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Applying the Organizational Centaur Theory on Boundary Spanners in Demanding Situations

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Abstract

The aim of the present study was to compare the existing conceptualization of the dual nature of organizational centaurs to discover what could be found in an investigation of organizational contexts characterized by risky and life-threatening situations. The study design involved a two-step procedure. The first step was inductive in character and followed the guidelines of grounded theory regarding selection of the participants in the study (*further called informants*, $N = 71$), data collection and initial analysis. The second step consisted of an attempt to compare this conceptual model to the existing ideal-typical descriptions of the organizational centaur concept. Managing crisis, disasters and other uncertainties as a boundary spanner can be understood in terms of a typology differentiated at the organizational and individual levels. The organizational part defines the prevailing conditions in uniformed, greedy organizations for boundary spanners who contribute to the organization's foundation of competence and behavior, and also outlines the limitations this may entail. The individual part focuses on the human such as no room for mistakes and the management of asymmetrical collaborations. It was concluded that the special case of severely demanding conditions added new insights into the organizational centaur framework.

Keywords: boundary spanners, organizational centaur, organizational adaption, crisis management, military operations

1. Introduction

In modern organizations operating in a globalized environment, there is an increasing demand for cross-sectorial collaboration and for organizational members to work at the perimeter of the organizations. When it comes to crisis management it has long been recognized that disasters and crisis characterize circumstances in which the boundaries between organizations,

roles, responsibilities and individual roles are blurred [1, 2]. Collaboration and collaborative roles such as boundary spanners in crisis management are therefore crucial. Previous research in a variety of organizational contexts has shown that boundary spanners in context of crisis management issue are characterized by the intrinsic competencies and authorization to step outside organizational boundaries and collaborate with different external organizational actors [3–7]. Boundary spanners have an ability to stretch the boundaries of an organization, thereby facilitating the influx and outflux of information, negotiations, knowledge and innovations [2, 3]. They facilitate managerial decision-making and build confidence and long-term relationships [8]. Further, boundary spanners contribute in many ways to the creation of social capital in an organization and between organizations [9]. However, according to [10], this can cause information asymmetry in organizations, as boundary spanners can act on their own agendas and may break rules [11]. Boundary spanners have many additional descriptions of the role such as networker, broker, collaborator, cupid, civic entrepreneur, boundroid, spark plug and collabronaut [12]. “Grassroots bureaucrat” [13], “spontaneous volunteer” [14] and “spider in the web” [15] are other monikers.

1.1. Organizational centaur

Boundary spanners can also be seen as organizational members who have a great ability to put a personal stamp on work tasks and other organizational actions. They become, in [16] terms, ‘organizational centaurs’ – half human, half organization. He writes:

When organizations do something, it is always the individuals who act. However, they do not primarily act on the basis of their own impulse but on behalf of the organization. Their actions are not their own but those of the organization. However, since people are still acting with their own experiences and thoughts there is always tension between the actions of the organization and the human actor. Organizational action is a social hybrid. The actor is a human individual but the action is organizational. One can talk of organizational centaurs: partly human – partly organization [16 page 63].

The idea of the organizational centaur conveys the fact that organizations are not homogenous actors and indeed cannot act at all, as only individuals have that ability [16]. Organizational members not only act as organizational representatives but also as separate individuals with their own feelings and characteristics [16]. Ahrne [16] further maintains that when an individual acts on behalf of an organization, it is still the person who brings something of himself or herself in each act. The main difference between the concepts boundary spanner and organizational centaur is that the theories focusing on boundary spanning usually describe individual actions and interactions [17]. Organizational centaur conceptualizations, on the other hand, describe a duality and a holistic view of the organization and the individual as a form of social hybrid [16]. There is a lack of research on the organizational centaur concept in highly demanding and stressful environments. Typical examples of the latter are military and disaster response organizations. The character of intra- and extra-organizational boundary spanning needs to be explored in these environments and be compared to what has been found in more ordinary organizational settings. In particular, in extreme conditions where life and death may

be at stake, issues such as responsibility, risks and consequences of mistakes call for more research. In addition to the need for further conceptual development, these issues may have long-term effects for afflicted individuals as well as professional actors, their organizations and their nations.

In a previous series of studies, we have explored boundary spanners in demanding situations. Although many aspects have been empirically identified, a unified theoretical framework of the obtained results is lacking. Therefore, we decided to attempt the organizational centaur concept as a unifying theoretical umbrella in order to understand boundary spanners in context of crisis management and other uncertainties. This required two steps:

- To synthesize our own previous results on boundary spanners in demanding situations as they derive from several separate studies.
- To qualitatively evaluate a comparison between this empirically generated synthesis of boundary spanners on the one hand and the general concept of organizational centaur on the other.

In addition to the challenge of comparing two theoretical models, the present one had an additional theoretical challenge in that the organizational centaur model represents the critical theory tradition and the empirically generated boundary spanners model has a functionalistic base. Against this background, the aim of the present study was to compare the existing conceptualization of the dual nature of organizational centaurs to what could be found in an investigation of organizational contexts characterized by risky and life-threatening situations.

2. Method

The study design involves a two-step procedure. The first step was inductive in character and followed the guidelines of grounded theory regarding selection of informants, data collection and initial analysis [18]. Using the constant comparative method of analysis, a hierarchical conceptual model was developed. The second step consisted of an attempt to compare this conceptual model to the existing ideal-typical descriptions of the organizational centaur concept.

2.1. Demanding situations as the context of the research

Demanding situations include crises, wars and armed conflicts, as well as extraordinary events, and society may respond to these kinds of challenges on a national and international level. This article focuses on Swedish situations and the Swedish authorities which have had to cope with demanding circumstances in both domestic and international contexts. Specifically, the examples from civil and military contexts are described in the next section.

2.1.1. Civil contexts

The tsunami catastrophe struck on December 26, 2004. As a result of an earthquake, the waters of the Bay of Bengal formed 10-metre high waves that flooded the coastal areas of several

countries. Approximately 200,000 people died and around 50,000 people are still missing from the area. The number of Swedish deaths (people on vacation in Thailand) in the catastrophe amounted to 543, of which 120 were children under the age of 15.

In 2004, the Swedish prison service was affected by a series of incidents. This article focuses on a hostage drama that took place at an institution in Mariefred on September 23, 2004. Despite preparedness and incident exercises among the prison officer staff, two inmates with knives fled the prison after taking a middle-aged warden hostage. Fears for the hostage's life quickly spread among his colleagues and also among the police and general public. The prisoners moved across several counties but were finally arrested outside a small city far from the prison.

On February 4, 2005, a large sulfuric acid tank suddenly collapsed in the harbor area of Helsingborg, a medium-sized Swedish town. As a result, approximately 16,000 tons of sulfuric acid were discharged into the harbor basin. A number of authorities and 35 municipalities took part in the clean-up, which lasted for 3 days. Although the accident did not cause any serious harm to humans, it is the largest chemical accident to have affected Sweden to date, with significant material and environmental damage.

2.1.2. Military contexts

Where a military context is discussed, it concerns staff from the Swedish Armed Forces serving on international missions for military observation, peace-keeping and peace-enforcement purposes. Typical military collaborative tasks highlighted in this study focus on liaison, negotiation and intelligence gathering, observations and situation outlook reporting. All of these activities are conducted under imminent danger to life and limb, and the military contexts are often also characterized by challenging geographical and social aspects such as squalor, deprivation and extreme climatic conditions and a variety of socio-cultural traditions and customs. Actors encountered in the host country include the local people, the armed forces from different countries and local actors such as clan warlords, local police, politicians and a range of non-governmental organizations (NGOs) [2].

2.2. Informants and organizations involved

In order to gain as wide a variety of experiences as possible, the selection of participants or informants for this study was made in accordance with the guidelines for Grounded Theory developed by Glaser and Strauss [18]. A total of 71 people were interviewed, of which 50 informants were involved in disaster management and 21 were participants in military operations. Of the 71 informants, 10 were women (**Tables 1 and 2**).

For the sake of clarity, military organizations and civilian crisis management organizations will from now on be referred to as uniformed organizations, a term inspired by Soeters [19].

2.3. Data collection

Data were collected from interviews, following a prepared interview guide. The interviews consisted of open-ended questions and individually adapted follow-up questions covering

Organization	Involvement in rescue operation	Number of informants	Female/ male	Their position (during the rescue operation)
1. The Swedish Rescue Services Agency	Tsunami	5	1/4	<ul style="list-style-type: none"> • Director-general • Head of Operational Management • An emergency service function called focal point • Two crisis managers
2. A local rescue service organization	Sulfur spill Hostage-taking	11	2/9	<ul style="list-style-type: none"> • Incident commander • Chief fire officer (CFO) • Chief fire officer (CFO) on duty • Overall incident commander • Incident site officer • Chief of staff • Full suit firefighter • Information officer
3. An emergency treatments unit	Sulfur spill	4	1/3	<ul style="list-style-type: none"> • Chief of emergency treatment • Officer on duty • Incident site medical officer • Emergency medical officer
4. Swedish Armed Forces	Tsunami	6	0/6	<ul style="list-style-type: none"> • Logistics coordinator • Medical doctor on duty • Liaison officer sent from operative unit (OPU) and located at the Swedish Rescue Services Agency • Two managers for the operational section on duty • The head of the logistics department
5. National Board of Health and Welfare	Tsunami	6	2/4	<ul style="list-style-type: none"> • Director-general • General Manager of Administration • Head of Social Services Department • Head of Crisis Management Department • Two Operative Managers
6. A regional public prosecution office	Hostage-taking	2	1/1	<ul style="list-style-type: none"> • Two chief prosecutors
7. Regional Police Department	Sulfur spill Hostage-taking	11	1/10	<ul style="list-style-type: none"> • Head of the police department in charge of law and order • Three chiefs of staff • Two negotiators • Two police incident officers • An adviser to strategic commander • An information officer • A liaison officer
8. A prison establishment	Hostage-taking	5	1/4	<ul style="list-style-type: none"> • Director-general, • Three detective inspectors • Chief of security
(N) informants		50	9/41	

Table 1. Overview of informants from civil disaster management.

the following themes: (1) background, (2) individual role and task during a specific rescue/military operation, (3) experience of individual actions during the rescue/military operation, (4) experience of organizational actions during the rescue/military operation, (5) experience

Organization	Number of informants	Female/male	Their position (during the international military operation)
1. Swedish Armed Forces	20	0/20	<ul style="list-style-type: none"> • Military observers (3 persons) • Liaison officers (11 persons) • Contingent commanders (4 persons) and • Military attachés (1 person). • Police officer
2. The Ministry of Foreign Affairs	1	1/0	<ul style="list-style-type: none"> • First secretary to the Swedish embassy
(N) informants	21	1/21	

Tables are published in Alvinus [2] which is the doctoral dissertation.

Table 2. Overview of informants from international military operation.

of collaboration between the authorities and the organization during the rescue/military operation and (6) stress and demanding conditions during the rescue operation.

The interviews were conducted between January 2005 and July 2008 at the informants' workplaces, in the premises of the Swedish Defense University and in two informants' residences; two were conducted over telephone. The interviews were recorded and generally lasted about 60–210 minutes. All interviews were conducted and analyzed by the authors. The data may be outdated but it makes a contribution to further theoretical elaboration on boundary spanners and organizational centaurs in context of crisis management.

2.4. Data analysis step 1: inductive generation of a conceptual model

The interviews were transcribed verbatim and analyzed according to the constant comparative method of Glaser and Strauss [18], and clustering, a process of moving to higher levels of abstraction [18]. The first step was so-called "open coding." Data were examined line by line in order to identify the informants' descriptions of thought patterns, feelings and actions related to the interview themes.

The codes derived were formulated in words resembling those used by the informants. For example, the following statement was coded as 'Church minister helping':

I picked someone from the support group and our prison pastor [.../ but we were so lucky because another minister from Mariefred lived on the top floor [in the building where the hostage lived]. He was their neighbor [.../ so those three travelled together – our support person, our prison pastor and the other minister went and met his [the hostage's] wife and family to inform them.

Codes were then compared to verify their descriptive content and to confirm that they were based on the data. The second step involved sorting the codes into different categories. The above example, 'Church minister helping', was sorted into the category 'Spontaneous links'. Similar codes sorted under the category 'Spontaneous links' had similar characteristics, that is, they had no organizational belonging, predefined positions or tasks. They occurred when the

needs of the crisis became too great for the organization to manage by itself, thus contributing to assisting the organizational members resolve the crisis. The next step consisted of putting 'Spontaneous links' into the superior category "Partly human" after constantly comparing interview transcriptions, codes, categories and superior categories. The category 'Partly human' is characterized by human actions, qualities and behavior and how significant these are to the organizational adaption to crisis. There was consequently a clear connection between becoming a spontaneous link as a result of one's knowledge and competences and contributing to solving the organization's task. A similar line of thought guided the creation of the other categories. Data were also analyzed with respect to the selection criteria, meaning that comparisons were made between the different organizations and the different roles occupied by the informants according to Glaser and Strauss [18]. The final step consisted of fitting the superior categories together using the constant comparative method. This resulted in a clarification of organizational centaur theory using the existing typology of partly organization and partly human concepts.

2.5. Data analysis step 2: comparison of the generated conceptual model and the concept "organizational centaur"

The second analytical step was in itself a two-step procedure. First, components of the organizational centaur concept were identified in the literature source [16]. Second, a qualitative evaluation was performed where these components were compared to the generated conceptual model. This evaluation was based on our understanding of the meaning of the components. The process resulted in the following categories: (1) categories that were evaluated as identical although sometimes labeled differently, (2) categories found in the existing organizational centaur concept only and (3) categories found in the inductively generated conceptual model only.

3. Results

3.1. Part 1: A conceptual model generated from data in highly demanding conditions

The analysis of the interviews shows that boundary spanners, seen through the lens of the organizational centaur, facilitate the adaption of the organization to demanding and uncertain conditions. Managing uncertainties as a boundary spanner can be understood in terms of a typology differentiated at the organizational and individual levels. For this reason, the analysis continues under two separate sections: (1) partly organization defines the prevailing conditions in uniformed organizations for boundary spanners who contribute to the organization's foundation of competence and behavior, and also outlines the limitations this may entail and (2) partly human focuses on the human factors that are particularly relevant in demanding situations.

Superior categories at the organizational level named partly organization that emerged in the analysis of the interviews were the following: (1) boundary spanners' organizational belonging

– being a part of greedy institutions, (2) acting at the boundary of the organization and (3) building neutral temporary organizations. The following aspects at the individual level named partly human have been crystallized in terms of the part human aspect of demanding situations: (1) no mistakes, (2) using contextual intelligence in boundary spanning, (3) managing asymmetrical collaborations, (4) improvisation vs. structure and (5) spontaneous links. Each aspect will be illustrated by relevant quotes to provide empirical clarification of the theoretical discussion. The purpose of this outline is to explain and define how the core variables are supported by quotes, codes and categories. Please see **Table 3** for an over-arching definition.

3.1.1. *Partly organization*

Boundary spanners who carry out actions on behalf of an organization are only operating as a part of the organization and will, to varying degrees, replace the organization in a certain context. This duality stems from double intentions that the boundary spanner is also partially carrying out a personal action that is controlled by personal qualities and emotions. The organization furnishes its members with resources, tasks, objectives, motives and knowledge, while the members furnish the organization with a body and a voice, with all that entails. The workers have only a limited say in what is to be done and how, because the organization curbs their capacity to change their minds, chiefly when it comes to major decisions. This makes acting on behalf of an organization somewhat trying, and is also the cause of tension between the demands and the actual execution of the task [20].

3.1.1.1. *Boundary spanners’ organizational belonging – being a part of greedy uniformed organizations*

The analysis of the interviews shows that organizational adaption to demanding conditions occur through a number of organizational factors. In uniformed organizations, liaison is a

<div><div>The context: national and international disaster and crisis management, international military operations</div></div>	
Partly organization Organizational factors contributing to boundary spanners’ ability to adapt the organization to demanding conditions	Partly human Individual factors affecting organizational adaption
<ul style="list-style-type: none">• Boundary Spanners’ organizational belonging – being a part of greedy uniformed organizations• Being and acting at the boundary of the organization• Building neutral, temporary organizations	<ul style="list-style-type: none">• No mistakes• Using contextual intelligence in boundary spanning• Managing asymmetrical collaborations• Improvisation vs. structure• Spontaneous links

Table 3. Boundary spanner as the organizational centaur in demanding conditions.

common type of task and organizational belonging defines and shapes the nature of this liaison, as tasked by organizations which have extremely high demands on performance, efficiency and results. One interview quote illustrates this:

The uniform represents legal violence, and behind that uniform, whether it's in UN or EU context, there is an organization that has the resources necessary to practice this legal violence. So the signals are clear – I'm here, I'm unarmed, I'm not dangerous to you but at the same time, my uniform represents those standing behind me.

Quote above demonstrate boundary spanners who have a specific liaison task in a demanding situation. Many of these individuals liaise in very difficult conditions, for example, disaster management, and also in threatening environments, where life and limb are in the balance. For these boundary spanners, markers of belonging to a certain uniformed organization (emblems, military rank and uniform, etc.) can make them political targets for certain types of opinion, whether that be favorable or less so. It does not matter how friendly or skilled you are at liaising as an individual if you are wearing the 'wrong' emblem or rank on your uniform. There are advantages and disadvantages to belonging to a "greedy organization". Soeters [19] and Weibull [21] agree that military organizations are 'greedy institutions' that demand a great deal from their organizational members, who are trained, practiced, educated and specially selected to execute the activities of the organization. Hierarchical ranking is decided by grade and acquired level of expertise, and provides a clear indication of organizational position for each individual. Like-minded people are trained in creating a common sense of solidarity, which separates the group from others in the environment [22, 23]. On the other hand, boundary spanners experience increased internal conflict in that they are part of the strong solidarity of their own organization while they must also nurture contacts and their interests outside of the organization.

3.1.1.2. Being and acting at the boundary of the organization

Most of our interviews reveal boundary spanners acting in the field, having to manage serious accidents with many fatalities, looking after survivors or saving lives and fighting the enemy. The boundary spanners themselves had the remit and authority to collaborate with external actors belonging to their own organizations, other partner organizations or those who were volunteers and civilians. Being some distance from organizational boundaries had both advantages and disadvantages in regard to organizational adaption to demanding conditions:

[A commander] and I went along together to speak to the people in the field and he got a picture – one from the outside which was more precise than the one we could see. Things started to become clearer.

In a civilian crisis management context, the work of boundary spanners cooperating with each other at the perimeter of the organization (far away from home) and in the field, where a demanding situation has occurred, can be very beneficial in forming an operational picture. In the quote above, the situation surrounded a leak of sulfuric acid at a harbor in Helsingborg, Sweden, and confirms how the operational picture becomes clearer the closer to the incident

you are. Even in uniformed organizations, it is common for organizational members to operate “at the boundary of the organization”. In difficult situations, the opportunity to monitor the perimeters of the organization is reduced, and one way to manage this is through well-trained boundary spanners [2]. Their ability to quickly form an impression of the operational picture at the scene, convey information for better decision-making and communicate between uniformed organizations which speak ‘different’ organizational languages has led to a more favorable result according to Danielsson et al. [22, 23]. While those who act from a distance are naturally bound by predetermined organizational routines and regulations, as human actors they will always act as half organization and half individual. Creating relationships with external actors is a key task for boundary spanners. In more demanding contexts, informal contacts may have value but if they become an objective in themselves, the survival of the organization may be jeopardized. The quote below illustrates how too much trust between partners can lead to economic or emotional dependency, along with the risks associated with starting romantic relationships in the operation zone or accepting cash bribes when money is tight.

You might get hired and get paid...as an attaché or liaison officer in Afghanistan, you could find yourself in some sort of dependent position with the person you are collaborating with and it could be an emotional one – getting involved in various love affairs has happened.

Because you can't... if you go out there and have disastrous finances when you come out. If a defense attaché leaves with completely wrecked finances or a string of different relationships, with lovers on the scene. Your collaborator can find that out pretty easily – it's the classic way of roping you in.

Hidden agendas and informal relations can impact destructively on the reputation of the organization, on the individuals involved and on the working groups, both in the short and long term. The destructive forces of informal actions in an organizational setting have been studied by Hackman and Johnson [24], with particular focus on leaders using informal power to achieve personal or organizational goals. However, according to Hackman and Johnson [24], informal strategies are also constructive in terms of managing product development, coordinating with others and of help in removing incompetent leaders, which may be difficult to do using formal rules. While the above-mentioned studies state that informal actions influence the internal workings of organizational life, the present study shows that boundary spanners not only influence the organization, but also the environment.

3.1.1.3. Building neutral, temporary organizations

Boundary spanners who are geographically distanced from their organizations, at the scene of accidents, or in other regions or countries must still contribute to facilitating collaboration. In a number of cases, this means expanding the physical area and embodiment of the organization, as has occurred in civilian catastrophes where the rescue initiative has expanded across national boundaries and also involved military operations in the affected country.

Each nation has its intelligence outfits or sources in this area – informers or analyses or whatever, right? And then they have to be of service to the command center – in the national pipeline then. The problem is that these things are relatively sensitive and you're reluctant to

release it between nations because it's a commodity... it's currency, isn't it? That's why nations make use of this buying and selling stuff – you buy and sell information between nations. So you have to have national intelligence services, so you literally build a village with containers arranged in a circle. Each container gets its information from home so you really have to make an assessment. So you meet in the middle to exchange information because they (the liaison officers) have a mandate from Swedish intelligence and security services as to what they can and cannot say. Then they exchange information with each other and then they can confirm things with the commander.

A last aspect forming part organization is the opportunity for the organization, via individuals, to realize forms of neutral, temporary organizations or meeting places. The purpose of these is to handle sensitive information in an exchange and gather resources in one place, which takes place in designated localities, not only for security reasons but also ensure the exchange can be carried out on equal terms and in a more 'neutral' setting. Temporary organizations or meeting places can be provisionally set up in containers, as verified by the informant cited above.

As previous studies confirm, temporary organizations materialize in the field and boundaries are created between the 'real' organization and the environment. Johansson [13], discuss the concept of the semi-organized field, which is defined as an area delimited by prior arrangement, the purpose of which is to facilitate the exchange between organizations and individuals on the ground. As the quote shows in the semi-structured field, temporary organizations arise – a common occurrence in military contexts, offering an atmosphere of neutrality, a meeting place where exchanges take place on equal terms. Similar results have been shown in a study of how formal organizations act when something unexpected happens. Lanzara [25, 26] argues that formal organizations can be paralyzed in the event of an accident, and that is why temporary organizations arise, facilitating the clear-up operation. One explanation as to why temporary organizations emerge may be that individuals within them have local knowledge of the incident area, and have the ability to be creative, precisely because they have not had the time necessary to erect more formal structures. This is characteristic of crisis management, but in a military context it is about creating a neutral meeting point as a preventative measure, when life or death is at stake.

3.1.2. Partly human

Organizational adaption to demanding conditions is also dependent on the actions and behavior of the boundary spanners. This section presents the meaning of being partly human as a boundary spanner. Regardless of rank, grade and organizational belonging, the fact of being human may have positive or negative aspects, that is, it may be both an asset and a weakness for the organization. Here next we will focus on these particular human aspects of boundary spanning in demanding situations and their influence on organizational efficiency. The focus is mostly on boundary spanners' behavior.

3.1.2.1. No mistakes

How boundary spanners act in collaborative situations in various contexts depends on how well equipped they are in terms of competences and qualities that help them avoid faux pas.

Such faux pas may involve a lack of diplomacy or cultural awareness, incorrect expression, breach of regulations, provocative behavior, etc. The quote below focuses on how some have perceived such faux pas and felt their damaging short and long-term effects on the collaborative process:

I've learnt one thing, for example, that we should try to avoid the risk of stomach bugs, so I always have a bottle of alcohol for hand washing in the car so that each time you shake hands with someone you can clean your hands thoroughly. It can be very sensitive though. In Congo I happened to be seen by someone as I was cleaning my hands with alcohol and his comment was that we think they are sick – that white people have to wash after shaking hands with black people. So there's a cultural thing you have to be careful about too.

Even so, boundary spanners can make mistakes if they are not watchful of their own behavior. The quote above from a liaison officer who has worked in Africa illustrates how a simple act of hygiene could be construed as an insult by the local population. There is very little tolerance for mistakes in uniformed organizations. Particularly in a military context, any mistakes made may be of a life-threatening nature and may destroy many different aspects of the organization. For example, trust in the individual can be negatively influenced in leadership [20], the organization, and ultimately, the credibility of the nation [17]. In short, tolerance of 'mistakes' in the military is less than it would be on the civilian employment market, due to its right to use weapons and violence. For boundary spanners that are even more vulnerable at the periphery of the organization, this is particularly important to manage.

3.1.2.2. Using contextual intelligence in boundary spanning

An important aspect of organizational adaption is how boundary spanners influence the situation through their emotional intelligence, herein described as contextual intelligence because it involves adaption of emotions to the dynamic and demanding conditions of the context. Having the ability to calm agitated individuals is one example of managing a situation, which relies on the individual making use of their personal resources on behalf of the organization.

So many of those situations, where I know how we, at a restaurant or a discothèque or someplace, he was upset because we closed the place because drugs and stuff were on the increase. But I often felt it worked – I had quite a calm effect on people I go in and talk to.

I must have talked for two hours and that was mostly with the man who was in the apartment and not the suspect, but his mate, and he was the communicator, he was like a filter between us two – it worked really well because we do have a different way of talking sometimes, us police.

In demanding contexts, the use of smart power and contextual intelligence means being able to sense threatening situations while having a de-fusing effect. One strategy of collaboration is to have a calming influence on other people who feel provoked and express anger or frustration. The second quote demonstrates that once the hostage takers had been located it was the negotiator's job to try to get them to give up and to ensure the arrest went calmly. Contact between the hostage taker and the negotiator was established and communication mainly took place via a friend of the suspect. Boundary spanners in uniformed organizations do not merely

employ weapons, they must have an ability to persuade without needing to use violence. One way of doing this is to employ smart power and contextual intelligence. In his book, *The Powers to Lead*, Nye analyses the conceptual pair of 'hard' and 'soft' power. Nye [27] defines the concept of power as something used in order to get others to do what you personally wish to achieve. To succeed in this, there are three different approaches: through force and threat, through various kinds of reward systems such as hard power techniques, but also through attraction and cooperation, such as soft power techniques. According to Nye [27], a combination of hard and soft power – so-called 'smart' power – is the best combination, employing different degrees of the different approaches depending on context and situation. Some situations require more hard power than soft, and vice versa. For a combination to be successful, Nye [27] considers contextual intelligence to be necessary. Contextual intelligence is the ability to understand different environments and thus choose those strategies which best suit the specific environment. This is particularly important for boundary spanners who will be operating in demanding situations.

3.1.2.3. *Managing asymmetrical collaboration*

The interview analysis highlighted one challenge faced by boundary spanners acting on behalf of the organization in demanding situations, namely collaborating with actors who do not always follow rules, belong to another hostile organization, are threatening or culturally different, or have too many or too little resources to meet on the 'same symmetrical terms'. As the task is always in focus, individual and organizational adaption is necessary:

We collaborate with individuals in the gray zone – sometimes you are forced to deal with certain people even if we know or have a good reason to believe that they might be criminal, but we still have to meet them because he might just be the mayor of the town.

The quote above illustrates meetings with unofficial groups that, although having a criminal background, also have an important societal function, their role and position making them inevitable collaboration partners. The task of the uniformed organizations, (e.g. the Swedish Armed Forces) has increasingly come to be characterized by a need to cooperate with different actors, such as other military organizations in connection with multinational operations – which one can discuss in terms of symmetrical relationships. An increased need for collaboration with civilian individuals and NGO organizations is also apparent, presenting itself as asymmetrical relationships because civilian and NGOs do not have the same resources [2] or the same agenda for collaborative goals. Not uncommonly, local actors in the host country (e.g. chiefs of police), who are seen by Swedish officers as corrupt, are the very parties with whom they collaborate [2]. For boundary spanners, this is an enormous challenge, as collaboration does not take place on equal terms with partners of a similar background. For the collaboration to be successful, the boundary spanners must contribute in different ways in order to create a sense of symmetry between partners – an illusion that collaboration is being carried out on equal terms.

3.1.2.4. *Improvisation vs. structure*

Boundary spanners acting at the perimeter of the organization meet with a dynamic and often unpredictable course of events, putting great demands on competence and management. It is

not always possible to follow all the rules of the organization to succeed. Sometimes, improvisation is needed to save lives and accountability must often be dealt with later.

You can't forego the rescuing part in order to build up structure. That's something that can be done afterwards.

The example above is a quote from the Southeast Asian tsunami, when a boundary spanner reported a strong need for freedom to act and to take personal initiative. The balancing act between improvisation and structure can be seen as one important aspect for boundary spanners to manage in demanding situations, as highlighted by a number of studies. Examples include when boundary spanners have succeeded in bridging the gap between structure and improvisation during the tsunami catastrophe [2], or in international military relationships [2, 28]. Jackall's [29] study points out that organizational members at both leadership and collegial levels depart from the prescribed regulations – no-one blindly follows all the rules. An organization would scarcely function if all the rules were adhered to. This is especially important to remember as the need for improvisation is considered essential in order for lives to be saved. Whether to stick rigidly to the rules and endanger life or break the rules to save it has been a relevant discussion but has become more topical in several specific contexts such as health and care services, but also crisis management in a military context [29]. The most important thing for boundary spanners is to find a balance between structure and improvisation. Overemphasizing authority and structure could easily lead to paralysis and delay, while overemphasizing freedom could lead to a lack of collaboration and to conflicts between actors who wanted to act in disparate ways. Similar results have been shown by Larsson et al. [28].

3.1.2.5. Spontaneous links

The focus of the analysis was organizational adaption and how this occurs through individuals, highlighting a particular type known as spontaneous links. A spontaneous link is a kind of improvised boundary spanner without clear organizational belonging, which becomes useful with its particular qualities and skills out in the field when something unforeseen occurs. Spontaneous links can also arise at different stages, as contacts or resources associated with other boundary spanners, thus creating a network. Although these individuals can make a substantial contribution, there is a risk that, like 'cooks', too many spontaneous links 'spoil the broth'. The most important aspect highlighted, however, is that no matter whether they belong to uniformed organizations or are volunteers, spontaneous links can help solve tasks and consequently help in the organization's adaption.

At the end of the day I got in touch with a guy XX who had contact with someone down there (Thailand); he suddenly appeared – this Swedish Air Force officer who was there celebrating his 50th birthday. So he turned up and asked if they needed help with anything.

At the outset of the tsunami catastrophe, when uncertainty was great, boundary spanner roles named spontaneous links were operating out in the field, illustrating the fact that actors emerge when a need becomes visible, as was the case in the quote above. The analysis of the interviews shows that spontaneous links are shown to encompass volunteers as well as other boundary spanners from other organizations. Lovegren Bosworth and Kreps [30] found in

their study that role improvisation is more likely to occur in extending and emergent organized responses [30]. Further study of the roles that may arise during crisis management and in international military context is also advocated and there is emphasis of the fact that regardless of whether an initiative is planned or not, improvised roles will always arise, and to varying degrees. Johansson's concept of spontaneous volunteers as the individuals who assist at the scene of a disaster and his discussion of how they are viewed by involved organizations, for example, the rescue services and police [31], is an important contribution to the definition of roles which occur spontaneously.

3.2. Results part 2: comparing the inductively generated model to the existing organizational centaur concept

The results of the comparison between the qualitatively generated model on the one hand, and the existing organizational centaur concept on the other, are presented in **Table 4**.

Existing organizational centaur category	Generated model
<p><i>Partly organization</i></p> <ul style="list-style-type: none"> • General organizational belonging – that members are bound to the organization through contracts, positions, etc. • General description of power and resources provided by the organization to its members. People's ability to act as partly organization is reinforced by the organization's resources • Regular monitoring of individuals. Grass roots bureaucrats and boundary spanners are nevertheless more difficult to manage as they operate at the organizational perimeter • Individuals can be replaced, although it is more difficult to replace those who possess special competencies or belong to a tightly knit group 	<p><i>Partly organization</i></p> <ul style="list-style-type: none"> • Specific description of a particular organizational member, that is, Boundary Spanners. Boundary Spanners' organizational belonging – being a part of <i>greedy uniformed</i> organizations. Military and response organizations that have extremely high demands on their members • Being and acting at the boundary of the organization, using organizational resources to save lives or enter armed conflict. The task is to manage difficult and stressful conditions • Building neutral, temporary organizations in threatening environments using resources provided by the organization • Control dimension is little emphasized and trust, as well as being trained to act as a boundary spanner is more important. More empirical research required here, however • Missing. Empirical research required as to replaceability of individuals as skills, training and also gender, age and cultural background can impact on task solving
<p><i>Partly human</i></p> <ul style="list-style-type: none"> • Loyalty to the organization • Human action makes the organization vulnerable in the long term • Informal processes are created as a result of emotions not being allowed to be released. Empirical details on informal processes and informal roles are missing • Breaking up from the organization 	<p><i>Partly human</i></p> <ul style="list-style-type: none"> • Loyalty is embedded in "organizational greediness". A lack of tolerance for mistakes as these can put people's lives and health at risk. No mistakes. Any mistakes or human action affects the organization in the long term • Below follow a number of informal measures associated with task solving. Informal processes can be seen as both favorable and unfavorable aspects: Using contextual intelligence in boundary spanning. Managing asymmetrical collaborations. Improvisation vs. structure. Spontaneous links • More empirical research required

Table 4. Comparison between data and the organizational centaur concept.

According to our analysis, the existing organizational centaur model can be seen as being built up by four concepts forming the Partly organization part, and the concepts underpinning the Partly human part. The main finding is that most of these can also be found in the qualitatively generated model based on emergency-type organizations. Within the Partly organization domain, the control concept was less emphasized, while trust was more underlined. Moreover, the replaceability aspect was given no or limited attention in the emergency-type data. Turning to the partly human domain, the main difference is that there is a much richer amount of detail on informal processes and informal roles in the generated model. It was also found that the organizational centaur concept “breaking up from the organization” had no equivalent in the emergency-type model.

4. Discussion and conclusions

The aim of the present study was to compare the existing conceptualization of the dual nature of organizational centaurs (partly organization and partly human) to what could be found in an investigation of organizational contexts characterized by risky and life-threatening situations. In our opinion, the organizational centaur model proved to provide a meaningful framework for a more holistic understanding of the conceptual “bits and pieces” that were previously identified in empirical studies. At the same time, the presented grouping of these empirically generated concepts offers an illustrational of a special case of the organizational centaur model. The main difference between the two models has contextual roots. Boundary spanners in a greedy-type of organization need to manage demands where they jeopardize their own lives in order to solve organizational tasks [32]. This is not the case for organizational centaurs in civilian contexts [16]. Despite this difference, however, it was concluded that the most parts of the organizational centaur model had their equivalents in the empirically generated model. This further adds to our conclusion that the organizational centaur model provides a meaningful conceptual umbrella when looking at boundary spanners. The empirically generated model emphasized trust rather than control. This has been reported as an absolute necessity for boundary spanners in high-risk environments [2, 20]. This appears to be reasonable and different from less threatening situations. Top management needs to trust specially selected boundary spanners and the latter group needs to experience that they are trusted in order to perform their risky tasks well. The richness of data on informal processes for handling emotions, asymmetrical collaboration relationships, improvisation versus structure, spontaneous links, etc. constitutes a substantial addition to the centaur model. Similar kinds of details can probably be found in other kinds of organizational contexts as well. The components presented here illustrate this particular special case.

The fact that no data was found in the empirical model on replaceability can probably best be understood as a result of this question area not being covered in the interviews. An organization such as the military, for instance, has a long tradition of maintaining clearly defined procedures in the event of someone being killed or wounded in action. The organizational centaur model rests on a critical theory paradigm and the empirically generated model on a functionalistic one. Given this, the high correspondence may seem surprising. Our interpretation

is that life and death contexts foster a functionalistic approach. It is a win or die context and the interpreted similarity may not be relevant in other contexts.

This study has several limitations. In constructing the current conceptualization with one core variable and two superior categories, the researchers were limited to data obtained from a selected group of informants. The study's strengths include the abundance of qualitative data and the variety of contexts and informants and their experiences. In this globalized world, cross-sectorial and international collaboration is essential in order to manage the demanding conditions characterizing disasters, accidents, war and terrorism. The number of accidents, crises and wars has been increasing year on year [33] so the need is very real. Boundary spanning and spanners, seen as a form of organizational centaur (a social hybrid) can therefore play a key role in the context of crisis management. Practically, this book chapter can be used for educational purposes to increase awareness of the new demands made on boundary spanners in uniformed organizations and what they may need out in the field.

We conclude by presenting three suggestions of future research. Firstly, more research is needed to distinguish different types of boundary spanners (e.g. women and men) when it comes to dealing with stressful and difficult situations in disaster management and in a military context. Secondly, boundary spanners may experience inner conflicts due to the demands of the organization on the one hand, and the demands of acting outside of the organization on the other. For this reason it would be interesting to study the emotional stressors that boundary spanners might face, the feelings they have to deal with and how they might be given support.

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