How to cite: Olofsson, A. (2011). Organizational Crisis Preparedness in heterogeneous societies: the OCPh model. *Journal of Contingencies and Crisis Management,* 19(4) 215-226.

Journal of Contingencies and Crisis Management

Organizational crisis preparedness in heterogeneous societies: the OCPH model

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Abstract
The populations of European societies are heterogeneous and a crucial part of effective crisis preparedness is to customize contingency planning and crisis communication to these populations. The aim of this study is therefore to develop a theoretically based model of organizations' crisis preparedness in heterogeneous societies. Through theoretical and empirical analyses the model for 'Organizational Crisis Preparedness in Heterogeneous societies', the OCPH model, is developed. The model provides a theoretical foundation for the understanding of organizational crisis preparedness and also has practical implications: It offers a tool with which to develop organizational contingency planning further. For authorities that supervise municipalities or other local authorities, the OCPH model can be used to analyse and evaluate organizations.

1. Introduction

The populations of European societies are heterogeneous in terms of, for example, age, gender, income, and, not least, ethnicity. Historically, Europe has always been ethnically diverse and the last decades of increased immigration have further amplified this. The sheer variety of people and experiences provides a challenge for policy-making and contingency planning, which are based on the assumption that populations are homogeneous. As a consequence, customizing contingency planning and crisis communication to heterogeneous populations is a crucial part of effective crisis preparedness. Two of the most important aspects of contingency planning are preventive work and reaching the target population at the time of emergency (e.g. James, *et al.*, 2007; Quinn, 2008; Sikisch, 1995; Smith, 1990).

Therefore contingency planning has to be adapted not only to the situation in hand, but also to the population affected. Unfortunately many crisis managers and crisis communicators still use a generic 'one message fits all' strategy, despite research showing that messages adapted to the target audience are more successful (e.g. Kar, *et al.*, 2001; Lindell and Perry, 2004; Quinn, *et al.*, 2008; Vaughan and Tinker, 2009).

This paper enlarges on a model for organizational crisis preparedness "Organizational Crisis Preparedness in Heterogeneous societies", the OCPH model. The model provides a theoretical foundation for the understanding of organizational crisis preparedness, particularly with regard to formal and informal management as well as adaptation to the general circumstances. The model also has practical implications, for it offers organizations themselves a tool with which to develop further their contingency planning, while presenting governments and other authorities with a standard with which to measure the ways in which different organizations manage heterogeneity during crises. The aim of the paper is thus twofold: firstly, to develop a theoretically based model of organizations' crisis preparedness in heterogeneous societies; and secondly to empirically investigate one aspect – in this case the 'natural' element – of the model in Swedish municipalities.[i] The natural element is part of the theoretical model, comprises informal organizational practices and processes, and can be viewed as the opposite of formal contingency planning. The latter will not be empirically investigated in this study, but is also part of the theoretical model.

2. Previous research

Remarkably few studies have focused on the issue of population heterogeneity in the contingency planning by the authorities. Instead, there is a tendency to focus only on the target group – 'women', 'ethnic minorities' or 'the poor' – with all that entails for the creation of vulnerable groups and the increased stigmatization of already exposed groups, rather than focusing on the population and society as a whole (Wisner, *et al.*, 2004). One way of taking the wider approach is to study the organizations that are responsible, and their actions and perceptions of the surrounding world, rather than studying their target population groups. For if those responsible within an organization overlook the heterogeneity of the population, or consider it irrelevant, there will be consequences for the ability of that organization to adapt to changing circumstances and thus successfully manage crises.

Earlier research shows that different population groups handle crises differently. For example, ethnic minorities diverge from the majority population in their perceptions, reactions, and actions in emergencies, as well as coping after disasters and catastrophes (Barnshaw and Trainor, 2007; Bolin, 1986; Flynn, *et al.*, 1994; Mets, *et al.*, 2002). It is also acknowledged that minority groups' assessment of the credibility of a warning differs from that of the majority, and that ethnic minorities are less likely to apply for, or indeed be aware of, government assistance after a disaster or crisis. Further, individuals belonging to minority groups are less likely to be part of local networks through which official crisis information flows (Bier, 1999; Burger and Waishwell, 2001; Lindell and Perry, 2004). As a consequence, relationship-building has proven to be particularly important (e.g. Falkheimer and Heide, 2006; Grunig, *et al.*, 2002). Such findings might be an indication that government authorities fail to adapt their practices to heterogeneous populations and that little has been done to implement this knowledge in policies, crisis communication, and crisis preparedness (Falkheimer and Heide, 2006; Olofsson, 2007). As a matter of fact, authorities and other organizations rarely customize their crisis communications and preparedness to the heterogenic population and minorities. Considering the vulnerability of some individuals and groups, it is crucial that communication is effective and that it not only reaches those who are already well off but also those who are most in need (De Oloviera Medes, 2009).

The literature on crisis management in general also acknowledges the importance of the exact circumstances for an organization's way of planning proactively and of handling crises (i.e. Boin, *et al.*, 2005; Crichton, *et al.*, 2009; Mayer, *et al.*, 2008; Sundelius, *et al.*, 2001; Toft and Reynolds, 2005). There are many environmental aspects over which an organization has no, or limited, power: the demographic structure, for example; or natural conditions such as the weather and geophysical conditions; or man-made risks such as the transportation of dangerous goods on roads and railways. Hence, if the organization is located in an area where there is a high risk of a crisis occurring, that organization's knowledge and hence crisis preparedness will be different from that of an organization located in an area where few crises occur (Gouldson, *et al.*, 2004; Kim, 1998; Sundelius, *et al.*, 2001; Tanifuji, 2000). Consequently, there is an interaction between the organization and its environment on different levels and the character of the environment influences organizational behaviour (Stern, 1997). In other words, crisis preparedness is context-dependent.

Turning to previous research in Sweden, one can find studies on crisis management in general but almost no organizational studies on crisis preparedness in diverse societies as

such. There are a few Swedish studies that analyse crisis communication with people of foreign origin (Falkheimer and Heide, 2006), and the way that mass media covers these population groups (Nohrstedt, 2006). However, none of these studies have investigated organizational adaptation to population heterogeneity. To the best of my knowledge, there is only one previous study that investigates Swedish municipalities' crisis preparedness and crisis communication from a heterogeneous perspective (Olofsson, 2007). The present paper is based on this study and will further develop its findings.

3. The OCPH model

Over time, the need for crisis preparedness, including the authorities' responsibilities associated with it, has increased in Sweden and many other Western countries, as several severe crises, such as Chernobyl, the Southeast Asian tsunami and Hurricane Katrina, have changed the view of crisis management. In Sweden, the change from military-based crisis management came in the 1990s after the fall of the Eastern bloc and a number of civilian disasters. Furthermore, after the tsunami in 2004 the whole system of crisis management in Sweden was reorganised, including the delegation of increased responsibility to the municipalities. Consequently, a key task for the authorities and crisis managers is to establish institutional procedures and high levels of preparedness in order to cope with unforeseeable future crises (eg. Boin, 2009a; Sundelius, *et al.*, 2001; t Hart, *et al.*, 2001).

There are many models that show how an organization can prepare itself for crises, and the measures it can take in the event. However, such models suffer from limitations: they easily become simplified and stereotyped, and fail to capture the complexity of both the crisis and the organization; while much management literature tends to overemphasize empirical results from single case-studies instead of using theoretically based models (cf. Collins, 1998). Despite what these often practical, step-by-step models (cf. Somers, 2009) would have us believe, in reality there are vast differences between organizations: they operate under different conditions; they have different objectives, resources, cultures and, above all, environments.[ii] In the present paper this complexity is captured by using organizational theory, previous research, and empirical investigation.

A typology of organizational crisis preparedness was developed in a previous study (Olofsson 2007), which is further elaborated on here as the OCPH model. The typology was developed to cover crisis communication planning in an organization's pre-crisis phase. It is

based on McConnell and Drennan's (2006) typology of organizational planning for crises (eg. Nilsson and Keriksson, 2008). The major developments by Olofsson (2007) compared to the original were the incorporation of organizational environments and the empirical testing of the model in a large number of Swedish municipalities and city districts (160 out of a national total of 290).

McConnell and Drennan (2006) draw a distinction between formal and informal organizational preparedness. Formal organization is described in organizational schemes, plans of action, on web pages, and so on, while informal organization is neither explicit nor written down. Informal practices are harder to detect and are often connected to an organization's culture, or, as McConnell and Drennan (2006) put it, the organizational 'psyche' (cf. Boin and Lagadec, 2000). McConnell and Drennan (2006) define informal aspects as 'organizational attitudes' to crises and the inclusion of crisis management in the 'organizational consciousness or 'psyche', while formal aspects are defined as the 'importance of contingency planning on the organizational agenda', the 'extent of contingency plans', and the 'extent of active preparedness through trials and simulation'. Hence, high preparedness for coping with contingencies involves not only formal plans but also the embedding of crisis preparedness in both formal and informal practices.

Olofsson (2007) investigates the formal aspects of the typology and adds to McConnell and Drennan's typology another aspect, namely the environment. In this way, internal and external factors are added to the analysis, in the form of a division between factors within the organization and environmental factors (Jacobs, 2005). In the study, internal, formal factors were operationalized into three indicators: the extent to which contingency plans consider people with foreign backgrounds; the degree to which crisis communication is adjusted in practice; and the extent of preparedness measures taken. External factors were defined as 'previous occurrences of crisis' and 'demographic characteristics'. Each indicator varied on a scale from high to low, and three categories of organization were defined accordingly: active, intermediary and passive (Olofsson, 2007). The typology was developed and operationalized to investigate the Swedish municipalities' alterations to their crisis communication with people of foreign extraction, and it proved to be an adequate instrument for the categorization of organizations in this respect. However, the typology focuses *solely* on formal aspects of crisis communication since the available quantitative material did not include informal aspects. In this paper, informal aspects of crisis preparedness are incorporated into the OCPH model.

As noted, previous research tends to present rather instrumental models. The theoretical basis is often unclear, as are the ways in which the different concepts are interlinked and how the model can be empirically applied. To solve some of these problems, the OCPH model uses the theoretically derived concepts of rationality and openness (cf. Scott, 2003). Organizational theory has a long, rich history, and is today a well-established and comprehensive field of research. In studying any organization three key elements are (1) individuals and their roles, (2) the formal and informal organization, and (3) the environment (Scott, 2003). These elements are interlinked through different processes such as individual and organizational communication and decision-making. Over time there has been a development from more rational theories about organizations to theories that view organizations as open systems where rules and formal structures are seen to have a symbolic rather than a formal function (Johansson, 2010). At the same time, the rational way of understanding and managing organizations has prevailed, which means that there are a large number of perspectives available for the understanding of organizations. To reduce some of this complexity, Scott (2003) divides these different approaches into the categories of rational and open organizational theory.

Organizations are characterized by a mix of formal and informal structures and practices, as well as a variation in the degree of openness to the surrounding environment. In real life it is not easy to keep the one from the other; what seems to be a formal way of handling crisis preparedness, such as contingency plans, might in fact be more a symbolic act. Similarly, organizations might claim to be open but in reality act as closed systems. Previous research about disasters has shown that formal planning is important and does have an effect, although not necessarily the intended one (Kendra and Wachtendorf, 2003). To capture some of the complexity, and particularly the way in which organizations manage crisis preparedness, I follow Scott (2003) in applying two dimensions of rationality and openness, albeit directly at the organizational level rather than as a way of categorizing theory as Scott does. The strength of this approach is that it enables us to identify complexity by allowing organizations to be open and closed, as well as rational and natural (although not at the same time). As with all theoretical concepts, it helps us to understand and explain the complexity of reality by simplifying it as comprehensible entities. The two dimensions – rationality and openness –bring together much of the previous research and theory of organizations. By using these dimensions in the investigation of organizational crisis preparedness we have comprehensible tools based on solid empirical and theoretical grounds with which to

understand the object of study.

Returning to Scott's (2003) model, we find that the rational perspective focuses on organizational structure as an efficient tool to achieve goals, with management, planning, rules, and roles as its core concepts (cf. Abrahamsson, 2000). The less rational or so-called natural perspective instead views organizations in terms of informal structures, and focuses on interactions between individuals and sub-systems. Compared to the rational view, where organizations are described as a consequence of rational planning and design, the natural perspective sees organizations as evolving and adapting over time (Scott, 2003). There is extensive literature on the subject of organizational rationality, in which some reduce the natural to the rational and vice versa, but this discussion is beyond the scope of this paper (e.g. Abrahamsson, 2000; Brunsson, 2000).

'Openness' describes the extent to which an organization is open or closed with regard to its environment. Today, few organizational theorists would view organizations as closed systems that are unaffected by their environment (cf. Thompson, 1967), although the extent to which the organization tries to control or interact with its surroundings might still vary. Furthermore, the relationship between the organization and its environment is most often described as a two-way interaction. Put together, the result is a two-by-two model, with four different views of organizations described by Scott (2003) as:

- Closed, rational systems: the organization focuses on formal planning, is goal-oriented, and does not acknowledge its dependency on its surroundings.
- Closed, natural systems: the organization acknowledges informal processes but more or less disregards its surroundings.
- Open, rational systems: the organization is oriented towards managing its affairs in a formal, goal-oriented way and is at the same time open to its surroundings.
- Open, natural systems: the organization focuses on informal processes and interactions and is open to its surroundings.

These two dimensions of openness and rationality help us to comprehend not only organizational crisis preparedness per se, but also its relation to formal and informal structures, and internal and external matters. In other words, the theoretical dimensions are combined with the previous work of McConnell and Drennan (2006) as well as Olofsson (2007) to create a model to analyse crisis preparedness. Rather than categorizing organizations as one type or the other, the idea of this model is to identify different modes of action that an organization follows in its contingency planning. In this way a theoretically

derived model can be used to identify strengths and weaknesses in individual, or groups of, organizations.

The OCPH model presented in Figure 1 is based on the two dimensions and divided into four modes of action: open, rational crisis preparedness; closed, rational crisis preparedness; open, natural crisis preparedness; and closed, natural crisis preparedness. Openness varies between a focus on internal organizational affairs to a focus on external affairs, whereas rationality varies between a formal and an informal focus. Based on the model, one can expect *formal* contingency planning and goal fulfilment both within, and in relation to, the environment, to 'score' high on the rational axis. The natural approach to crisis preparedness, where crisis management is integrated in the organizational culture and works with these issues in terms of *informal* processes, scores low on the rational axis. Further, organizations where the environment is perceived as something that must be controlled and managed rather than interacted with will try to control crisis situations in a formalised way. An open approach that emphasizes mutual responsibility, cooperation, and informal action will score high on the second axis – openness – while a disregard for the environment in formal and/or informal crisis preparedness will give low openness scores.

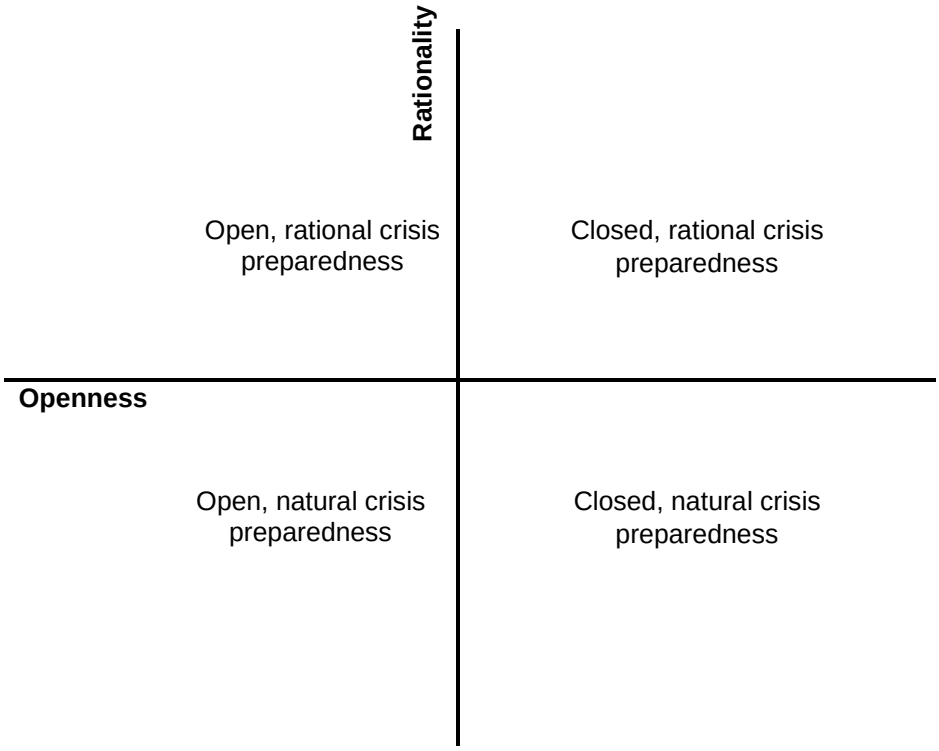

Figure 1 Model of organizational crisis preparedness in heterogeneous societies (OCPH).

The four different kinds of preparedness are not mutually exclusive; on the contrary, they can be combined in different ways and vary between organizations. In this way the model allows for a reduction in the complexity of reality by using a two-by-two categorization and, at the same time, tolerating complexity within this categorization.

To further define the OCPH model and enable empirical investigation, eight factors, or indicators, have been defined (see Figure 2) (cf. Olofsson, 2007a; McConnell and Drennan, 2006). This definition takes its point of departure in the two dimensions of rationality and openness, but is closely related to McConnell and Drennan's (2006) theoretical typology and Olofsson's (2007) typology (cf. Stern, 1997) and empirical investigation of 160 Swedish municipalities. In this way the OCPH model is based on both theory and previous research.

The degree of rationality can be defined as the extent to which contingency plans consider heterogeneity (factor 1); the extent to which contingency plans are adjusted in practice (factor 2) (cf. Olofsson, 2007); the organizational attitude towards threats (factor 5); and the embeddedness of crisis preparedness in the organizational culture (factor 6) (McConnell and Drennan, 2006). The first two are examples of formal organizational structures while the second two are examples of informal ditto. All factors are seen as varying

on a scale from goal-oriented with a focus on planning, rules, and roles, to process-oriented with a focus on interaction and sub-systems. The factors measuring openness are interaction with external actors (factor 3); adjustment to external physical conditions (factor 4) (cf. Olofsson, 2007); organizational perception of the environment (factor 7); and informal networks and interaction with the environment (factor 8). The factors vary from open and responsive to closed and uninformed. Once again, the first two are formal while the latter two are informal.

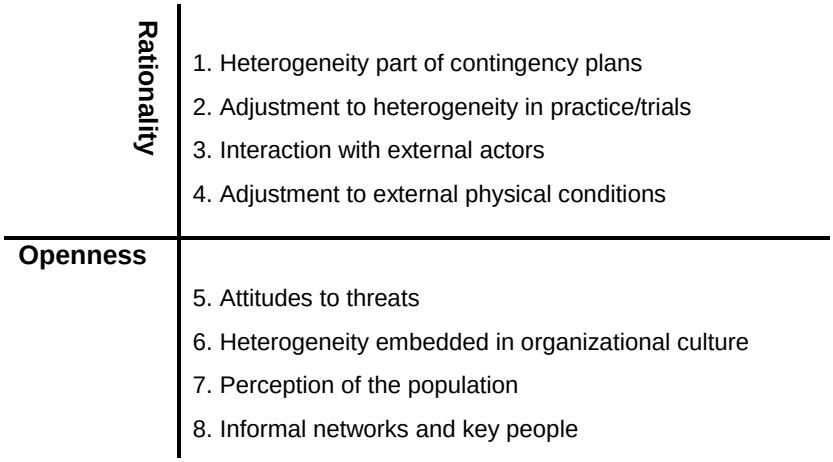

Figure 2 Definitions of the OCPH model.

The empirical study presented here focuses on factors 5–8, which are the informal factors of both internal and external crisis preparedness, or the open and closed crisis preparedness modes of action (see Figure 1). The model will be further discussed in the concluding section of this paper. First, however, the empirical investigation of part of the model will be presented.

4. Method

The aim of the empirical study was to investigate the open and closed natural aspects of the OCPH model in order to establish whether or not the model is more than just a theoretical construct. The model is not validated or tested quantitatively but studied in an analytical way to develop an understanding for the model's empirical relevance. The study was conducted as part of the same research project as the previous investigation of *formal* crisis preparedness in

160 municipalities in Sweden (55 per cent of all Swedish municipalities) (Olofsson, 2007). Using this earlier study, suitable organizations could be identified for further investigation. As a consequence, heterogeneity is defined as ethnicity in the empirical investigation, although the OCPH model could just as well embrace such factors as age, gender or disability.

To capture the modes of action demanded by open or closed natural crisis preparedness – the *informal* factors, in other words – a qualitative approach was chosen. For this reason the empirical material comprises interviews with crisis managers and risk communicators in six Swedish municipalities. Municipalities are of particular interest in Sweden since, together with the County Administrative Boards, they are responsible for crisis management in their geographical area (SFS, 2006:544), and are thus the organizations responsible for the safety and security of the population. In the literature, informal crisis preparedness is thought less widespread than formal (McConnell & Drennan, 2006), and it seems it is even more unusual for organizations to take heterogeneity into consideration (Olofsson, 2007). In order to avoid a situation where none of the organizations interviewed paid any heed to ethnicity, the choice of municipality fell on the six that had actively included ethnicity in their formal crisis preparedness in the earlier study (Olofsson, 2007).

The interviews were semi-structured informant interviews with eight people in six municipalities. Initially, seven municipalities were selected, but unfortunately one declined to participate, resulting in a total of four small- and medium-sized municipalities and two city districts in the municipalities of Stockholm and Gothenburg. An informant interview is a relatively open method of collecting data from individuals who possess valuable information, knowledge, and experience in the area of study (Bauer and Gaskell, 2000). Four of the interviews were held in person, while three were conducted by telephone. It would have been preferable for all the interviews to be in person, but limited resources and the distances involved made it impossible.

The selected municipalities vary according to population size, the proportion of people of foreign background (‘Prop. FB’ in Table 1), and previous experience of crises where people with foreign backgrounds have been involved (‘Exp. FB’ in Table 1). The selected six municipalities and city districts – all ‘active’ in their crisis preparedness – thus represent a mix of organizations with a varying proportion of people with foreign backgrounds and varying experience of crises involving people with foreign backgrounds. Despite these variations, all interviewees had experience of working with crises both inside and outside their organizations. The selected municipalities and city districts are presented in Table 1.

Table 1 The municipalities included in the semi-structured interview study.

Municipality/ city district	Population	Prop. FB*	Exp. FB	Number of interviews	Number of interviewees	Interviewee identification
City district 1	36,300	54 %	Yes	1	2	C1:1, C1:2
City district 2	15,100	39 %	Yes	1	1	C2:1
Municipality 1	35,900	32 %	Yes/No**	1	1	M1:1
Municipality 2	134,500	23 %	No	1	1	M2:1
Municipality 3	36,900	7 %	No	2	2	M3:1, M3:2
Municipality 4	19,600	7 %	No	1	1	M4:1

* The national mean was 18 per cent in 2008, the same year as these figures are form.
** Municipality 1 reported having experienced a crisis involving people with foreign backgrounds while the interviewee stated the opposite, a disparity presumably caused by the information coming from different people.

An interview guide based on the OCPH model, its theoretical foundation, and previous research was developed, focusing on both open and closed natural crisis preparedness, in order to capture the organizations' attitudes to threats, embedment of crisis preparedness, and perceptions of their environment and interactions with it. The interview guide was used in order to ensure that all aspects were covered in the interviews, but the interviewees were first asked to describe in their own words their municipality's crisis management and contingency planning in general, and then to comment on the extent to which they took the heterogeneity of the population into account. When needed, supplementary questions were asked.

Each interview lasted for about one hour, with the exception of one of the telephone interviews, which only took thirty minutes. The interviews were transcribed and analysed using a qualitative content analysis approach (Bauer and Gaskell, 2000). Since a number of themes had already been defined in the OCPH model, a structured coding was applied to the material, after which the interviews were reanalysed to see how different concepts related to one another, what kinds of arguments were advanced, and how the themes' characteristics varied according to the municipality. This type of in-depth analysis of a small number of interviews is open to subjective interpretations and bias, so to go some way in counteracting this, quotations from the interviews are used to illustrate the findings.

5. Empirical findings

The investigation of the OCPH model was limited to the informal or 'natural' aspects of the organizations' internal and external crisis preparedness, as already noted. This section begins with the internal aspects and ends with the external.

5.1 Within the organization

The results were interpreted according to the two predefined factors, *attitudes to threats* (factor 5 in Figure 2) and *heterogeneity embedded in organizational culture* (factor 6 in Figure 2).

5.1.1 Attitudes to threats

Threats are something that all the informants take seriously. All their organizations have experienced extraordinary events with disruptions to critical infrastructure or the workings of society. In the interviews, the informants repeatedly returned to these events, using them as examples of how well or badly the crisis management had worked, how they had learned from their mistakes and changed their practices in the light of that, and how their awareness of possible future crises had changed. One of the interviewees (M4:1) also expressed the view that crisis management is something that has become increasingly important in the municipality. This feeling of increased attention paid to crisis management was confirmed by another informant:

> I have to say, it's now really on the table. Like many others, we had a change of [political] majority in our municipality, and the new majority has raised the question lots of times. They themselves want some kind of seminar or workshop, and, well, exactly what it's going to be like we don't know yet, but they really are *keen* on this. (M2:1)[iii]

Given that the municipalities were selected because they were defined as active in their preparedness measures, it is not surprising that they seriously consider possible threats. What is more interesting is how they muster support for this attitude, and thus the way they express their awareness, not just whether or not heterogeneity is mentioned in relation to possible threats.

However, when discussing the importance of preparedness in crisis management, the informants tend to refer to *formal* practices such as how well structured their organization is for crisis management, whether or not it has up-to-date contingency plans, and so on. This tendency to refer to the formal management of risk, threats, and crises was evident in all the interviews, indicating that spontaneous reflection on threats starts from formal practices rather than informal attitudes. Interviewees from the smaller municipalities and city districts do mention examples of informal collaboration between divisions and professionals (possible

because of 'distances' within the organization) over planning for and reacting to crises. However, it is hard to say whether this corresponds to the OCPH model's natural approach or whether it is only the result of organizational size and normal practice.

The only informants (C1:1, C2:1) who spontaneously mentioned anything related to heterogeneity or people with foreign backgrounds work in the two city districts. In both cases it was the municipal citizens advice bureau that was mentioned as being part of the crisis management organization. None of the other informants volunteered any information on heterogeneity or people with foreign background. When asked specifically, although their responses varied the gist was that many of the organizations took heterogeneity into account in their crisis preparedness. In one municipality where 23 per cent of the population were of foreign extraction (municipality no. 2), they have initiated an adaptation process, but, as in the other municipalities, the consequences of the population's heterogeneity are not reflected in the organization:

> I must say, I think it's probably rather loosely anchored. We really haven't thought of it in a very structured way at all before; we've mostly thought about in terms of communication. And that's not enough. But you somehow reassure yourself that out in the organization you need to reach certain groups. (M2:1)

5.1.2 Heterogeneity embedded in organizational culture

Considering that interviewees' attitudes towards heterogeneity and crisis preparedness were rather vague and 'weak', one might expect heterogeneity not to be embedded in the organizations' culture either. However, the interviewees indicate that heterogeneity's embeddedness in the organizational crisis culture is interlocked with the more general organizational structure. The municipalities where heterogeneity is part of the crisis culture are also often characterized by diversity. Hence in the city districts with a high proportion of people with foreign backgrounds, heterogeneity is well embedded in the organization. Here, because not all politicians and civil servants are native Swedes, diversity is not something 'that happens to other people':

> It's self-evident here. It's not only that many of our citizens have foreign backgrounds but many of the city district staff does too, politicians and so on; it's like a part of everyday life. (C2:1).

The fact that the municipality itself has a diverse workforce is reflected in its work with crisis management. For example, there are employees available who can help with translations and other practical issues. Hence, a high level of heterogeneity in the *organizational* culture spills

over into crisis management. In one city district (C2) this is done informally, in the other (C1) it is formalized:

> We have an organization that we call the Culture Interpreter, which consists of employees here in the administration with foreign backgrounds and other linguistic backgrounds who can step in and translate or interpret when it's needed during crisis situations, and between them they cover the ten most common languages. (C1:1)

It is also in the city districts that crisis managers and risk communicators themselves have had personal experience of situations that involved people with foreign backgrounds and a variety of needs, at which point the crisis organization was activated. However, earlier experience and organizational diversity do not automatically lead to identical approaches to handling heterogeneity in crisis management. On the contrary, the two city districts, both with heterogeneity embedded in their organizational culture, have quite different practices. One example is that they have different policies on the translation of risk communications into foreign languages: one of the city districts translates its material; the other does not. Clearly, the relationship between the formal and informal aspects of contingency planning is loosely coupled.

In three of the municipalities (M:2, M:3, M:4), heterogeneity is not embedded in their culture to the same extent, be it on the level of crisis management practices or among politicians or civil servants.[iv] One could say that there is an awareness of population heterogeneity and the need to somehow adapt crisis planning and action, and not just risk communication, to this heterogeneity, but this awareness is not a clearly defined attitude that is embedded in organizational culture or put into practice.

5.2 Outside the organization

In the following discussion the results are interpreted according to the two predefined factors, *perception of the population* (factor 7 in Figure 2) and *informal networks and key people* (factor 8).

5.2.1 Perception of the population

Although they indicated that they were aware of the fact that the inhabitants in their region have various needs, there were considerable variations between the informants. Those from city districts, with the highest proportion of people with foreign backgrounds, were also the ones who perceived the population as being heterogeneous. One of the informants expresses it

thus:

> Seventy per cent of our inhabitants have foreign backgrounds; for the huge majority it's their first stop here in X-city. We handle this on a daily basis, so it's part of our crisis management plan as well. (C1:1)

In the two municipalities with the lowest proportion of people with foreign backgrounds (M3, M4), the population is perceived as being heterogeneous, but only in a limited sense that has little to do with crisis preparedness. However, when asked directly, the informants expressed an understanding that inhabitants might need both preventive measures and tailored crisis communication during crises:

> Yes, indeed it's very important to reach out to everyone. We do have people from many different countries, even though there aren't so many altogether. We have a very active POSOM group here and we also have the refugee bureau. (M3:2)[v]

One informant's standpoint was quite different to the others. Although aware of the population's heterogeneity, the informant (M1:1) clearly stated that this was more or less irrelevant for contingency planning: 32 per cent of the municipality's residents are of foreign descent and 16 per cent were born in a foreign country, yet the attitude was that everyone should be treated in the same way, regardless of background or other circumstances. In answer to a direct question as to whether the informant saw it as a problem if, for example, a large part of the population could not be reached in the event of a crisis, the answer was, "you can't save them all, and if you manage to save 84 per cent you've done a good job" (M1:1). This informant, who worked in a municipality with a very ambitious crisis management organization with a high level of formalisation, also argued that heterogeneity is nothing for the central crisis management: "It is something for the individual divisions, nothing we should engage in on a central level. They know." (M1:1). Clearly the issues have been decentralized to this particular municipality's various divisions. This is also quite common among the other municipalities, for the informants refer to the responsibility of individual divisions, such as the social work section or sub-divisions such as the citizens advice bureau or the refugee bureau. This is reasonable, in view of the divisions being in closer contact than is the central administration with the various population groups and operational activities. At the same time, it is an indication of the perceptions of key people in the municipality whose views and opinions are influential. If the question is not addressed on a central level, it thus indicates a rather low level of organizational openness.

5.2.2 Informal networks and key people

In various ways, the informants show that networks and direct interaction with local residents play an important role in the municipalities and city districts' crisis management. The informants with past experience of crises involving people with foreign backgrounds also emphasized the importance of personal contact and communication with people belonging to such groups:

> In the event of a crisis, personal contact is very important with people with foreign backgrounds, much more so than with people with Swedish backgrounds whose experiences are more like our own. From our experience we have seen that they definitely need more information, preferably in their mother tongue. (C2:1)

The different municipalities interact both formally and informally with various types of association, religious leader, and authority that people turn to at times of crisis. Once again, it is the informants working in two city districts (C1 and C2) that give examples of individuals with whom they have direct contact for the prevention or management of crises. These can be individuals who either belong to an ethnical or religious association or informally represent a group of people:

> It's a part of everyday life to adapt information to different citizens. One of the most important things is to get to know each other and to have contact. We're a small city district: we're close to everything and everyone. (C2:1).

The city districts also communicate by local radio stations, television, the Internet, leaflets, and so on. However, it is the direct interaction between the city districts and the citizens that sets them apart from the other municipalities. One (C1) has a special unofficial list of phone numbers for strategic people, while the other district (C2) has chosen to include representatives of local societies and associations in its own organization:

> We're a relatively small city district with 15,000 inhabitants, and we're very good at knowing which associations, and people in the associations, can be contacted if necessary. We don't name anyone in such a plan since people change and disappear and new people come in. We have two associate consultants who are based at the citizens advice bureau and they have all the necessary knowledge about our associations. (C2:1)

The three municipalities (M2, M3, and M4) with a low or medium proportion of people with foreign backgrounds do not speak about similar contracts or networks to the same degree. They refer to the local refugee or citizens advice bureaus, arguing that these municipal organizations *probably* have these kinds of networks. One of the informants (M3:1), explicitly mentions the importance of networks between the municipality and its various communities, but at the same time states that the municipality currently does not have such networks. One

way some of the municipalities studied here have begun to establish links with surrounding organizations and communities is through their work with what they call integration:

> it's a group that works with [integration], and they collaborate with a democracy group that … where there's an integration strategist. A woman working with diversity issues. And she's part of, and reflects on, this [crisis management] perspective. (M2:1)

Once again, the smallest municipality, with the lowest proportion of people with foreign backgrounds (M4), has informal relations with different population groups, although not explicitly about contingency planning or risk communication:

> we have a group of people who have been here for a number of years and who speak both Swedish and their mother tongue. And they're on our contact list and they (pause) well we don't have any real associations for immigrants; that we don't have. It's more that families meet up and get together. They know each other pretty well. And we know them pretty well; some of them are politicians. So we have all these ways of contacting [people]. (M4:1)

This also indicates the importance of another type of environmental factor, namely population size: small municipalities and city districts tend to be more open than larger ones.

Moreover, one informant (M1) that claimed that the municipality treated all inhabitants equally, and gave several examples of informal networks with population groups. One example was that the municipality, together with the local Iranian community, arranged the security for Nowruz, the Iranian and Kurdish New Year celebration. In this way, one could say that the informal handling of crisis management includes the surrounding heterogeneous society, even though neither attitudes and perceptions nor plans incorporate heterogeneity as a perspective to abide by. Once again, there is an indication that the relationship between formal and informal crisis management is loosely coupled.

Summing up, the empirical results indicate that in areas with a relatively high proportion of inhabitants with foreign backgrounds, organizations with previous experience of crises that involved people with foreign backgrounds are more open than the other organizations investigated here. The former have a more 'natural' mode of action, although there is variation between them. The two organizations with no previous experience and a relatively low proportion of people with foreign backgrounds are more closed and rational in their approach towards crisis preparedness. However, being small in terms of inhabitants increases informal and open modes of action (cf. Jin, 2010). One of the organizations with a high proportion of people with foreign backgrounds is more rational than natural in its internal and external crisis preparedness, but at the same time is open to interaction with key people in

the surrounding environment. This confirms that crisis preparedness is a complex phenomenon, in which analytical tools and theoretically derived models are crucial to the greater understanding and better adaptation of actual crisis management. The last section will show how the OCPH model can contribute to this.

6. Discussion

Crises are becoming increasingly trans-boundary and trans-system (Boin, 2009a; Boin, 2009b; Quarantelli, *et al.*, 2006; Wachtendorf, 2009), transcending social, organizational, and physical boundaries. One consequence is the need for organizational flexibility in the event of large-scale crises and disasters, combined with proper planning (Kendra, 2003). Interestingly, little attention has been focused on social systems in terms of diverse populations, cultures, and societies – factors that ought to be of similar importance in times of a globalized, multicultural world of international migration, travel, and communication.

The OCPH model emphasizes that formal and informal crisis preparedness is not necessarily closely related, be it internally nor externally, something that the empirical investigation confirms. In line with the theoretical assumptions, the empirical results indicate that an organization that has a formalized, structured way of organizing crisis preparedness does not necessarily have informal practices in place, and vice versa. Although the empirical investigation presented here was limited, the results indicate that the OCPH model, with its focus on rationality and openness, promises to be a useful way of categorizing and further understanding organizational crisis preparedness. One of the strengths of the model is that it can capture the complexity of organizational crisis preparedness rather than over-simplify it. Furthermore, it is applicable not only to diversity in terms of ethnicity and origin, but in terms of any kind of heterogeneity factor, be it gender, disability, age, or poverty. The OCPH model can also be used as an analytical tool to compare organizations, map groups of organizations, or make in-depth analyses of the crisis preparedness of single organization.

Figure 3 outlines how the OCPH model can be used in practice. In this case the results from the empirical study of two of the organizations (city district 1 and municipality 1) have been applied to the model, and can therefore be compared (both organizations were defined as having highly rationalized, or formal, contingency plans in the previous study (see Olofsson, 2007) indicated in the figure in grey).

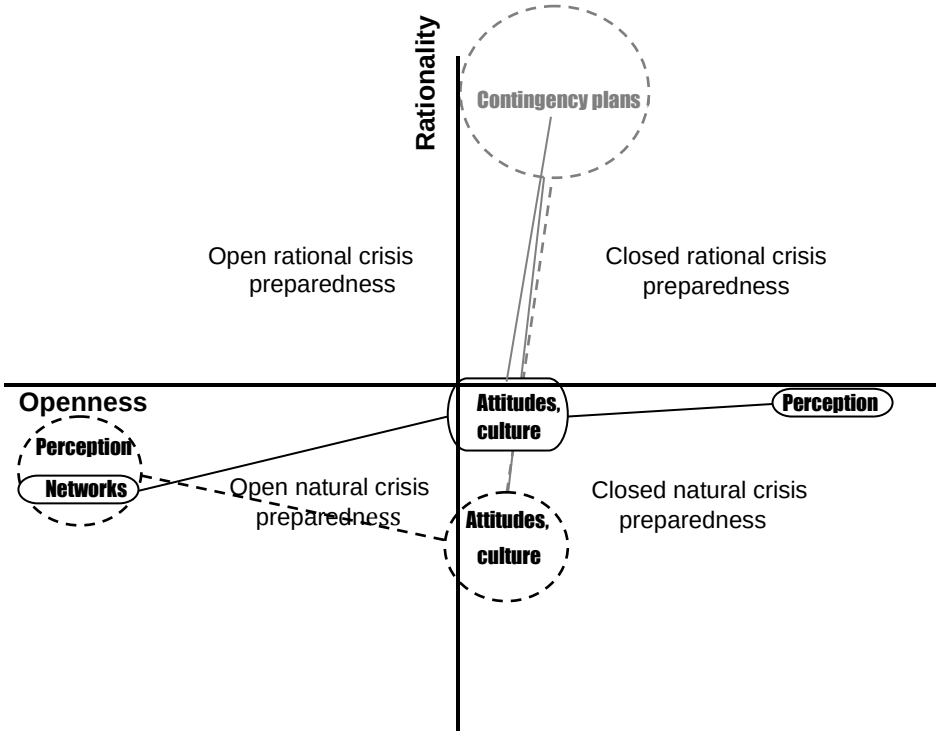

Figure 3 The OCPH model in use. The unbroken line represents municipality 1; the dotted line represents city district 1 (see Table 1).

While this example should not be taken as a result of the empirical investigation, it nevertheless shows it is possible to establish where the different aspects of the organization's crisis preparedness vary with regard to openness and rationality, and in this way capture the fact that the same organization can be highly rational in one aspect, open in another, and closed in a third (as is the case with municipality 1). On the basis of such findings, an organization can decide to change or further develop particular aspects of its crisis preparedness. For authorities that supervise municipalities or other local authorities – in Sweden, a task that falls to the County Administrative Boards and the Swedish Civil Contingencies Agency – the OCPH model can be used to analyse and compare organizations. The empirical results described in this paper exemplify how an analysis based on the model can help crisis managers as well as other concerned parties to understand and improve organizational crisis preparedness in practice.

The study has a number of limitations mainly related to the empirical investigation. The results should be seen as an analytical tool in the development of the model, for the aim of the empirical investigation was to see if the theoretical model was empirically applicable, and

further research will be needed to cover all the variants in the OCPH model in terms of heterogeneity and organization. The fact that only crisis managers were interviewed and no other employees in the municipalities is a critical limitation considering that the managers' views on formal organization might differ considerably from those of other employees, and future research of the OCPH model should include a range of different opinions both inside and outside the organization. Organizational culture is also an important aspect of the OCPH model that needs to be investigated in greater detail if the full relationship between the formal and informal aspects of crisis preparedness is to be ascertained. Thus, further empirical investigation of the model is needed using a larger quantity of material and including all aspects of the model. That said, the OCPH model bids fair to be a useful tool in adapting crisis preparedness to a heterogeneous society. Just as crises are becoming increasingly trans-boundary and trans-system, so people increasingly make up 'floating' populations of transnational individuals.

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[i] Municipalities were chosen because they have a central and legislative role in Swedish crisis management (SFS

2006:544).

[ii] Two recent – and telling – exceptions are Abrahamsson, Hassel and Theler's system-oriented framework (2010) and Jazarbkowski and Whittington's (2008) strategy-as-practice approach . However, the focus of these approaches is not contingency planning.

[iii] All translations are the author's own.

[iv] One of the informants (M4), who works in the smallest municipality, also mentioned that there are residents with foreign backgrounds who are engaged in politics and informally maintain contact with their family and relatives concerning these issues.

[v] POSOM, Psychiactric Social Care, is a semi-voluntary organization that exists in all Swedish municipalities.