multi-level governance structures of interdependent collaborative units and actors
3) Double capacity building occurs when certain problem-solutions configurations presupposes certain governing capacities and when a certain institutional design install certain interdependencies in a multi-level governance structure
3.1. Analytical Approach and Method

In order to open up and trace the notions of wicked problems in the reform discourses we apply a Foucauldian ‘problematization analysis’ (Foucault, 1985; Thaning Sørensen et al., 2008; Rabinow 2011; Bacchi, 2012). Emphasizing the construction of problematizations means we are tracing how problem-solution-configurations are discursively formed instead of seeing them as representations of a pre-given object and incidences existing out there. A problematization can be defined as “....the set of discursive or non-discursive practices that makes something enter into play of true and false, and constitutes it as an object of thought” (whether under the form of moral reflection, scientific knowledge, political analysis etc.) (Foucault, 1985: 456f). The pivotal point here is that we are focusing on how things, actions, phenomenon and processes are discursively constructed and observed as an emergency management
problem and which kind of value prepositions are attached to it. You can say that a given problematization is an observation and in that respect ‘an answer’ to a concrete in the world existing or emerging situation observed in a certain perspective (Thaning Sørensen et al., 2008:233). Building on the lead from Foucault and the concept of problematization we are inspired by Bacchi, who has developed an approach for policy analysis that focuses on problematization by using public policies and proposals as starting point to observe ‘the problematizations through which we are governed’ (Bacchi, 2012: 4). This approach rests on the basis premise that the discursive forming of objects and strategies constitute ‘the problem’ and, hereby make it possible to investigate how certain problem-solution configurations are formed. Our point of observation will be the name given to specified objects and the implicated notion of risk in observations and problematizations that we can identify and code from the reform documents and organizational self-descriptions of emergency management agencies and services.

In addressing the institutional design of reform we apply the framework developed by Koppenjan & Klijn (2004) that focus on managing a network through institutional design. Koppenjan & Klijn looks at three interrelated activities: managing content, managing the policy game, and managing institutions and creating institutional design. Since the two first issues are covered in what we have presented above in the section on discourse-analysis, the rest of this section will focus on managing strategies through change in institutional design. To Koppenjan & Klijn, institutional design “involves changing the institutional characteristics of a network; the interrelation patterns and the institutional rules that support these relations, the (patterns of) opinions that guide strategic behavior within a network, and the institutional arrangements that shape the relation between parties”. Like it is common in many theories on institutional change, including the historical-institutional perspective of Pierson (2004) or Streeck & Thelen (2005), Koppenjan & Klijn assume that institutional change is difficult because institutions are sticky, but it is not impossible because institutions are seldom complete in their composition. For the structural part of changing formal institutional arrangements, which we have in focus here, Koppejan & Klijn identify three main strategies: (1) Changing network rules focused on network composition: Which actors make up the network organizationally? (2) Changing network rules focused on network outputs: Changing the reward and evaluation rules and focusing on what the output (or outcome) should be. (3) Changing network rules focused on network interactions: What guides the way the actors can interact, and can the rules for that allow that other actors can be suggested so the network gets expanded? Koppenjan & Klijn also mention reframing as a strategy, often connected to launcing of a major plan. In the following descriptive analysis we will focus on both the institutional design of network composition, rules on output and outcome and rules of network interaction.

4. The Danish Emergency Management Reform - Framework

The Danish emergency reform (structural part) was launched in September 2015 and went into effect 1. January 2016. after a three year long process of budget analysis, consultancy reports and a Structural Committee that began in 2012. The initial ideas were formulated in a report made for the Ministry of Defense in 2014. (see also appendix A for a time table of the process)
The layered and multiple reform complex we are focusing on here began in 2012 with a political agreement and the establishment of a Structure Committee charged with looking into the organization of the emergency management area. Of course, discussions and developments have taken place before that time, but for this present paper we limit our analysis to the reform process that began in 2012.

2012 first witnessed a budget analysis for seeking efficiency gains in the emergency services. The budget analysis recommended that an analysis of further structural changes was needed. This budget analysis was carried out by Deloitte, a consultancy firm on behalf of the Ministry of Defense and followed by a political agreement between the main political parties about the future of the emergency management service (Regeringen et. al. 2012: Aftale om redningsberedskabet i 2013-2014). The agreement from 12 November 2012 stated that emergency management was an important task for Denmark, and that the quality of emergency service should be upheld at a high standard, but that the emergency management was ripe for improving its effectiveness. The main argument for this was “in light of the economic situation in the country after the global financial crisis”. The political parties agreed to establish a Structure Committee that should further examine the emergency management sector.

2013 saw the establishment of the Structure Committee. The Structure Committee should examine the propositions made in the Deloitte budget analysis and make recommendations about a future structure for the Danish emergency sector.

2014 the Structure Committee issued its report (on 24 August 2014). The focus was on the organization of the emergency management system. As the report assembled many of the key arguments about a reformed emergency management system, we elaborate a little on the report below.

The report stated that the emergency services organization of 87 small independent units (municipal fire and rescue services) constituted a barrier to the fully exploitation of the emergency services potential and therefore the main obstacle for making further efficiency gains. The arguments were that bigger units would be more sustainable and effective in the future. The report called for a structural change of the emergency services, so that future tasks and challenges could be addressed with the highest possible efficiency, quality and coordinated action, which required a comprehensive reform of the emergency services. The Structural Committee's recommendation was based on creating a number of local, but larger and more robust municipal fire and rescue services. The actual number ended up being a reduction of 87 local emergency organizations to 24 local emergency organizations. This multi-level emergency management organization emanating from both municipal and state authorities should be coordinated based on the regulatory principles of a shared national risk picture, free dispositioning to nearest relevant unit, lowest possible response time, shared evidence-base, and a clear structure of command. The Structural Committee believed that these principles allows for a more efficient organizational design with larger and more professionalized emergency agencies as well as better utilization of the overall emergency services capabilities based on collaborative working across units and levels of government.
It was important to the Structural Committee to ensure that the emergency projects undertaken earlier also will be solved in the future, and that the emergency services continue to have proper deployment capacity, response and resilience both for daily and for the rare and major events, accidents and disaster. Furthermore, it is stated as crucial for the Structural Committee to focus on the emergency services' preventive work, including building robustness and resilience by way of involvement of companies, citizens and volunteers, the strengthening of citizen-oriented behavior-prevention, and co-creation of greater safeness and security.

2014 then witnessed a political agreement on structural rationalization and budget cuts between the government and Local Government Denmark, the peak association for all local governments in Denmark. As a part of the economic agreement for 2015 (On 3 June 2014), an agreement was made to reduce the number of emergency organizations from 87 organizations to around 20 local emergency organizations by 1 January 2016. The local governments were scheduled to do the mergers voluntarily. For the emergency sector, savings through cuts in block grants were agreed between the government and Local Government Denmark of 50 million DKK and 75 million DKK in 2016 and going forward. The government and Local Government Denmark also had a mutual understanding that further 100 million DKK could be saved. One of the key agreements was the new structure would only permit a local government administrative level with around 20 emergency organizations and one central government agency Danish Emergency Management Agency (DEMA) in Copenhagen.

2016 saw the mergers of local emergency organizations fulfilled in the first round as 24 new local emergency organizations were formed and ready on 1 January. A map of the current Danish emergency landscape shows their place in the country. Several local governments and emergency organization have been reacting to the mergers, and warned about dire consequences for the quality of the service.¹

2016 also witnessed a new political intervention as opposition to the cuts and savings emerged. One of the critical points was if DEMA’s sub-units should be scrapped so there only were the now 24 local emergencies and DEMA as a government agency. A new political agreement on 17 March 2016 confirmed the opposition to the original plan and DEMA’s six emergency districts were kept as well as other DEMA sub-organizations such as two educational facilities. The original organizational design of only a local government level focused on operations and a national agency focused on planning and

¹ If you go to www.beredskabsinfo.dk that collects information about emergency organizations you can find many stories and evidence about the reactions of local emergency organizations. This means that there is a strong strategic game going on about who is going to merge with whom, why, when and how. 2017 has continued to see a number of strategic actions from the local governments concerning the new structure. Some local governments have gained control over local emergencies. Other local governments have decided to opt out again of the emergency districts they had first joined (Elsinore being an example of that).
policy were off the table again. The result was the new structure which has more of multi-governance design to it.

2016 saw the National Prevention Strategy being published. This report focuses on building resilience and putting citizens first by educating and involving the population, private and civil organizations in order to make sure that so few people as possible are hit by accidents and disasters as well as to lower the risk of accidents.

2016 saw a National Crisis Management Plan based on general principles informing a multi-level and cross-sectoral collaboration with reference to the national security commission (sector responsibility, largest possible similarity, subsidiary, cooperation and high precaution) in order to form cross-sectoral coordination and build crisis management strategies with allusion to the national risk assessment framework.

2017 also saw the National Risk Assessment from 2013 being updated and 13 current risks described. A new national forum for prevention of accidents was established in April 2017. The new national forum consists of Danish Emergency Management Agency, Local Government Denmark, Danish Red Cross, The National Health Agency, The Social Security Agency, Emergency Association, Transport Agency, the National Police, The Danish police intelligence agency (PET) and many other organizations (DEMA 2017c).

Core policies in reform complex:

• Multi-level agency - in basic and secondary emergency response is seen as the most appropriate, flexible and effective institutional design based on a certain division of labor and encouragement for collaborative working: Not everyone is able to handle everything in the future Emergency management!

• An ‘overall risk assessment framework’ - the future of threats and risk must be analyzed and response developed that can handle the risks facing modern society. It must be able to handle both frequently occurring events known as unforeseen, larger and longer-lasting accidents. A national risk assessment is issued.

• Flexible and free disposition – by the nearest appropriate emergency services units sent by the office to meet as low response time as possible and thus greater security. This ensures an effective rescue.

• Standardized and larger units - which creates economies of scale, efficiency and consistent service to citizens, while also allowing for building collaborative capacity on certain risk issues.

• Outcome criteria: Response time - not departure time - is crucial for the security and quality that community and citizens experience, when short and long term emergency situations occur.

• Unambiguous authority and responsibility - is crucial to also future emergency management services, which have to be dimensioned and designed so that it can lift it’s socially critical role in crisis situations.
• **Cross-sectoral coordination of crisis management** based on national risk assessment framework developing crisis management planning efforts across sectors, government departments, agencies and other stakeholders

• **A national prevention and resilience strategy** – a whole strategy has been formulated on national prevention and resilience for emergency management in 2017 and a new national forum for prevention and accidents have been established in 2017.

2017 also saw the first official evaluation report of the reform process. The report was produced by DEMA in association with local government emergency organizations and was published in February 2017. The status was that the new 24 emergency organizations have been in operation since 1 January 2016, but not all have produced efficiency savings. However, the evaluation report finds that the quality of the emergency sector has been upheld, and that the key KPI of the response time has been kept to the same level as before the reform. The evaluation report points at some recommendations for example that the risk-based dimension of emergency is being further developed and tasks are being planned with reference to the national risk assessment and, that a national strategy for evidence and knowledge must be developed and hereby to build new governing capacity in the state agency, DEMA.

5. **Analysis: Discourse and institutional design of multi-governance structures**

In this section we first analyze the problem configuration and then turn to the institutional design that came out that process.

**Problem configuration in the emergency management reform**

The socio-political salience of security, social safety and societal resilience stand out as the dominant categories addressing contemporary issue of preparedness in the Emergency management reform. By way of a discursive analytical reading of central reform documents from 2012 – 2017 it is possible to identify three constructions of problems in the policy design of the emergency management reform. Each of them seem to be formed around a distinct problem-solution configuration within a dominant discourse on preparedness offering certain value perspectives and notions of risk and capacity, which again seem to be deriving from certain contemporary governing rationalities in advanced liberal democracies (Foucault 2000; Miller and Rose, 2008; Lentzos and Rose, 2009).

_The first and initial problem of reform is formulated as an objective to form “an effective, focused and robust system of preparedness”_ (Agreement on emergency management development 2012-2013, Ministry of Defense, 2012; Structural Committee Report, 2014: 84). The problematization focuses on building an optimal and efficient preparedness system capable of effective and coordinated remedial action against different level and types of risk occurrences and accidents within restricted financial resources (due to planned comprehensive budget cuts of both state and municipal rescue and fire services). Solutions are centered around building robust and effective preparedness capacity due to a set of emergency management principles of risk based flexible dimensioning in a multi-level agency.
system of fire and rescue services, standardized bigger units, efficiency of costs, fixed measures of time of response, exclusively responsibility by single public authority and a clear line of command in collaborative efforts (Structural Committee Report, 2014: 84).

The notion of risk is here perceived as known types of risk, which is - if not calculable - then possible to define within a typology of different known smaller or bigger accidents and occurrences to be matched accordingly to level of response and remedial action delivered within a given space of institutions. Thus, capacity means bigger units with sufficient professional capacity, organizational, managerial and operational resources to match level of response and remedial action.

The second problem of reform is about developing and improving a coordinated national crisis management system in the face of new transboundary threats and disasters such as critical infrastructure failures, large scale industrial break downs, oil spill, impact of climate change as hurricanes and floods, pandemics, cyber and terrorist attacks, irregularly migration etc. (DEMA 2015 Crisis Management in Denmark; DEMA, 2017a National Risk Assessment) The problematization focus on building crisis and disaster management capacity i.e. cross sectoral coordinating bodies, clear structure of command, evidence based risk analysis and a structured national risk framework picture to inform an “in-the whole of contingency planning” (DEMA 2017a:22-25/evalueringsrapport). Solutions are focusing on forming a ‘National Crisis Management Plan’ due to general principles (sector responsibility, largest possible similarity, subsidiarity, cooperation and high precaution) in order to form cross-sectoral coordination and build crisis management strategies with allusion to ‘the national risk framework picture’. The national risk picture is based on analysis from different national and international science and knowledge institutions (On climate, terror, biometrics and other risk areas) and pointing out and listing certain national ‘risk objects’ (i.e. critical infrastructure, cultural values, risk companies etc.) ‘types of disasters’ (i.e. hurricanes, floods, highly virulent diseases, nuclear accidents, cyber-attacks etc. (DEMA 2017a). National Risk Assessment). DEMA supports local authorities and companies in developing crisis management capabilities by way of advice and feedback on local preparedness planning and dissemination of statistics on emergency response and hereby creating more consistency in planning efforts across sectors, government departments, agencies and other preparedness stakeholders (www.brs.dk/eng/pages/dema.aspx)

The notion of risk as observed in the guiding advice for the use of the national risk picture is, that risks are contextual and ‘known unknowns’ incidences and threats (DEMA 2017a). The unforeseen and wicked character of possible threats create an open, but still conditioned contingency, which allows for a greater complexity for risk issues of concern being taken into account in local risk scenarios, wherefrom variations of profiles can be extracted, while maintaining attentiveness to patterns of threats and disasters. Thus, capacity means knowledge based risk analysis, and efforts of gaining evidence for emergent threats by collecting data and forming statistics as well as identifying generic capacities and setting up task forces of crisis management and communication.

The third problem of reform is concerning prevention by building a resilient society. The problematization focuses on an increased societal vulnerability, rapid shifts and instability and the challenge of forming resilience. In a newly launched national strategy of prevention, the rationale is that we cannot avoid
new threats, disasters and future catastrophic events. Due to the increase of uncertainty and instability, we lack fixed criteria for risk scenarios to be rendered in to probabilities and systematic response strategies. The solution is focused on building enhanced societal resilience by way of greater risk awareness, helpfulness and self-reliance in the population before, under and after serious accidents and disasters (DEMA 2016a). “The challenges we face now and in the future are getting still more complex (climate change, irregular migration, terror attacks etc.). Therefore there is a need for a greater crosscutting focus on the vulnerability of society”, the argument is (DEMA 2016a:5). Citizens’ presence, helpfulness and self-interest are seen as resources that not only need to be protected but indeed to be mobilized in order to strengthen the prevention towards transboundary disasters and unforeseen accidents. The Danish populations risk perception and awareness as well as the Danish public’s general behavior and emergency preparedness during major crisis and accidents are assessed, and ‘a population educational program in prevention’ is formed, parallel to dissemination of series of campaign and information material for schools and companies (DEMA 2016a: ‘The Danes’ risk perception of major accidents and disasters’). Communities, local groups, volunteers and single citizens are seen as ‘co-creators’ of their own safety and security, and they need to be involved in co-creation of societal prevention. For example digitalization with the citizen in the center accelerate and improve direct and tailored communication in crisis situations and enhance citizens and organizations capabilities for preparing, adapting and coping with critical events, it is argued (DEMA 2016a: 13).

Here the notion of risk seems to be transformed to a problem of resilience. Instead of observing risk as present, calculable or contingent probabilities (due to risk analysis and risk profiles), risk is observed as a question of uncertain and multiple potential futures – the ‘unknown-unknowns’. The challenge of risk is seen as the uncertainty of transboundary and intertwined, potential and undesirable events, which forms an open contingency that is countered by a preparedness strategy of building resilience at all levels of society. Capacity building becomes a question of mobilization and ‘responsibilization’ of citizens, organizations and communities, who become co-creators of prevention and resilience by way of making risk awareness and preparedness a part of their mind set their attentiveness, daily routines and practices.

These three prevailing problem-solution configurations in the emergency management reform are all formed within a contemporary preparedness discourse of social security. Nevertheless, the three configurations also show varied perspectives and inner tensions in the policy design of reform. As shown above the notion of preparedness to risk is doubled, from fixed criteria of judging and calculating known threats and risk to a rather complex and contested concern that involves not only abstractions of different analyzed risk patterns, probabilities and extracted scenarios, but also feelings and beliefs as confidence and freedom of doubt from anxiety and insecurity. You can also say that preparedness becomes an unconditioned and wide category, which can be claimed from perspectives and, it becomes possible to attribute public value propositions of safety within rather different contexts and communications (Pedersen, 2016: 116). Preparedness to risk is observed both as a public purpose, regulated by law, a professional public task (as traditionally defined by service producers and professionals) as ‘a continuously contested common concern’ (Bennington 2011; Pedersen, 2016). As Lentzos and Rose perceptively, point out this doubling of value perspectives, can also be observed as a
shift of rationale of security from risk toward uncertainty and resilience, paradoxically, implying that: “... the need to govern security through insecurity, by using and indeed intensifying subjective state of doubt, anxiety, apprehension and the like, with the aim of making individuals responsible for key aspects of security, that is to say, by ensuring the vigilance, preparedness and pre-emption required to secure security” (Lentzos and Rose, 2009: 235).

Institutional design of a multi-level governance structure

This section aims at identifying the institutional design changes that imply a new set of multi-level governance network structures, following Koppenjan & Klijn (2004).

The first aspect concerns the institutional design related to a robust system of preparedness. The design put forward by the Structural Committee was a multi-level emergency management organization emanating from both municipal and state authorities that should be coordinated based on the regulatory principles of a shared national risk picture, free dispositioning to nearest relevant unit, lowest possible response time, shared evidence-base, and a clear structure of command. Capacity building is focused on establishing bigger units with sufficient professional knowledge, organizational, managerial and operational resources (i.e. required personnel and equipment at disposal) to secure delivery of effective response and adequate level and quality of rescue and remedial action (Structural Committee Report, 2014; DEMA, 2017a: 42-44/evalueringsrapport). The reform process introduced formal structural changes to the Danish emergency management system. The key was the reduction of local emergency organizations from 87 to 24 through a process that replicated a process made in the Structural Reform of local governments 10 years earlier in 2007. The new organizational design was supposed to have limited also the six regional districts connected to the Danish Emergency Management Agency and only consisted of a national planning and policy agency and the 24 local emergency organizations. That plan failed to a certain extent because of political interference due to opposition to remove the regional districts run by the national agency. The organizational result is therefore a structure which resembles a multi-governance system where the different administrative levels have to work together and engage in concerted actions. Koppenjan & Klijn (2004: chp. 10. and p. 250) refer to this strategy as “changing network rules focused on network composition” and also “reframing through the launching of major plans” because the whole emergency reform can be said to be a major plan.

The second aspect concerns the development of a national crisis management system: Both public emergency management agencies and private organization and companies are recommended to take precaution and build up system of crisis management and establishing formal contingency planning structures. All Danish authorities are required to plan for maintaining their most critical functions in event of major accidents and crisis. The role of the national agency, DEMA is to create more consistency in the planning efforts across sectors, government and agencies and other emergency preparedness’ stakeholders by supporting authorities and companies in developing crisis management capabilities, consults on preparedness planning, facilitate and organize exercises; collect statistics on emergency response. Thus, the governing capacity build up in the national agency is focused on developing risk
analysis, producing knowledge on new tendencies and gaining evidence for emergent threats by collecting data and forming statistics on patterns of occurrences, as well as identifying generic capacities and set up task forces of crisis management and crisis communication that can be applied to a complex picture of possible threats and crisis. Knowledge based risk analysis and reformed organizational practices are to make accidents and disasters less likely or less harming.

The reform introduces a number of new coordination institutions that will make the emergency management system hopefully perform better in the future. A number of these coordination institutions were already in place, but some of them are new. One coordination institution is the it-system called ODIN with evidence and knowledge about emergency management. This coordination institution inserts important governing capacity and is being maintained by the Danish Emergency Management Agency and so gives them a pivotal role in national emergency planning. A second type of coordination institution is the new national strategies that inform the whole professional emergency community about challenges and tasks. One strategy document – the National Risk Assessment – first appeared in 2013 and was updated in 2017. Another strategy document is the National Prevention Strategy which was published in 2017. These strategies act as coordination institutions for all the administrative levels involved in emergency management. Added to that is the new national forum for prevention of accidents that was announced in April 2017 (DEMA 2017d). All these coordination institutions rely of course on other well-proven institutions such as a national emergency plan and the emergency law (beredskabsloven). Koppenjan & Klijn (2004: chp. 10 and p. 250) refer to strategy as “changing network rules focused on network outputs” and also “reframing though narratives” and “reframing through the use of focusing events” as pursued by lead organizations when building the multiple institutional arrangements of the emergency management system to improve preparedness.

The third aspect of institutional design concern building an enhanced societal resilience. The national prevention strategy launched in 2016 is focused on education of population and new digitalized technologies to build greater risk-awareness and self-reliance by efforts to forester better involvement of volunteers and to make citizens, private organizations and communities co-creators of prevention and resilience. Governing capacity becomes a question of mobilizing citizens and communities self-governing capacities derived by individual and shared beliefs and anxiety towards future unknowns or you can say that risk becomes the territory of everyday life. Instead of merely being protected and rescued by public emergency services, citizens, communities and private organizations and companies need to be resilient and make risk awareness and preparedness a part of their mind set and attentiveness, daily routines and practices. Koppenjan & Klijn (2004: chp 10; and p. 250) refer to this strategy as “changing network rules focused on network interactions”. The type of actors in the network is expanded to embrace citizens and community organizations as well. And central efforts of governing societal safety become increasingly dependent on the self-governing capacity of civil and private actors.

Governing capacities of social security and preparedness is both seen as a capacity of regulating, planning, coordinating and delivering public emergency services within a multi-level preparedness system, as well as the deliberate involvement, responsibilization and mobilization of autonomous stakeholders, organizations, companies, communities and individual citizens. Multi-level governance and governing of self-governing and autonomous entities become a prevailing governing principle of
security and preparedness. This means more complexity regarding multiple level governance and an increased number of stakeholders, and indeed also in regard to the governmentalities and technologies of governing multi quasi-autonomous agencies, private organizations, communities and citizens (Dean, 1999; Miller and Rose, 2008).

The table below summarizes the way the coordination mechanisms and interdependencies work in three overlapping institutional arrangements.

### Table 2. Double Capacity Building Results

<table>
<thead>
<tr>
<th>Policy problem</th>
<th>Discourse</th>
<th>Institutional design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forming an efficient and robust system of preparedness</td>
<td>New emergency management principles of risk-based flexible dimensioning</td>
<td>Changing network rules focused on network composition: new merged local units in a multi-level agency structure to coordinate remedial action</td>
</tr>
<tr>
<td>Developing a coordinated national crisis management system</td>
<td>Building a safe society by designing and improving ‘in the whole of contingency planning’</td>
<td>Changing network rules focused on network outputs: reframing through launch of national management plan and ‘risk picture framework’ for collaborative efforts</td>
</tr>
<tr>
<td>Developing a resilient society</td>
<td>Building enhanced societal resilience by way of greater risk awareness, helpfulness and self-reliance in the population</td>
<td>Changing network rules focused on network interactions: expanding network interactions with citizens and community groups in patterns of co-creation</td>
</tr>
</tbody>
</table>

### 6. Discussion

Our discussion will here focus on the question of integration between the different analyses: The interplay of problem configurations and institutional design matters for the form of capacity building in the process of ongoing reform making.

First, the emergency management reform opens up a number of new problem configurations to which many actors are involved in defining, formulating and implementing what emergency management is about or should consist of. Some common institutions, a national risk assessment, a national prevention plan, coordination bodies like a national forum for prevention of accidents may institutionally stabilize
and sanction the constructed problems, but also open for an ongoing discursive struggle of how to approach new governing rationalities, subjectivities and objects of risk and safety.

Second, the emergency management reform is creating a new institutional design for the emergency management that is much more complex than before. Whereas the previous system had a clear division of labour between the central DEMA agency, the regional districts and the 87 local emergency districts, the new structure were supposed to give more power to the merged 24 districts, but since the regional level was kept instead of being abolished, the structure remain complex, and now with 24 districts who may seek greater responsibility and have greater power.

Third, the policy and the institutional design of reform showing three distinctive problem configurations and a complex and multi-level governance structure opens up questions of how these strategies and capacities are played out in the intersection of central and local services, public, private and civil stakeholders. If the reform will work and the quality of emergency management will be kept and developed will in part be determined by the strategic reactions by local emergency and other stakeholders. A next step in the research process will therefore be to collect empirical evidence about their response, ongoing discursive practices and network interactions. Interview data with representatives from selected cases from the 24 emergency organizations and other stakeholders will be valuable to get.

7. Conclusion

Much existing literature focuses on finding the proper or suitable organizational design to wicked problems in crisis management and sees reform as short-term rational response to identified problems. Our approach has been different. We have analyzed how the discourse and the institutional design of a multi-level governance network have developed in the emergency management reform in Denmark. We have studied the period 2012-2017 where the reform episode took place, and we have used primarily documents as data and supplemented them with two interviews with key informants.

Our point of departure was that configurations of problems in reform imply certain dimensions of wickedness due to notions of risk, that institutional design of network composition and rules of network interactions imply certain mode of institutional complexity and interdependencies and, finally that the interplay of problem configurations and institutional design matters for the form of double capacity building.

Double capacity building occurs when problem-solutions configurations presuppose governing capacities and when an institutional design installs interdependencies in a multi-level governance structure. The three problem configurations and the corresponding and layered institutional design identified in the above analysis show both an immense abstraction of problem constructed (from preparedness to resilience) and increased interdependencies in a both multi-level and multi-actor network governance structure. These two characteristics in the reform response to problems of emergency management form a complex and dynamic form of governance that we have chosen to call...
'double capacity building'. Instead of a simple hierarchy or a functional organizational form in which authority and governing power are delegated, centralized or decentralized, we are here witness to different modes of governing of self-governing. This is evident when for example coordinated remedial actions depends on the organizational capacity in bigger local emergency management services; when a national crisis management plan are based on cross-sectoral collaborative capacity and least but not last, when prevention and resilience rest on the self-awareness and self-governing of private and civil actors. The dynamics of central coordination capacity and local self-governing capacity becomes the critical and pivotal point of reform success.

Based on our empirical observations we find that key-dimensions of wicked problems and institutional response strategies (design) can be characterized by a certain gap in space or what we could call a general problem of distance at both an object a social and a time dimension. Focusing on these three dimensions we are adding new insights to the definition and categorizations suggested by Head and Alford (2015), who are characterizing wicked problems by value diversity, institutional complexity and uncertainty. Instead of viewing these dimensions as definitions of objects out there within a realistic paradigm we are focused on which traits can be identified in the generalized form of problem- construction by means of extrapolating our empirical findings.

On the object-dimension we will point to not only value diversity, but to the very form of value. Due to all three value horizons for preparedness (i.e. ‘a safe’ and resilient society’) identified above as informing three different problem-configurations value becomes an abstract and open contingent category, that cannot be defined by one logic or value perspective, but must be defined dialectically within a range of perspectives brought up in discursive practices of translating, varying out competing values, logics and forms of knowledge suitable for coping with complex and unspecified emergency issues of concern. Paradoxically, the different images of value must be observed and formed from a particular position, within a certain logic and order of value. The wickedness emanates from a tension of universality and particularity, you could argue.

On the social dimension we will point to not only the institutional complexity of multiple interdependent actors in a multi-level governance network structure, but also that increased interdependencies between central, local, public, private and civil actors implicate a certain doubling of authority and autonomy. By way of resolving of functional organizational structures (i.e. the administrative hierarchy) it becomes possible to make up space for networked interactions of different stakeholders that serve both as autonomous and interested subjects and as constructed ‘publics’ and images of a self-governing citizens and communities called upon by central governing agencies in order to build safety and resilience by way of collaborative efforts and co-creation. Paradoxically, ongoing interactions are formed around a more fluent and comprehensive notion of public authority and responsibility, which has to be continually re-established since it is not linked to one single and stable institutional order, but diverse and cross-sectoral orders. The wickedness derive from a tension or a dynamic of governing and self-governing, it could be concluded.

On the time-dimension we will point not only to gaps in reliable knowledge i.e. on unknown risk, but to uncertainty deriving from the open contingency that characterize both problematizations and
responses, when for example risk is observed as a question of uncertain and multiple potential futures and response depends on the mobilization of citizens, organizations and communities risk awareness. Agency becomes a question of not just reliable knowledge, but also on realizing the potential capacities of other stakeholders. Paradoxically, agency are formed as a temporal organized project dependent on the engagement of different identities, perspectives and capacities of judging and acting based on different form of knowledge, arguments and logics. Uncertainty becomes a tense and always unresolved gap of potentiality and performance, we will add.

In this sense the form of wickedness to risk problems must be seen as a certain doubling of risk in all three key dimensions, and their specificity must be observed in concrete empirical instances of reform making when problematizations and response strategies are being situated in a multi-level, multi-actor, flexible and collaborative governance structure.
References


**Empirical data**


Danish Emergency Management Agency (2016b): Henning Thiesens tale på Danske Beredskabers årsmøde 24. august 2016. [http://brs.dk/omstyrelen/presse/nyheder/Documents/2016/August/HHT%20tale%20ved%20DB%20%C3%A5rm%C3%B8de%202016.pdf](http://brs.dk/omstyrelen/presse/nyheder/Documents/2016/August/HHT%20tale%20ved%20DB%20%C3%A5rm%C3%B8de%202016.pdf)


Danish Emergency Management Agency (2017c): Årsrapport 2016 [Annual report]


Appendix A: Timeline for the reform process

2012:

Budget analysis from Deloitte on behalf the Ministry of Defense finds that emergency management in Denmark can become more efficient and effective and that economic savings for the state is possible.

Political agreement in the Danish parliament on the need for efficiency savings and for a new investigation (Structure Committee) into future organizing principles for emergency management in Denmark.

2013

Structure Committee to look into the emergency management system is formed. The Structure Committee is supposed to take the Deloitte budget analysis as a starting point and make recommendations about future organization.

First National Risk Assessment is published

2014

The Structure Committee finalizes its report and makes recommendations that reduce the number of local emergency organizations and make them into bigger units

Government agrees with local governments (though Local Government Denmark) about the need to reduce 87 emergency organizations to around 20. Savings are also part of the agreement. Mergers must be voluntary. The agreement is part of the annual economic negotiation between the government and local governments.

2015

Local emergency organizations make mergers to form 24 new emergency organizations.

ODIN – the it-system that collects evidence and knowledge on emergency in Denmark is updated and implemented fully by the Danish Emergency Management Agency.

2016

1 January is the new structure with 24 emergency organizations ready.

New political agreement reveals opposition to the plan, and there is political support in parliament for DEMA to keep its six national emergency districts. The new structure is now one national agency, six national emergency districts run by DEMA and 24 local emergency districts.
Some local governments disagree about the new structure and a few local governments choose to opt out of the mergers again.

National prevention strategy is published

2017

Evaluation report of the reform is published by DEMA and an association of local emergency organizations. Report accepts current structure, but proceeds to make eight recommendations for future cooperation between the national and local level.

National Risk Assessment (second version) is published. 13 current risks are described.

A national forum for prevention of accidents is formed with a broad number of stakeholders involved