UMEÅ UNIVERSITY

The role of the military

A study in how civil-military cooperation is formed during CBRN incidents

Daniel Strömberg

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Abstract

Europe is currently in a stage of increased military spending due to greater insecurity in the region. Previous studies claim that one consequence of such an increase may be greater reliance on the military in matters that had previously been handled by civil agencies. Are societies in Europe facing a change in which the military will be more involved in crisis incident response? The purpose of this study is to examine if the role of the military in a society depends on the level of militarization of the country.

With the foundational question of why the military has different roles within different societies, this study focuses on civil-military cooperation (CIMIC) dealing with CBRN (Chemical, Biological, Radioactive and Nuclear)-related issues, in order to investigate the possible relationship between CIMIC and militarization. Empirical data from countries with high- and low levels of militarization are collected, and thereafter analyzed and categorized into "ideal types" of CIMIC. The forms of each country are then compared and put in the context of militarization in order to answer the foundational question.

This study initiates the closing of a research gap regarding examination and analysis of the relationship between militarization and CIMIC during CBRN incident response. Additionally, this study marks the initial development of a method, including new "ideal types", that enables the comparison of CIMIC, opening new doors for analysis of civil-military cooperation.

Key Words: militarization, civil-military cooperation, CIMIC, Governance Theory, CBRN

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List of Abbreviations

CIMIC	Civil- and Military Cooperation
SIPRI	Stockholm International Peace Research Institute
U.S.A.	United States of America
CBRN	Chemical, Biological, Radioactive, and Nuclear
MCLEA	Military Cooperation with Law Enforcement Act
DOD	Department of Defense
SOP's	Standard Operating Procedures
GDP	Gross Domestic Product
LLM	Low Levels of Militarization
HLM	High Level of Militarization
OECD	Organisation for Economic Co-operation and Development
NATO	North Atlantic Treaty Organization
NIMS	National Incident Management System
HFC	Home Front Command
IDF	Israeli Defense Forces
MoD	Minister of Defense
EMS	Emergency Medical Services
GAF	German Armed Forces
NCOs	Non-Commissioned Officers
SAF	Swedish Armed Forces

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1. Introduction

1.1. Overview

Why does the military have different roles within different societies? In some countries, armed military forces may be patrolling the streets, while in other countries military personnel are only allowed to conduct security tasks during times of national emergencies. The reasons behind these differences are as diverse as they are complex and have been studied by scholars around the world.

The multifaceted nature of this question makes it extremely difficult to answer, so this study narrows it down to a discussion regarding possible reasons why civil- and military cooperation (CIMIC) is formed differently in different countries. In particular, possible reasons for why the military has different roles in CIMIC are examined.

One theoretical concept often used in discussions related to military roles in societies is militarization. This concept has by some scholars been described as a mindset and actions which should be limited while others have chosen to highlight positive effects that have followed the militarization of societies. Previous studies point out that one of the results of increased militarization is greater reliance on the military in domestic matters. These conclusions, drawn by other scholars, become the theoretical basis for this study, in which the relationship between militarization and forms of CIMIC is explored. The unchallenged question so far is, can the role that the military has within societies, particularly domestic civil-military cooperation, be explained with the theoretical concept of militarization? If this is not the case, what other factors may have greater validity in explaining the role of the military in CIMIC? The aim of this study is to shed more light into these questions by comparing forms of CIMIC during CBRN incident response in countries that have high and low levels of militarization.

In this study, conclusions are drawn by investigating the possible relationship between militarization and CIMIC in preparation for and response to CBRN incidents. Focus has been placed on CBRN incidents because it is a field in which military resources can provide critical support for civil agencies. An example of this that will be discussed in section 4.3. is the case of Germany, where CBRN is a set area in which the military is required to be capable to support civil agencies if requested or if support is necessary (Innenministerkonferenz 2011, 20).

This study sets out to create three "ideal types" of how CIMIC can be formed, in order to analyze empirical data from each country (with militarization as the independent factor) and to enable the comparison of CIMIC in these countries. A model is developed in order to compare key features investigated and to draw conclusions. These ideal types (**Autonomous actors**, **Cooperation** and **Regulation**) are based on the ideal types (market, network and hierarchy) used by Governance Theory.

1.2. Background

Europe is currently undergoing increased militarization, as "military expenditure in Western Europe rose for the second consecutive year and was up by 2.6 percent in 2016. There were spending increases in all but three countries in Western Europe" (Stockholm International Peace Research Institute [SIPRI] 2017). After eight years without mandatory military service (värnplikt), Sweden reintroduced conscription in 2018 (Försvarsmakten 2019), and the Swedish Minister of Defense has confirmed that funding to the Swedish Armed Forces (Försvarsmakten) will have a steady incline during upcoming years (Larsson 2019). Based on conclusions drawn from previous research that increased militarization results in the military taking a more active role in society, this increase in militarization may have implications for incident response and civil-military cooperation within European societies.

1.3. Disposition

This study begins with an overview of the content of the study, including the purpose and research questions in the Introduction chapter. This is followed in chapter 2 by a clarification of the various definitions of militarization which leads to conclusions regarding expected characteristics of military-like civil-military cooperation. The chapter on Methodology clarifies how this study is conducted and how data is assessed. In chapters 4 and 5, empirical data will be presented and analyzed, which will be followed by a discussion of findings in chapter 6.

1.4. Research Problem

The theoretical concept of militarization is commonly used by scholars, although they may use different definitions of the term. These can be categorized into an understanding that militarization is either a process, in which an entity becomes more military-like, or as implementations, with resource allocation to armed forces as an example. Research has furthermore shown how in what way the characteristics of militarization may be evident within societies.

Taking conclusions of past research into account suggests that the role of the military within societies is determined by the level of militarization (i.e. to what extent a country is militarized). Militaries in countries such as United States of America (U.S.A.) and Israel should, based on this assumption, cooperate with civil agencies in a different way and to a different extent than the militaries in Germany and Sweden. More explicitly, in a more militarized country like U.S.A. or Israel, previous research suggests that CIMIC should be more military-like and take a more hierarchical form. This assumption has so far been unchallenged, and the extent to which militarization may explain the role that the military has within the societies of these and other countries is the aim of this study. In addition, other factors that may affect CIMIC are discussed following the data analysis.

1.5. Purpose and research questions

The purpose of this study is to investigate the extent to which militarization may explain the role that the military has within societies with respect to CBRN incidents. A more specific aim of this study is to explore the relationship between forms of CIMIC and militarization, with special focus on CBRN incidents.

In order to examine various aspects of militarization, and thus better identify the impact that militarization may have on CIMIC, three research questions have been formulated. The first research question serves to build a theoretical understanding of the concept of militarization and uses this to create a hypothetical form of CIMIC that can be used as a point of comparison. The second research question focuses on creating a way to compare CIMIC in different countries, using the Forms of Governance theory as a starting point. The third research question uses the findings from the comparison of CIMIC in different countries to draw conclusions regarding the relationship between militarization and the role of the military in civil-military cooperation. The following research questions direct the structure of this study:

1) What traits should be prevalent in civil-military cooperation in militarized countries, according to existing research?
2) In what way can the Forms of Governance Theory be used as a base for the creation of a new model which defines ideal types, and enables the comparison and analysis, of civil-military cooperation?
3) How, if at all, does the form of civil-military cooperation dealing with CBRN-related issues differ between countries that have high- and low levels of militarization?

1.6. Implementation

This research studies existing structures and methods for mutual support of civil- and military agencies and organizations during domestic crises. These are categorized into forms of cooperation in order to enable comparison between countries, with the aim to reveal potential tendencies that are connected to militarization. Findings and conclusions of the study are compared to previous research to highlight what has been added to the academic discussion.

1.7. Previous research

The majority of previous studies covering the topic of CIMIC are focused on cooperation during peacekeeping and peace enforcing missions. Military approaches to CIMIC, also covered in these articles, are though applicable for cooperation in domestic incidents as well. Catriona Gourlay describes how military institutions place great value on command and control, clear lines of authority, discipline, accountability and top-down hierarchical organizational structures. This directive and coercive approach may clash with the less hierarchical and more participatory style of humanitarian organizations (Gourlay 2000, 36).

There is strong criticism of the militarization of domestic disaster response (Etkin, McBey and Trollope 2011, 10-11). A statement made by the U.S.-based National Emergency Management Association (NEMA) is used by Etkin, McBey and Trollope as an example of criticism towards militarized disaster response. NEMA is quoted in the article as stating: "The National Emergency Management Association does not support an increased role for the active military in disaster response. … NEMA does recommend improved procedures, and a greater understanding by state and local officials of those procedures that allow civilian authorities to request assistance and support from the military in a timely and efficient manner in those rare and catastrophic circumstances that require response capabilities of a magnitude only DoD can provide." (Etkin, McBey and Trollope 2011, 12). Criticism of hierarchical command and control models are as well covered in the article, due to the failure of this system to sufficiently incorporate local authority, expertise, and cultural concerns (Etkin, McBey and Trollope 2011, 12). Finally, the article quotes W.L. Waugh who concludes that "sensitivity is necessary for intergovernmental and multi-organizational efforts to operate smoothly and effectively. That is one reason why military-style command and control structures are often inappropriate in disaster operations", which may result in a "clash of civilian and military organizational cultures…" (Sylves and Waugh 1996, 347).

As stated in the introduction, this study investigates the relationship between militarization (in the form of military spending) and how CIMIC is formed in the case of CBRN incident response. Data collection and an empirical analysis is necessary due to the fact that no previous studies could be found that have both (a) compared forms of CIMIC, and (b) analyzed forms of CIMIC with militarization as the independent factor. Additionally, no previous research comparing and analyzing CIMIC during CBRN incident response could be found. This lack of material highlights the need for this study.

Previous research conducted on militarization will be covered in sections 2.1 and 2.2.

2. Theory

As stated in *Purpose and research questions* in the Introduction chapter, the overall purpose in this study is to determine if the role that the military has in a society is determined by whether or not the country is militarized. In other words, does militarization (independent factor) determine the form of CIMIC (dependent factor) in a society? In order to be able to draw conclusions regarding this potential relationship, a method is developed through the operationalization of Governance Theory. This chapter covers these two theories: **Militarization,** as the independent factor in this study and **Governance Theory,** which is for operationalization and forms the base of a method to compare CIMIC. This operationalization is further described in the Methodology chapter.

The beginning of this chapter contains a theoretical discussion regarding definitions of militarization, therefore clarifying the following research question: What traits should be prevalent in civil-military cooperation in militarized countries, according to existing research? The following areas of discussion will first have to be clarified in order to answer this question;

1) Definitions of militarization
2) Characteristics of militarization
3) Expected prevalent characteristics in military-like CIMIC

The purpose of these topics is to precede the study in order to answer the first research question, and while doing so to form a theoretical foundation and understanding needed for the remainder of the study.

This chapter initially explores the definitions of militarization and the interconnected concept of militarism in order to understand the aim, and the limitations, of this study. The characteristics of militarization are thereafter covered briefly as a reference for the final question, in which the characteristics of a military-like CIMIC will be discussed.

2.1. Definitions of militarization

Militarization is a concept which has been defined in various ways by different scholars. It is therefore important to outline the definitions that are primarily used in academia, in order to clarify the understanding of militarization that is used for this research.

Militarization is defined by The Stockholm International Peace Research Institute (SIPRI 1982, 393) as "a steady growth in the military potential of states. Such growth is usually accompanied by an increasing role for military institutions both in national affairs, including the economic, social and political spheres, and in international affairs." (Ross 1987, 562). This definition includes the increase in both military capability and military influence within societies, which are conclusions that are shared with other scholars such as Miles Wolpin, Francis Beer and Augusto Varas.

The definition in which militarization is linked with resource allocation is described by Wolpin as a process in which state resources are increasingly assigned to the military, alternatively to military-related activities (Ross 1987, 562). This understanding is shared by Asbjorn Eide and Marek Thee, who write that "Militarization manifests itself in the increase in armaments, advances in the destructive capacity of weapons, growing number of people under arms, and dramatic increases in military expenditure" (Eide and Thee 1980, 9).

A definition of militarization that focuses on military influence within societies is used by Beer who has identified militaristic behavior in domestic, culture, society, economy and government (Beer 1981, 12). Varas shares this focus, defining militarization as a "growing military involvement in, and control of, domestic politics", and as "an overemphasis on the importance of armed forces" (Varas 1985, 26-27).

Steve Carlton-Ford uses the definitions of social- and economic militarization when describing the effects of militarization on society. Economic militarization is used to describe how countries buy and maintain weapons systems as well as the support for the armed forces, while social militarization includes the recruitment and maintenance for armed forces (Carlton-Ford 2009, 864). Carlton-Ford's definition of economic militarization is shared by Hubert P. Van Tuyll in his study Militarism, The United States, and the Cold War, when he includes militarization, cultural behavior and national policy in the concept of militarism. Van Tuyll's definition of militarization includes the quantity and proportion of resources that a society allocates to military affairs. Cultural behavior covers organization, group and individual behavior and attitudes, while national policy focuses on governmental actions, which includes tendencies to sign treaties and frequency of military interventions (Van Tuyll 1994, 519).

Van Tuyll is not alone in attempting to differentiate between the concepts militarism and militarization, as seen above. Militarism is described by Eide and Thee as an inclination to

rely on military means when dealing with conflicts (Eide and Thee 1980, 9). Peter B. Kraska defines militarism as an ideology on how to best solve problems. Furthermore, "it is a set of beliefs, values, and assumptions that stresses the use of force and threat of violence as the most appropriate and efficacious means to solve problems" (Kraska 2007, 3). Militarization is for Kraska the implementation of the above-mentioned ideology, where "to militarize means adopting and applying the central elements of the military model to an organization or particular situation" (Kraska 2007, 3).

In conclusion, militarization may be defined as a process, where i.a. societies and organizations become more military-like, or as the implementation of militarism which includes repressive- and/or militaristic behavior, or as resource allocation to the armed forces. This study uses the resource allocation definition of the concept of militarization. The main reason for choosing this definition is the ability to measure and compare the amount that countries spend on their military, in contrast to the difficulty of measuring the level of militarization under the other definitions.

2.2. The characteristics of militarization

Certain types of developments follow an increase in militarization, although the impacts of militarization have been debated by scholars. While some compare militarization to a disease which should be eradicated (Ross 1987, 561), others emphasize an overweighing positive development following an increase in militarization (Carlton-Ford 2009, 866). The extent and degree of the developments as positive or negative is relative to various factors, and often related to the degree of democratic policies implemented by a government (Carlton-Ford 2009, 869).

Other research has indicated that investments in social welfare, such as "benefits for social insurance, public assistance, family stipends, health, and employment-related sickness and injuries", are smaller in countries with large armed forces (Gifford 2006, 481).

Hall, Coyne and Kraska point out that increased militarization results in greater reliance on the military in domestic matters (Hall and Coyne 2013, 488). An example used by Kraska is the central role that the US military has taken in war-on-terror initiatives and homeland security, the latter after the US Congress passed legislation establishing the military as a central feature of homeland security (Kraska 2007, 10). The passing of the 1981 Military Cooperation with Law Enforcement Act (MCLEA), and the nearly 10.000 civil activities in which the Department of Defense (DOD) supported state and local law enforcement, are

other examples used by Hall and Coyne (Hall and Coyne 2013, 495). The result of greater reliance on the military and military-like policing seen in several democracies (Sotomayor 2013, 43 & Kraska 2007, 6 & Hall and Coyne 2013, 486), is a blurring of civil- and military functions. A common denominator for this development is an intensification in the efforts of dealing with issues that are of both national- and international nature, such as terrorism and drugs (Kraska 2007, 11 & Hall and Coyne 2013, 500).

2.3. Expected characteristics in military-like CIMIC

The clarification of the characteristics of militarization enables the creation of a hypothesis as to the shape that a military-like CIMIC would take. Doing this answers the first research question: "What traits should be prevalent in civil-military cooperation in militarized countries, according to existing research?"

Based on the conclusion drawn above, that the military acts as a key player in domestic issues, Kraska's four dimensions of the military models will be used for the provision of tangible indicators of military-like CIMIC. The dimensions are *material*, *cultural*, *organizational* and *operational*, and have been developed for the study of the levels of police militarization (Kraska 2007, 3). He recognizes that the police have always been militaristic at some level, and is therefore estimating the level of militarization (in the sense of being military like) in a continuum (from low level- to high level of militarization) (Kraska 2007, 4). The model is in this study utilized to categorize the areas that may take a military-like character.

Key features, connected to the four dimensions are (Kraska 2007, 3):

- Material: Advanced technology and equipment.
- Cultural: Values, beliefs and martial language.
- Organizational: Martial arrangements of control centers.
- Operational: Operational patterns modeled after the military.

These dimensions will in this study be used as a reference for the areas in which incident response conducted by civil agencies may be more military like, rather than being used as a tool to analyze the degree of militarization with the application of a continuum.

Combining Kraska's four dimensions of militarization, the assumption that the military acts as a key player in domestic issues, with the hierarchical structures of military organizations (Feld 1959, 18 & 22) leads to the following expected characteristics of military-like CIMIC:

- A hierarchical form of organization, with a top-down approach and delegated responsibilities.
- The basis of cooperation within civil- and military agencies is based on standard operating procedures (SOP's).
- Regarding the operational dimension, communication is based on routines, with high levels of hardware interoperability.
- As to material, military equipment should be prevalent and specialized due to delegated responsibilities. Planning and development should be delegated.

The hypothesis in this study is that militarized countries tend to adopt the military-like form of CIMIC defined above, and identified as **Regulation** (sections 2.5 and 2.6). In order to identify these characteristics within CIMIC in countries, and in order to be able to compare how CIMIC differs between countries, a method is needed that enables analysis and comparison. Such a model, which includes both key features for analysis and forms, or ideal types, for comparison is provided by Governance Theory through the "Stylized Comparison of Forms of Economic Organization" (Powell 1990, 300).

2.4. Governance Theory

It is possible to differentiate and compare collaboration through the application of Governance Theory, more specifically by the use of Powell's model for comparison of forms of governance that includes the governance forms of market, hierarchy and network. The model enables this comparison with the use of key features, and the result is that an analyzed case has tendencies towards one of the three forms, or "ideal types". This model for analysis fits the needs of this study, even though the forms used in the model do not fit the forms of CIMIC. Therefore, both the key features and the forms used by Powell will be modified to reflect the focus of this study.

Clearly specified benefits of the exchange of i.a. information and resources, where little trust is needed, is one of the main characteristics of markets. Contracts and regulations-guided relations, flexible collaboration and cooperation that is regulated mainly by prices are other attributes that contribute to the market form of governance. Powell concludes this as being a "spontaneous coordination mechanism that imparts rationality and consistency to the self-interest actions of individuals and firms". He continues "The stereotypical competitive market is the paradigm of individual self-interested, noncooperative, unconstrained social

interaction. As such, markets have powerful incentive affects for they are the arena which each party can fulfill its own internally defined needs and goals" (Powell 1990, 302).

Hierarchies are characterized by routines, clean lines of authority and detailed reporting mechanisms. Routines are the base for communication, in which the position of the employees shapes the channel in an employer/employee relationship. The result of these relationships is a work environment which is reliable and stable, creating a high level of commitment among partners. Commitments take time to establish and to terminate due to agreements that are based on various types of contracts (Niehaves and Plattfaut 2011, 187). Powell points out the strengths of hierarchy to be "its reliability – its capacity for producing large numbers of goods or services or a given quality repeatedly – and its accountability" (Powell 1990, 302).

The key characteristic for networks is interdependency, in which resources are shared, and strengths are complementary. This creates an effort to establish and sustain a long-term relationship between the parties, and mechanisms for solving conflicts are created to achieve this (Niehaves and Plattfaut 2011, 187). The basic assumption of interdependency, integrated amongst members in a network, results in pooling of resources and parties "agree to forego the right to pursue their own interest at the expense of others" (Powell 1990, 302).

Table 1: Stylized Comparison of Forms of Economic Organization

Key features	Forms		
	Market	**Network**	**Hierarchy**
Normative Basis	Contract – Property Rights	Complementary strengths	Employment Relationship
Means of Communication	Prices	Relational	Routines
Methods of Conflict Resolution	Haggling – resort to courts for enforcement	Norm of reciprocity – Reputational Concerns	Administrative – Supervision
Degree of Flexibility	High	Medium	Low
Amount of Commitment Among the Parties	Low	Medium to High	Medium to High
Tone or Climate	Precision and/or Suspicion	Open-ended, mutual benefits	Formal, bureaucratic
Actor Preferences or Choices	Independent	Interdependent	Dependent

Table 1: Powell's Stylized Comparison of Forms of Economic Organization clarifies the key features that differentiate the three forms of organization. (Powell 1990, 300)

2.5. Theoretical framework

The theoretical framework used in this study is the combination of the expected characteristics of military-like CIMIC, which is linked to militarization, and to Powell's model for comparison of forms of governance, which is part of Governance Theory. While the former is used as a base for one of three ideal types (**Regulation**) used in the analysis, the latter forms the base for a new method of analysis developed for this study. The modified model is used as an analytic tool when drawing conclusions regarding both the overall form that CIMIC takes in each country (ideal type analysis), and for comparison of specific key features between cases.

2.6. Ideal types and CIMIC comparison model

Ideal types used for the comparison of CIMIC in the modified model are **Autonomous actors**, **Cooperation** and **Regulation**. The Governance Theory form of market can be better described by the term **Autonomous actors**, in which collaboration between actors during CIMIC is sporadic, actors have an independent approach to each other, and there is a lack of a unified CBRN incident response approach. **Cooperation** replaces network and is characterized by interdependency and shared responsibility for the capability to respond to CBRN incidents. **Regulation** replaces hierarchy, as CIMIC is highly regulated, has hierarchical traits and is the most military-like of the three forms. This form has a top-down approach which is directed by set plans and directives.

The operationalization of Governance Theory will be described in section 3.6.

Table 2: Forms of Civil-Military Crisis Management Organization

Original Name	Key Features	Sub Features	Forms		
			Autonomous	**Cooperation**	**Regulation**
Normative Basis	**Basis for Cooperation**		Legal Requirements	Complementary strengths	SOP's
Means of Communication (new)	**Means of Communication**		Task (Prices)	Relational	Routines
Means of Communication	**Communication Interoperability**	**Hardware Interoperability**	Limited to Moderate	Moderate to High	High
		Terminology	Different	Similar	Similar
Degree of Flexibility	**Degree of Flexibility**		Medium-High	Medium-High	Low
Tone or Climate	**Responsibility**		Separated (Civil or Military)	Shared (Flexible)	Formal (Delegated)
	Climate		Suspicion	Mutual Benefits	Bureaucratic
Actor Preferences or Choices	**Usage of Resources**		Independent (Duplicated)	Interdependent (Intertwined)	Dependent (Specialized)
	Planning and Development		Separate	Joined/Linked	Delegated

Table 2: Original features of Governance Theory together with modified key features and forms, with two additional sub features. Identifying characteristics or the degree to which key features are met are used to determine a country's form of Civil-Military Cooperation.

3. Methodology

The main aim for this study is to answer the third research question: How, if at all, does the form of civil-military cooperation dealing with CBRN-related issues differ between countries that have high- and low levels of militarization? This chapter describes and explains the process by which the study was designed and conducted, and empirical data collected and analyzed.

After an initial examination of existing research, case study results are analyzed in order to form conclusions as to whether or not there are any links between the theoretical framework of militarization and the structural form of CIMIC. Instrumental case studies are used in combination with multiple case studies, which may also be referred to as comparative case studies (Lapan, Quartaroli and Riemer 2012, 246 & Yin 2009, 61). Four countries serve as cases and empirical data is collected through qualitative interviews. The tool used to analyze collected data is a model based on Powell's Governance Theory, modified for this study (Powell 1990, 300-305). Research questions are discussed after the results of the data collection are analyzed.

Each step of this methodology builds on the previous step in order to answer each research question while pursuing the ultimate purpose of this research: to discover any links between increased militarization and the role of the military within a society, and in particular, CIMIC during CBRN incident response. This research starts with an examination of what previous research has discovered about the effects militarization has had on societies, then uses this as a background for predicting what civil-military cooperation would be expected to look like, thus addressing the first research question. In order to prove, or disprove, this prediction, each case is examined and analyzed, then compared with the help of a template. This process provides an answer to the second research question. Findings from using this template to compare forms of CIMIC in each country reveal similarities and/or differences in countries that have high- or low levels of militarization, which answers the third research question as well as the overall purpose of this study.

Identification of a plausible relationship between militarization and forms of CIMIC can be done if at least one of two conclusions can be drawn. The first is that there is a clear difference between HLM- and LLM countries, in which it is the dissimilarity between the two groups that points out a relationship between militarization and CIMIC. The second

conclusion, which is not required for connecting militarization and CIMIC, is the linkage between conclusions drawn regarding forms of CIMIC in HLM countries and a military-like CIMIC form (**Regulation**) developed in the Theory chapter. This military-like form of CIMIC will be based on previous research regarding militarization.

How effective cooperation is within countries is not important for this study, and the focus is instead to gain knowledge as to what shape cooperation has, based on specific features which are described below.

3.1. Research design

Initially, existing research is studied in order to build a foundation for how CIMIC would be expected to look in militarized countries. The effects of militarization are reviewed and a hypothesis is formed, which is then tested by the results of the case studies.

This study is constructed on interview-based, instrumental case studies. The reason for using instrumental- rather than intrinsic case studies is that the results will explain a phenomenon rather than focus on the cases themselves (Lapan, Quartaroli and Riemer 2012, 246). Empirical data collected from Sweden, Germany, Israel and United States provides the basis for the analysis and discussion regarding the possible relationship between militarization and forms of CIMIC. This study examines the current forms of CIMIC, where a good understanding and in-depth analysis of cooperation in each country is necessary. Multiple case studies allow for the examination of contemporary events and the comparison of the results, which are key features of this research (Yin 2009, 11).

The strength of multiple case studies is the ability to identify possible causal mechanisms. This is obtained through the detailed attention to a few cases, which enables a better oversight and a more careful process-tracing (Bloemraad 2013, 3). The case study investigator should pay extra attention to certain attributes when collecting empirical data. To set aside preconceptions and ideologies, be flexible and adaptive, have a good understanding of the issues that are studied and finally to remain unbiased to the empirical data are a few attributes that are of most importance during the research of this study (Yin 2009, 69).

3.2. Choice of cases

This research explores a possible relationship between militarization and forms of CIMIC, and the cases chosen for this study are liberal- and ethnic-democracies. The form of militarization that was investigated in this research is, as stated above, a pragmatic approach

in which military spending is a key feature. Countries with high and low military spending are identified and categorized into two groups. These are subdivided into liberal- or ethnic-democracies and countries with other systems of government, in order to exclude governance type as an explanatory factor to the result (Smootha 2002, 475). The cases chosen for this study are Germany, Sweden, Israel and United States, all of which are liberal- or ethnic-democracies. The two former cases, with Germany spending 1.22 percent and Sweden spending 1.03 percent of gross domestic product (GDP) on the military, have low levels of militarization (LLM). Military spending in Israel (4.75%) and United States (3.15%) clearly shows a much higher level of militarization (HLM). As reference, average military spending for the world that same year (2017) was 2.18% while for EU member countries it was 1.51% (World Bank 2018). All countries are as well classified as being high income OECD countries, which places them among the richest countries in the world (Organisation for Economic Co-operation and Development [OECD] 2018).

Limitations in regard to cases are: the choice of cases, due to language barriers and systems of government, and the number of cases. The number of cases has been limited to 4 due to time restraints and scope of this research. Language barriers limit the possibility of conducting research in countries such as Japan and France. Reasons for cases chosen in regard to system of government are described above.

3.3. Data collection

The aim during the data collecting phase, is to gather enough information regarding CIMIC in each case to be able to categorize and analyze them by using a template. The aim is therefore not to draw conclusions regarding the effectiveness of CIMIC or about current capabilities within countries.

Interviews are used as the main source for data collection, while documentation is predominantly the source for reference- and background knowledge. Focused interviews are conducted in an open-ended conversational manner that still follows a certain set of questions and can therefore be best described as being semi-structured (Yin 2009, 107). This enables the interviewees to describe the current situation in each country in their own way, at the same time as it allows follow up questions that may be necessary to clarify, sum up or confirm shared information. This type of case study interviews is used for this study since it enables the interviewer to be flexible and adaptive, and effects of possible preconceptions are

reduced due to the nature of open-ended questions. Similar data, which later is easier to analyze, is usually the result of focused interviews, due to the use of similar questions.

The sources of data collection for this study are national experts of crisis management, and the majority of interviewees have a special expertise in CBRN-related incidents. Data collected for each case study is based with one exception on two sources; one interviewee is of a military background while the second is civilian. That both military and civilian sources are chosen is necessary for accurate insight and understanding in aspects of CIMIC within each country. Due to time restrictions and difficulties arranging an interview, only one national expert has been interviewed in the case of Germany.

Sources have been identified through purposeful sampling, the necessity of "information-rich" sources (sources that may provide much information) being the reason (Lapan, Quartaroli and Riemer 2012, 253). The wide scope of features of CIMIC that is included required a great amount of knowledge, thus the need of national experts. A second reason for purposeful sampling is the large size of some countries, which most often generates a larger number of actors, ergo a greater need for expertise in order to understand the crisis management system.

Criticism of sources

The empirical data used in this study is collected from sources that act as experts within their fields, which increases its validity and reliability. Further aspects that increase trustworthiness and validity of the sources are the aims of the research and the use of focused interviews. That the aim of the research is to identify the forms of CIMIC, rather than the effectiveness of it, decreases the incentive of the sources to overstate or exaggerate the data with the intention to endorse security policies and responses within their own countries. The use of focused interviews enables the collection of applicable data, due to the use of open-ended questions.

3.4. Method of analysis

This study is an exploratory case study, in which pattern matching is used for the data analysis (Yin 2009, 141). Collected data is classified and compared between cases. Results from countries with high- and low levels of militarization are compared in order to identify similarities and/or differences that may indicate a correlation between militarization and

forms of CIMIC during CBRN incident response. Further similarities are analyzed in order to identify additional explanations as to how CIMIC is formed.

No template for the comparison of forms of CIMIC existed prior to this study. This led to the development of the template *Forms of Civil-Military Crisis Management Organization*. This template is based on Powell's *Governance Theory,* and alterations are based on CBRN incident response requirements that are found in NATO's *Guidelines for first responders to a CBRN incident* (North Atlantic Treaty Organization [NATO] 2014).

Governance Theory is used as the basis for the template developed in this study due to its existing template for the differentiation of forms of governance. This template includes key features, such as *normative basis*, *means of communication*, and *actor choices,* which are important aspects when analyzing CIMIC, thus making it the best template to use as the basis for analyzing this research. Further aspects of *Governance Theory* making it an appropriate basis are the forms *market*, *network* and *hierarchy* that, after being modified, describe the range of different forms of ideal types of CIMIC (Powell 1990, 300-305), although cases may not have all features that correspond to one form of governance. Based on *Governance Theory*, the *Forms of Civil-Military Crisis Management Organization* template facilitates the comparison of CIMIC during CBRN incident response. Additionally, the ability to compare specific features makes it possible to draw conclusions based on similarities and differences between countries.

Being a study where the majority of data is gathered through semi-structured interviews, a deductive content analysis is best used to analyze this data (David & Sutton 2004, 205). The ideal types or forms of CIMIC, **Autonomous actors**, **Cooperation**, and **Regulation**, together with developed key- and sub-features, are used as categories by which the collected data is coded. Collected data is initially categorized into key- and sub-features, by identifying main tendencies in each case. An effort is made to identify which description of each key feature best describes cooperation in each case, knowing that aspects of all ideal types may be present within CIMIC in a country. After the identification of each key- and sub-feature, the result is analyzed by identifying tendencies in relation to the three ideal types of CIMIC. Tendencies in countries that have high- and low levels of militarization are thereafter compared, with special interest in the relationship between countries with a high level of militarization and the form of **Regulation**. In addition, key- and sub-features are analyzed by

comparing the result of case studies with the aim of identifying similarities and differences may have explanatory factors other than the levels of militarization of a country.

3.5.Ethics

The interviewed national experts from each country are, before each interview, informed about the content and purpose of the study and the aim of the interview. They are as well given the opportunity to ask any type of question before the interview. In some cases, interview questions and results of previously conducted interviews are sent prior to the interview in order to give the interviewees an accurate of an understanding as possible of the aims of the interview. This is done due to a concern expressed by some interviewees that the studied subject is considered to be sensitive. Agreements about how interview material was to be handled have been taken seriously and kept in the duration of the work of this study.

Interviewees have formal positions (as national experts) and have not been pushed to answer a question if they felt unsure or that answering the question required the sharing of sensitive information. They have as well, when agreeing to being interviewed, accepted that their names are used as sources for this study. Results, conclusions and documents showing how these conclusions were reached have been sent to interviewees for two reasons: this gives the interviewees the opportunity to review and ensure that no information or conclusions drawn may be considered as sensitive information, and so that the experts may respond in the case that they have been misunderstood, or if the text does not accurately reflect their understandings and opinions. These actions are based in part on the guidelines of the Swedish Research Council (The Swedish Research Council 2015).

3.6. Operationalization of Governance Theory

As stated earlier in section 2.6 Governance Theory, the lack of an existing method for comparing forms of CIMIC necessitates the development of a template specific for this task. The following sections cover the operationalization of Government Theory.

3.7. CBRN incident response requirements

It is necessary to adjust the key features of Governance Theory in order to apply its categories to CIMIC of CBRN incidents. Capabilities such as methods for information gathering and sharing between responding agencies, common command system and structure, effective on-site inter-agency coordination, pre-agreed responsibilities and bilateral agreements, are important for effective response and have therefore been integrated in this study (NATO

2014). These requirements are the basis for the following altered key features: *Basis for Cooperation*, *Communication Interoperability*, *Responsibility*, *Usage of Resources* and *Planning and Development*.

3.8.Forms of Civil-Military Crisis Management Organization

Modified key features serve to answer the following questions:

Table 3: Modified Key Features

Basis of cooperation	What is the initial reason for cooperation?
Means of Communication	What triggers communication?
Hardware Interoperability	What level of compatibility do the parties have?
Terminology	How similar is the specialized vocabulary used by military- and civilian agencies?
Degree of Flexibility	How flexible are parties for changes required within the cooperation?
Responsibility	How is responsibility delegated amongst the parties?
Climate	What defines the relationship between civil- and military agencies?
Usage of Resources	How is the system of resources structured?
Planning and Development	What is the relationship between CIMIC and planning and development?

Table 3: Explanation of modified key features created for the purpose of this study.

This study focuses on the key features of: *Basis of Cooperation*, *Responsibility*, *Usage of Resources*, and *Planning and Development*. The reason for this is that these features provide the most relevant information when investigating when and how military agencies and assets are used in domestic issues, and by doing this looking at the main subject of this study, which is the role the military has within societies during CBRN incident response. Traits that would be expected to be prevalent in CIMIC in militarized countries should be possible to identify using these four key features.

- *Basis of cooperation* covers how the use of military assets in domestic issues is initiated.
- *Responsibility* involves the extent to which the overall responsibility of having the capability to manage CBRN incidents is delegated prior to and during such incidents.

- *Usage of resources* includes which and to what extent military resources are used in order to manage CBRN incidents, in addition to the overall view held by civil agencies on how military equipment is to be used.
- *Planning and development* includes the extent to which military actors are involved in the process involving planning and development of equipment and resources.

Referring to Kraska's four dimensions of military models and key factors in CIMIC concerning CBRN incidents, in militarized countries these four key features can be expected to contain the following characteristics:

- *Basis of cooperation*: founded on a pre-set plan that describes how and in what way various types of incidents should be handled. This includes a description of which actor is responsible for certain aspects of incident response. Tasks for various actors, such as private organizations, civil agencies, military, or different levels of governments are clarified.
- *Responsibility*: based on a pre-set plan in which different actors have tasks and obligations. Tasks and responsibilities are pre-set and delegated, and there is little room for flexibility.
- *Usage of resources*: because there is a clear crisis management plan in which areas of responsibilities are defined, the tasks of each area of responsibility are specialized, meaning that the equipment used by the various actors is also specialized. This results in a system of dependency due to the fact that specialization leaves little room for redundancy. Each actor has only the equipment needed for its own specialized task. Resources are also specialized for specific tasks, that it makes it difficult if not impossible for other actors to use this equipment, possibly due to lack of training or lack of hardware interoperability.
- *Planning and development*: in a crisis management system, where tasks and equipment are organized according to all-encompassing plan, planning and development is expected to be incorporated in this plan. This means that the development of new equipment and planning for the use of resources is delegated according to this plan.

The remaining key features: Means of Communication, Hardware Interoperability, Terminology, Degree of Flexibility and Climate, are used for analysis but function as a

supportive role in this study. These key features will be covered in the Empirics chapter and will be used for analysis in chapters Analysis and Discussion.

3.9. Assessment design

Basis of cooperation

Governance Theory identifies complementary strengths, contract and employment relationship as the factors that differentiate the forms in regard to normative basis. The latter two are in this study modified due to requirements that are connected to CBRN incident response. *Contracts* of markets becomes *legal requirements*, and *employment relationships* is changed to *Standard Operating Procedures* (SOP´s). The aim of this *Key feature* is to identify the key aspects of the initiation process of CIMIC, so special focus is put on possible requirements for mutual support, CIMIC initiation procedures and historical contributors to current crisis management policies and strategies.

Autonomous actors - Legal requirements (Contract oriented)

Cooperation between civil- and military agencies, in this category, is primarily based on the legal requirement to assist other agencies due to insufficient resources of the initial actor, i.e. when the agency that has the initial responsibility of managing the incident determines that additional assets are needed.

Cooperation is therefore, **circumstantial** – in the sense that the response and the cooperation are formed according to the incident, with no pre-set procedures, and **indirect** – in the sense that military units or assets will be used as mandated by laws or directives.

Cooperation - Complementary strengths (Task oriented)

The military agency that is best fitted acts as supportive unit, or in cooperation with other agencies. This proximity to and capacity for managing a specific incident determines how the cooperation is formed.

Cooperation here is **circumstantial** – in the sense that the response and the cooperation is formed as a response to the incident, with no pre-set procedures, and **direct** – in the sense that support is initiated primarily due to the proximity and capability of local military assets. There may be legal requirements for cooperation, where the difference between this and the *Legal requirements* form is that both the military and civilian agencies may be used in the initial phase of the incident response without the necessity of laws or directives. Cooperation is in this way initiated without reference to a legal framework.

Regulation - SOP's (Protocol or Procedure oriented)

Cooperation within this category is pre-set.

Set – The cooperation of a crisis response is set according to directives, laws and SOP´s. These may vary in scope and content, but commonalities are codified responsibilities and forms of cooperation that are established prior to the incidents and have limited space for change during the response process. Responsibilities and the form of the response are therefore not formed specific to the incident but rather set up in advance according to the nature of the incident.

Responsibility

Responsibility and the key feature of *Climate* replace the *Tone or Climate* feature of government theory. How responsibility is delegated amongst civil- and military agencies is covered in this key feature.

Responsibility is, in one sense, an obligation to respond or offer support during an incident and by doing so holding or sharing accountability for incident management. Responsibility for incident management may be held by only primary actors (often civil agencies), or it may include secondary actors (often military assets or agencies). The focus in this study is on how the responsibility to manage CBRN incidents is distributed amongst actors such as local governments and agencies.

Responsibility may be distributed to agencies that have responsibility to cope with incidents during initial and secondary stages. Examples of this may be civil first-responder agencies that have the initial responsibility to manage the incident. The general responsibility for the incident response may include other agencies that may be activated during later stages, with the use of directives or legal clauses. These second phase agencies are required to support and may but are not required to have the capability to support. This study does not emphasize the analysis of any capabilities of the countries, so any conclusions as to whether or not second phase agencies are responsible to respond are based on existing directives or legal clauses.

Autonomous actors - Separated (Civil or Military)

Responsibility that is separated between military- and civilian actors, i.e. separated fields of responsibility, constitutes autonomous actors. There is no responsibility to support other agencies upon request, meaning that the military does not have to support civil actors and vice versa.

Cooperation - Shared (Flexible)

Cooperation is characterized by shared responsibility in the sense that agencies may not deny requests of support. If support is requested, it must be given. This necessity of giving mutual support is formal, meaning that these requests are pre-set and widely known by civil and military actors.

Regulation - Formal (Delegated)

Formal responsibility defines regulations, where responsibilities for certain tasks or areas are delegated. Set areas of responsibility and tasks are part of a general plan for crisis management which includes both civil- and military actors.

Usage of Resources

Actor preferences is a *Key feature* in Governance Theory, which has been modified for this research. How resources are coordinated and integrated is covered in this form. The ways in which the access to resources, between civil- and military agencies, are organized is of special interest in this feature.

Autonomous actors - Independent (Duplicated)

Actors act independently with little need of the other, and resources are consequently duplicated. This is usually the result of an understanding that civil and/or military incident response actors should have the capability to manage incidents without the support of other agencies.

Cooperation - Interdependent (Intertwined)

Actor tasks are intertwined which spills over into an interdependent approach towards the way resources are structured and allocated. The thought of how crisis management is to be handled in these countries is based on the assumption that in cooperations, "one party is dependent on resources controlled by another, and…there are gains to be had by the pooling of resources" (Powell 1990, 303)

Regulation - Dependent (Specialized)

In regulations, actors and resources are specialized which creates a dependence. Each agency has specific tasks and objectives, resulting in individual agencies having only the equipment for managing specific tasks. This creates a system of dependency on other agencies and their equipment in order to handle any kind of incident.

Planning and Development

Planning and Development is an added *Key feature*, which aims to clarify the way in which planning and development of equipment and resources is coordinated or synchronized between civil- and military actors.

Autonomous actors - Separate

Planning and development is conducted separately, with little or no interaction between civil- and military actors.

Cooperation - Joined/Linked

Close synchronization between civil- and military actors, where planning and development is joined/liked, constitutes cooperations.

Regulation - Delegated

Planning and development in regulations is delegated and connected to a general CBRN crisis management plan and strategy.

4. Empirics

In this chapter the results, which are based mainly on interviews conducted with national experts, are presented. As described earlier, although this study places a special focus on four key features, all eight key features are part of the data collecting, analysis and conclusions. The four focus key features are presented more fully for each country, while the remaining features are summarized at the end of each case section. The templates present the form that CIMIC takes in each country during crisis management in regard to CBRN incidents.

4.1. U.S.A.

Basis of cooperation

There are no written laws, policies or set procedures for an automatic activation of CIMIC in U.S.A. according to interviewed experts. The factor that best describes the initiation of CIMIC is expectation, in which requests for additional resources are anticipated to be supplied by local, state or federal agencies. The incident response system is based on a bottom up structure, in which the request for expertise or resources is initiated at the local level, with a request for federal assets ultimately being made possible through the request of the state governor. CBRN incidents usually trigger federal support due to additional need for manpower and, most of all, expertise (Bebarta 2018 & Little 2018).

As a state asset, the National Guard may be activated by the state governor in order to support civilian agencies and first responder units. Little explains that the highest commander will, throughout the duration of the incident, be civilian, with the exception being an event involving a military base. The top official will usually be a mayor or the governor, who will delegate tasks to their office of emergency management. Military involvement and assets always have a supportive role, meaning that the majority of the responsibility remains on civil agencies (Little 2018).

Bebarta points out that there are important questions that need to be answered before military involvement, such as: what is my mission? How will the mission be funded? What is the chain of command? Regarding the first question, military commanders contemplate if all non-military units have been exhausted and if it is a relevant mission for their unit. The consequence of needing to answer these questions prior to involvement is prolonged deployment (Bebarta 2018).

Responsibility

The division of responsibility, according to the U.S. and State Constitutions, can be divided into federal-, state- and local level. At the state level, it is the task of the state governor to assess the scope of major incidents and to decide if the use of state assets is necessary. The National Guard is the asset that has primary responsibility for the provision of military assistance to local governments within a state. Local responsibilities are shared between i.a. mayors, fire- and police officials, sheriffs, and public health officials. These officials are responsible for the planning for, and the execution of, first response to emergencies that arise within their jurisdiction (Swedish Civil Contingencies Agency (MSB) 2009, 265).

Legal structures vary between states and may ease or hinder CIMIC, as one expert expressed. "Legal structures widely differ between the states. For example, New York has fairly robust state laws and regulation that allow them to operate more as an effective command and control type system. Even though the concept is still supposed to be that the individual jurisdiction, where the event happens, has the initial responsibility and they reach out to partners for mutual aid". He then continues, "Some states can have a lot of control that way. Colorado is one example, of a home rule state, where authority that exists at the local level is pretty much paramount, unless there is specific language at the state level that overrides it for whatever reason. That scientifically limits ability of the state to enforce cooperation between the agencies and cities." (Little 2018).

The division of responsibility between the civil- and military sectors in U.S.A. should best be analyzed with the separation of formal- and informal responsibility. The latter is expressed by both civilian and military parties through mutual support when needed. One example provided by interviewed experts is military units that have the capability to support civil first responders during the contamination phase of incidents, and it is common that these are utilized when needed (Bebarta 2018 & Little 2018). Responsibility is in this sense shared.

Formally, missions of both parties focused primarily on their own sectors, where mutual support is best described as a secondary objective. Budgets and equipment acquired by the parties are examples of this, as equipment used by the military is specialized for military missions rather than for civilian support. A low level of equipment interoperability between the actors is one of several results of the dissimilarity of missions. A further consequence is a crisis management system that is not built on a default access to assets supported through CIMIC. Little stated, "we'll be happy to help with this if we're around and if we're able"

(Little 2018). Even though primary missions are pre-set in the U.S.A., these are not based on a general CBRN incident plan that includes military- and civil- actors.

Resources

There is a clear differentiation between military and civilian resources according to experts, and they are only used by their own agencies. The access of military resources is therefore only possible to civilian agencies with the activation of military units, and vice versa. Equipment is selected based primarily on particular mission requirements of each organization or agency, with budgets and associated suppliers as secondary factors. Overlapping missions, in which different actors have similar tasks but with different aims (military or civilian), together with the previously mentioned factors result in a duplication of resources (Bebarta 2018 & Little 2018).

Experts state that the reduction of duplication of resources and collective planning is currently mostly an ambition rather than an actuality, where efforts of standardization are hindered by laws and how responsibilities are defined and assigned within each state. One example brought up by an expert is decontamination where "One of the problems is that the decontamination round crosses so many specialties, so many organizations, which makes it is hard to standardize. It would be easier if it would have been only hospitals, or only fire departments. Right now, it's a mix of organizations". Statewide planning efforts are evolving with the structural support of the NIMS (National Incident Management System) doctrine (Bebarta 2018 & Little 2018).

Additional key features

Means of communication between units are based on past relationships, while "all formal communication for task assignment, pretty much has to go through the governor's office. It's though possible to reach out informally to reach out to various agencies in order to start pre-deployment". This categorizes it as *routines* and *relational* (Bebarta 2018 & Little 2018).

In regard to **hardware interoperability,** "Homeland Security does have the biggest footprint in this area, but it oversees has a great number (5000) different chemical response units. Each one is dictated by its local authority and budget". One interviewee stated that military equipment is purchased for combat needs but is then used for civilian needs as well. However, "there is no interoperability of communications equipment, for practical reasons". Hardware operability is therefore *limited to moderate* (Bebarta 2018 & Little 2018).

An effort to use *similar* **terminology** can be traced to 9/11. "Since 9/11 there has been an effort to make vocabulary more consistent or shared," which is also supported by the NIMS doctrine (Bebarta 2018 & Little 2018).

Regarding **degree of flexibility**, there are two levels. "People are flexible. The units are flexible as long as they can afford to do it, and that it is mission based, and they know who's in charge". Although individual people may be flexible, state constitutions within home rule states may hinder flexibility, as could mission assignment. Therefore the result is a *low* Degree of flexibility (Bebarta 2018 & Little 2018).

One interviewee states that the **climate** between agencies is "beneficial and bureaucratic. But in general beneficial". Interagency climate is therefore *mutual beneficial* and *bureaucratic* (Bebarta 2018 & Little 2018).

Table 4: CBRN CIMIC crisis management organization form in U.S.A.

Key Features	Sub Features	Autonomous	Cooperation	Regulation
Basis for cooperation		Legal Requirements	Complementary strengths	SOP's
Means of Communication		Task	Relational	Routines
Communication Interoperability	**Hardware interoperability**	Limited to Moderate	Moderate to High	High
	Terminology	Different	Similar	Similar
Degree of Flexibility		Medium-High	Medium-High	Low
Responsibility	---	Separated (Civil or Military)	Shared (Flexible)	Formal (Delegated)
Climate	---	Suspicion	Mutual Benefits	Bureaucratic
Usage of resources	---	Independent (Duplicated)	Interdependent (Intertwined)	Dependent (Specialized)
Planning and development		Separate	Joined/Linked	Delegated

Table 4: Results of empirical analysis of CIMIC in U.S.A.

4.2. Israel

Basis of cooperation

A number of historical events have, to a large extent, contributed to shaping how CIMIC in preparation for and response to CBRN incidents is formed in Israel. The usage of CBRN agents on the general population or on military has been a perceived threat for Israel since the 1960's. Egyptian use of mustard gas in Yemen, followed by C agent incidents during the Iraq/Iran war and the Syrian civil war, have, together with smaller and lesser known incidents in the region, emphasized the need for efficient defense and counter measures (Eisenkraft 2018).

A defense strategy for a large-scale attack with nerve-agents was renewed after the first Gulf War, when it became apparent that main targets were Israeli cities. It was decided that the military together with local authorities would respond to such events, and the Home Front Command (HFC), a military branch with the main purpose of protecting civilian lives, was established in 1992 (Eisenkraft 2018 & Israeli Defense Forces [IDF] 2019).

The scope of the threat of non-conventional terror attacks became evident due to several domestic close-call incidents, and the 1995 Tokyo subway sarin attack. Eisenkraft points out that this led to changes in preparedness in Israel: first responders received additional training, and support contributed by the HFC was only to be initiated if resources of civil agencies were found to be deficient (Eisenkraft 2018).

The main initiators for CIMIC in Israel are the philosophical view of the role that the military has in society and Israeli law, according to Rafalowski. The military has historically, to a high degree, been involved in main events within the Israeli civil society whenever the state has expressed the need for it. Education and absorption of refugees and new immigrants are two examples of this need. This level of involvement has, by one interviewed expert, been described as "the spirit of the military" (Rafalowski 2017).

Israeli law specifically allows civilian structures to request military assistance in case of need. Rafalowski explains that the system is very simple; the Minister in charge, mainly the Minister of Internal Security, will have direct communication with the Minister of Defense (MoD), regarding the request for military assistance (Rafalowski 2018).

It is normally the National Commissioner of the Police that contacts the MoD. This is due to the set role of the police as acting incident commander during most types of incidents.

Military units that have specific response capabilities for certain types of CBRN incidents are automatically called in if they are in the vicinity (Rafalowski 2018). In the case of a pandemic event, in which a general vaccination of the population would be necessary, the HFC and other military units would be ordered by the MoD to join forces with the Minister of Health and all local health agencies, in order to initiate a pre-set mass vaccination plan (Eisenkraft 2018).

In Israel, it is the police that are in charge over the incident in the initial stage. As Eisenkraft explains, "We conduct a lot of drills together, so that the police will know exactly what the roles of the Emergency Medical Services (EMS) are and what to expect from them. The EMS know exactly what to expect from the fire brigade. Everyone knows exactly what the roles of the other organizations are. They even have one radio channel where commanders can give input and allow the best situation awareness report. Each have their own radio channels, but we do also have this inter agency communicating network" (Eisenkraft 2018).

Eisenkraft continues to explain that the cooperation defines that once an event is out of the scope for first responders because of its magnitude, the military takes over. First responders will still be involved and help as they can, but they will do what the military defines for them, and not act as an independent group. However, the military force in charge in these events is the HFC and they are very knowledgeable about first responders, so they know exactly first responders can be asked to do. Additionally, many joint drills and exercises are regularly held, so the level of cooperation is excellent. The major advantage of the HFC is its ability to provide logistical support from the military (trucks, tents, generators, etc.), air evacuation in large numbers, specialized units (e.g. decontamination, medical support by the Israeli Defense Forces (IDF) Medical Corps, etc.), and connections with foreign militaries and civilian organizations for further support (Eisenkraft 2018).

Responsibility

Each civilian organization has its own responsibility based on relevant training. These are also, in the case of a non-conventional event, responsible for the evacuation of casualties, which Eisenkraft points out is unique for Israel. The police is the agency responsible for the management of the incident, with radiological events as the only exception, which is led by the military. Biological incidents are solely being handled by civilian agencies (Rafalowski 2018).

The HFC is responsible to guide and train all first responders for CBRN incidents. The main reason for this is the great amount of human resources that the military may provide for training, which enables first responders to focus on their day to day tasks. It is also the responsibility of the HFC to coordinate smaller, as well as multi-disciplinary and multi-organizational drills (Eisenkraft 2018).

Resources

CBRN-related equipment is highly specialized as to definitions and responsibilities, and is mission-oriented, rather than being agency-specific or duplicated into being military or civilian. How equipment is used in regard to responsibility is clear during peace time, when it is carried by first responders at any time, which is not the case for military personnel (Eisenkraft 2018). Rafalowski explains that logistically, the amount of resources that the IDF has is far greater than other agencies in the country. This means that the instant access to equipment, provided by first response units, is backed up with resilience which is the result of quantities added by the Ministry of Defense.

An inter-organizational committee of Israeli experts, led by the Ministry of Defense, jointly analyzes threats, preparedness doctrines used and equipment that can be acquired worldwide. Decisions regarding doctrinal changes, purchases or future research and development, are usually made out of mutual agreements (Eisenkraft 2018 & Rafalowski 2018).

Additional key features

Means of Communication is based on relationships, with one interviewee referring to his "list of acquaintances". Means of communication is therefore *relational* (Eisenkraft 2018 & Rafalowski 2018).

Regarding **Hardware interoperability**, each organization has its own network, as does the military, but during large-scale events everyone works together. This applies even to hospitals, as "the HFC medical department is connected to all hospitals, so they know the number of casualties in all hospitals, with ID". Hardware operability is therefore *high* (Eisenkraft 2018 & Rafalowski 2018).

A shared terminology is established at the federal level. "It is part of the work of the MoD lead forum to make sure that they use the same terminology, definitions, initials, safety perimeters". **Terminology** is therefore *similar* (Eisenkraft 2018 & Rafalowski 2018).

The **Degree of flexibility** during events is high, with high levels of trust between actors, However, "large organizations struggle with changes, and they don't tend to be flexible. For change, you will have to bring hard data". One interviewee clarifies that "being flexible is not an issue. Usually, the formal procedures (legislation) are way behind. They agree on something, but they don't put it on paper". Degree of flexibility is therefore *medium-high* (Eisenkraft 2018 & Rafalowski 2018).

No conclusions about **Climate** can be drawn, as interviewees state that the climate is dependent on the person (Eisenkraft 2018 & Rafalowski 2018).

Table 5: CBRN CIMIC crisis management organization form in Israel

Key Features	Sub Features	Autonomous	Cooperation	Regulation
Basis for cooperation		Legal Requirements	Complementary strengths	SOP's
Means of Communication		Task	Relational	Routines
Communication Interoperability	**Hardware interoperability**	Limited to Moderate	Moderate to High	High
	Terminology	Different	Similar	Similar
Degree of Flexibility		Medium-High	Medium-High	Low
Responsibility	---	Separated (Civil or Military)	Shared (Flexible)	Formal (Delegated)
Climate	---	Suspicion	Mutual Benefits	Bureaucratic
Usage of resources	---	Independent (Duplicated)	Interdependent (Intertwined)	Dependent (Specialized)
Planning and development		Separate	Joined/Linked	Delegated

Table 5: Results of empirical analysis of CIMIC in Israel.

4.3. Germany

Basis of cooperation

The German basic law (*Grundgesetz*) limits the capability of the military to act in domestic matters, due to historical factors. This law states that the sole task of the military is defense, and is not intended to be used for any other purpose. However, Article 35 states that "all official agencies are supposed to help each other, both in legal and in practical issues", which allows for the possibility for the military to take a supporting role in situations other than defense. Therefore, the only way the German Armed Forces (GAF) can be brought into a supporting role in an operation is when, i.a., a county or a state formally requests the support of the GAF (Langer 2019).

The crisis management system in Germany is based on the principal of subsidiarity, meaning that an issue should be dealt with at the lowest possible level before additional support is requested from the next level up. Initiation of civil-military cooperation is based on a system that includes liaison commands, at the county (*Landkreis*) and city level, and Landeskommando, which are used in each of Germany's 16 states (15 Landeskommandos and Standortkommando Berlin) (Langer 2019).

Langer explains that the central point for civil-military cooperation is the liaison command in each city or county. These have three main tasks: 1) communicate and inform local authorities as to what support the military can offer to civilian agencies; 2) communicate to the Landeskommando regarding requested military support; and 3) have a supporting role for the military that is sent to help the Landkreis. Throughout the incident response, the liaison command is the point of contact for civil authorities. All personnel in the liaison offices are reserve officers or non-commissioned officers (NCOs), including staff who have medical expertise (Langer 2019).

Once the requests of the county have been sent to the state command (*Landeskommando*) through the liaisons command, the state command makes a first proposal as to which military units should be used and sends it to Berlin. The final decision as to which unit will be used, and where they will be sent, is made in Berlin. This means that no decisions are allowed to be made in the lower command levels (liaisons- and state command). The county command makes requests, the state command makes proposals, and *Bundeswehr Territorial Tasks Command* in Berlin makes the decisions. Langer emphasizes that this is the case in all events, no matter the timing, location, or size of the event (Langer 2019).

There is a catalogue of the capabilities for support offered by the GAF, which may ease the work of the liaisons command when advising the county lord, as the catalogue clarifies in what way the GAF may support the county (Langer 2019).

There are two major issues when requesting military support.

1) Payment - the requesting party will have to pay the expenses of the military
2) The requesting party will have to have checked that there are no other capabilities to do the requested job.

According to Langer, the military is always the last resort for support. The principal of subsidiarity (*Prinzip der Subsidiarität*), means that the military only acts as support when civil agencies are out of other options. However, the military will have to support if Article 35 is used (Langer 2019).

Responsibility

According to the principle of subsidiarity, any crisis must be dealt with at the lowest possible level. Therefore, it is critical to clarify how responsibility to cope with emerging crises in Germany is divided. The CEP Handbook 2009 states that the "responsibility for the management of civil emergencies in Germany is distributed between the four different governmental levels: the federal state, the constituent states (Länder), towns and counties (regional), and municipalities (local)" (MSB 2009, 100).

The lowest level of crisis management is the Landkreis, which acts according to laws and procedures set at the state level. Although these laws and procedures may differ between Länder, it is the responsibility of each state to ensure that sufficient planning and preparation for crises has been done. (MSB 2009, 100).

The basic task of the military is defense, according to Langer. As such, the military is not allowed to do any type of training in disaster relief. The capability of the military to support civil agencies originates from military tasks which require skills and equipment that may be used to support the civil society as well. The core capabilities of the GAF to support civil society include combat engineering (*Pioniere*), CBRN, and search and rescue (Innenministerkonferenz 2011, 20).

The principle of subsidiarity combined with defined areas of responsibility for civil and military agencies described above set the areas as either civil or military. This may change if

a local governor uses Article 35 (*Amtshilfe*) in order to request military support. Langer clarified that "there are some legally based reasons why the military should not be involved in an incident, but there are no cases when the GAF can deny support". The fact that there is no way that the GAF can deny support is proof that the responsibility of having the capability to cope with a CBRN incident is not limited by the civilian or military sphere, but should be considered as something that is shared (Langer 2019).

Resources

Different agencies do not cooperate around common use of equipment in Germany, according to Langer. Additionally, military resources are not coordinated with the needs of civilian agencies. This is primarily since the sole purpose of the GAF is defense. Langer explains that after the Rhine valley flooding of 2014, state ministers said, "the military has these all terrain medical vehicles, the military should buy more of these because they are very effective". He continues, "The problem is that the basis for finance for the GAF is not crisis and catastrophe. It is defense, and for that there are other requirements and needs. The needs that the military has on their future vehicles are different than the civil agencies", referring to the military needs for vehicles with heavier armament which that are too heavy for the requirements of the civilian agencies. As Langer points out, defense, not crisis and catastrophe, is the basis for finance for the GAF, and for that there are different requirements and needs than for disaster preparedness (Langer 2019).

There is no common planning between military and civilian actors in regard to equipment used during incident response. The federal government gives money designated to crisis management to every state, because the state is the highest level of crisis management response. Each state then decides independently how to use this money (Langer 2019).

Langer concludes that planning and development done by civil and military agencies is conducted separately. Every state and agency has its own specific tasks and interests and its own preferred systems and suppliers (Langer 2019).

Additional key features

The **Means of communication** during crises is primarily through the liaisons command, as "civil agencies do not need to know detailed knowledge about who to connect, or what units are around". However, "once the county lord has personnel from the command with them, they will have close access to military communication equipment, and connection to the higher commands". Means of Communication is *routines* (Langer 2019).

In regards to **Hardware interoperability**, although the military uses different technology than the civilian agencies, "military units can request communications equipment used by civilian agencies when arriving to a disaster area". Systems can differ even between counties, and "no interoperability is foreseen in any doctrine in the near future". Hardware operability is therefore *limited to moderate* (Langer 2019).

Terminology differs between civil agencies as well as the GAF. The interviewee states that "efforts are put into using easy language when conducting interagency communications". Terminology is therefore *different* (Langer 2019).

Degree of flexibility is *low*, with the main reason being that "even minor changes within the system need the approval of ministerial lawyers" (Langer 2019).

No conclusions can be drawn regarding **climate**, as "it depends on the person, and this may depend on what political party that the local politician (county lord) is associated with" (Langer 2019).

Table 6: CBRN CIMIC crisis management organization form in Germany

Key Features	Sub Features	Autonomous	Cooperation	Regulation
Basis for cooperation		Legal Requirements	Complementary strengths	SOP's
Means of Communication		Task	Relational	Routines
Communication Interoperability	**Hardware interoperability**	Limited to Moderate	Moderate to High	High
	Terminology	Different	Similar	Similar
Degree of Flexibility		Medium-High	Medium-High	Low
Responsibility	---	Separated (Civil or Military)	Shared (Flexible)	Formal (Delegated)
Climate	---	Suspicion	Mutual Benefits	Bureaucratic
Usage of resources	---	Independent (Duplicated)	Interdependent (Intertwined)	Dependent (Specialized)
Planning and development		Separate	Joined/Linked	Delegated

Table 5: Results of empirical analysis of CIMIC in Germany.

4.4. Sweden

Basis of Cooperation

Cooperation between Swedish state agencies and the Swedish Armed Forces (SAF) is based on the need for support due to insufficient resources or capabilities of agencies handling the initial response. A set of laws and regulations become the basis for why and how state agencies may request support from other state agencies. Dufvenberg points out that there is an existing culture of understanding within agencies that mutual support benefits everyone, quoting the *Myndighetsförordning* (*2007:515)* (Regulations for State Agencies (2007:515)): "The agency (myndighet) must work to utilize, through cooperation with authorities and others, the benefits that can be gained for individuals as well as for the state as a whole" (Dufvenberg 2019).

Support provided by SAF is initiated via formal requests. These are submitted at the military headquarters, and the decision is made by the commander or the headquarters of the commander in charge, according to an expert. However, "the request may be made to a different organizational unit within the SAF if the request relates only to equipment or services of lesser scope. The decision will then be made by the head of the organizational unit" (Förordning 2002:375 2014). In cases when there is a need to prioritize available resources, MSB (Swedish Civil Contingency Agency) may lead the decision process, as multiple actors may be involved.

Both experts point out that incident response is always led by civil agencies, with the SAF taking a supporting role by overseeing and carrying out delegated tasks. The only exception to this is when Sweden is in a state of *Heightened state of alert* or at war, at which times the SAF takes the leading role in handling incidents, with the support of civil agencies (Dufvenberg 2019 & Näslund 2019).

Responsibility

The Swedish crisis management system is based upon a set of basic principles: the principles of similarity, proximity, and responsibility. In short, this means that a crisis should be managed by agencies as close as possible to how these agencies would act during normal incidents (Myndigheten för Samhällsskydd och Beredskap [MSB] 2018).

These principles, in combination with the *Law of Accident Protection* (Lag 2003:778**)**, clarify that the main actors responding to most accidental and antagonistic incidents are civil and as

far as possible local. Lag 2003:778 states that the "state or municipality must be responsible for a rescue operation only if this is justified by the need for urgent action, the threatened interests, costs of operation and other circumstances". State agencies and municipalities responsible for civil protection must as well "coordinate activities and cooperate with each other and with others involved" (*Lag* 2003:778 2019).

As in many other countries, a directive establishes that the function of the SAF is the capacity for armed military defense **(**Förordning 2007:1266). *Operational objectives of the Swedish Armed Forces for the years 2016 to 2020* (Inriktning för Försvarsmaktens verksamhet för åren 2016 till och med 2020) is a directive that has been issued by the Swedish Government. These objectives reinforce that the purpose of the SAF is national defense, stating that the Swedish Armed Forces exists to, among other tasks, "defend Sweden against incidents and armed aggression and to protect society and its functionality in the form of support to civil authorities" (Regeringen 2015, 1). These objectives also clarify that military resources exist in order to be useful to society, stating that "the Swedish Armed Forces have capable resources that in many cases are missing in other social sectors. These resources are in many respects useful when society is subjected to pressure. The ability to make joint use of military and civilian capabilities should increase. Armed forces will also be able to interact with other total defense players before and during the heightened alert, war and threat of war" (Regeringen 2015, 7).

Näslund clarifies that civil agencies and organizations should be able to handle most situations that arise during times of peace (Näslund, 2019). However, according to Förordning 2007:1266 (*Directive with instructions for the Swedish Armed Forces*), the Swedish Armed Forces should, during peacetime, provide support for civilian operations "with the authority's existing capacity and resources" (Förordning 2007:1266 2019). One interviewed expert emphasizes how clear these laws (Lag 2003:778) and directives (Förordning 2007:1266) are in stating that support must be given if requested, with the only room for interpretation being whether or not sufficient capability exists to support specific incidents.

Resources

Agencies have, to a certain extent, customized their resources according to their own needs. Näslund states that this has been done so these agencies are able to handle both accidental and antagonistic incidents. This ability to manage incidents is at a level that enables society to

continue functioning, even during or after such an event. Once these normal levels are surpassed, a close cooperation between agencies is necessary and may require cooperation with the Swedish Armed Forces. There is movement toward increased cooperation between agencies to acquire the same or similar equipment, in order to better enable agencies to share resources. However, one expert points out that acting proactively has proven difficult, and more often a solution is found only when a need presents itself (Dufvenberg 2019 & Näslund 2019).

In regards to planning and development of resources, agencies cooperate to a certain extent. While municipalities and counties can act independently regarding what equipment will be acquired, a joint strategy for purchasing equipment is more common within state agencies (Dufvenberg 2019).

Experts point out two main reasons for the lack of joint planning and development. Each agency has its own planning cycle which may start at different times and last for varying lengths of time, which makes it difficult to coordinate planning between agencies. A second reason that agencies may not cooperate in planning and development is due to differing experiences which leads to differing needs assessments. For example, agencies in an area that has been devastated by forest fires are more likely to look over their capability to handle similar situations in the future. Agencies located in neighboring areas may not see the same need, which often leads to differing priorities and separate planning (Dufvenberg 2019 & Näslund 2019).

Additional key features

Means of Communication is *task* and *relational*. The event is what determines how the communication happens, depending on risk assessments and the possibility of it becoming more serious. In addition, communication is dependent on personal relationships, and even though there are formal ways of communication, the informal is also important (Dufvenberg 2019 & Näslund 2019).

Regarding **Hardware interoperability,** there are systems used by both civil and military agencies, such as Rakel and VIS. The main problem is that these systems may not be used for sharing classified information, resulting in a limited use of these systems. Hardware operability is therefore *limited to moderate* (Dufvenberg 2019 & Näslund 2019).

The **Terminology** used by civil and military actors differs greatly. This can result in difficulties in communication between different actors. Words can even have different meanings within different agencies. In addition, there are many abbreviations used, which may lead to misunderstandings. Terminology is therefore *different* (Dufvenberg 2019 & Näslund 2019).

The **Degree of flexibility** is *medium to high*. Political decisions initiate change within the system. As in the case of Totalförsvaret, set goals and agendas lead to structural change within a few years. The question is how much more efficient the crisis management system has become. Changes that require legal change are more complex and time consuming. Sweden has seen great changes within a short timeframe, compared to neighboring countries (Dufvenberg 2019 & Näslund 2019).

The **Climate** is *mutually beneficial*, as actors have realized that current and emerging problems or issues cannot be solved independently, but require cooperation with others and their resources. One interviewee states that "it has been positive regarding CBRN-related questions, an example being the annual CBRN-days that are co-arranged by civil and military agencies" (Dufvenberg 2019 & Näslund 2019).

Table 7: CBRN CIMIC crisis management organization form in Sweden.

Key Features	Sub Features	Autonomous	Cooperation	Regulation
Basis for cooperation		Legal Requirements	Complementary strengths	SOP's
Means of Communication		Task	Relational	Routines
Communication Interoperability	**Hardware interoperability**	Limited to Moderate	Moderate to High	High
	Terminology	Different	Similar	Similar
Degree of Flexibility		Medium-High	Medium-High	Low
Responsibility	---	Separated (Civil or Military)	Shared (Flexible)	Formal (Delegated)
Climate	---	Suspicion	Mutual Benefits	Bureaucratic
Usage of resources	---	Independent (Duplicated)	Interdependent (Intertwined)	Dependent (Specialized)
Planning and development		Separate	Joined/Linked	Delegated

Table 7: Results of empirical analysis of CIMIC in Sweden.

5. Analysis

This chapter presents the ways in which CIMIC functions in each country, while possible and plausible explanations for why this is the case are covered in the following chapter. In this chapter empirical data is compared and analyzed, guided by three areas of analysis:

1) Commonalities and differences of the forms of CIMIC in countries that have high- and low levels of militarization. This discussion will answer the third research question: How, if at all, does the form of civil-military cooperation dealing with CBRN-related issues differ between countries that have high- and low levels of militarization?
2) Forms of CIMIC in countries with high levels of militarization will be compared with the expected characteristics of military-like CIMIC, as covered in the Theory chapter.
3) General commonalities in forms of CIMIC, regardless of whether the countries are HLM or LLM.

Figure 1: Forms of CIMIC

U.S.A

Key Features	Sub Features	Autonomous	Cooperation	Regulation
Basis for cooperation		Legal Requirements	Complementary strengths	SOP's
Means of Communication		Task	Relational	Routines
Communication Interoperability	Hardware interoperability	Limited to Moderate	Moderate to High	High
	Terminology	Different	Similar	Similar
Degree of Flexibility		Medium-High	Medium-High	Low
Responsibility	---	Separated (Civil or Military)	Shared (Flexible)	Formal (Delegated)
Climate	---	Suspicion	Mutual Benefits	Bureaucratic
Usage of resources	---	Independent (Duplicated)	Interdependent (Intertwined)	Dependent (Specialized)
Planning and development		Separate	Joined/Linked	Delegated

Germany

Key Features	Sub Features	Autonomous	Cooperation	Regulation
Basis for cooperation		Legal Requirements	Complementary strengths	SOP's
Means of Communication		Task	Relational	Routines
Communication Interoperability	Hardware interoperability	Limited to Moderate	Moderate to High	High
	Terminology	Different	Similar	Similar
Degree of Flexibility		Medium-High	Medium-High	Low
Responsibility	---	Separated (Civil or Military)	Shared (Flexible)	Formal (Delegated)
Climate	---	Suspicion	Mutual Benefits	Bureaucratic
Usage of resources	---	Independent (Duplicated)	Interdependent (Intertwined)	Dependent (Specialized)
Planning and development		Separate	Joined/Linked	Delegated

Israel

Key Features	Sub Features	Autonomous	Cooperation	Regulation
Basis for cooperation		Legal Requirements	Complementary strengths	SOP's
Means of Communication		Task	Relational	Routines
Communication Interoperability	Hardware interoperability	Limited to Moderate	Moderate to High	High
	Terminology	Different	Similar	Similar
Degree of Flexibility		Medium-High	Medium-High	Low
Responsibility	---	Separated (Civil or Military)	Shared (Flexible)	Formal (Delegated)
Climate	---	Suspicion	Mutual Benefits	Bureaucratic
Usage of resources	---	Independent (Duplicated)	Interdependent (Intertwined)	Dependent (Specialized)
Planning and development		Separate	Joined/Linked	Delegated

Sweden

Key Features	Sub Features	Autonomous	Cooperation	Regulation
Basis for cooperation		Legal Requirements	Complementary strengths	SOP's
Means of Communication		Task	Relational	Routines
Communication Interoperability	Hardware interoperability	Limited to Moderate	Moderate to High	High
	Terminology	Different	Similar	Similar
Degree of Flexibility		Medium-High	Medium-High	Low
Responsibility	---	Separated (Civil or Military)	Shared (Flexible)	Formal (Delegated)
Climate	---	Suspicion	Mutual Benefits	Bureaucratic
Usage of resources	---	Independent (Duplicated)	Interdependent (Intertwined)	Dependent (Specialized)
Planning and development		Separate	Joined/Linked	Delegated

Figure 1: Comparison of the results of empirical analysis of CIMIC in U.S.A., Israel, Germany, and Sweden.

5.1. CIMIC forms and militarization

When analyzing the empirical data and comparing forms of CIMIC in countries with high levels of militarization (HLM) and countries with low levels of militarization (LLM), the following becomes obvious. First, countries with HLM do not share forms of CIMIC. Second, countries with LLM have more similarities (5 out of 8) than countries with HLM (2 out of 8). Third, countries with LLM show tendencies of the **Autonomous actors** form of CIMIC, while one country with HLM has the form of **Cooperation** to a high degree.

HLM similarities

Israel and U.S.A. do not have a similar form of CIMIC, due to the lack of a clear form in the case of U.S.A. The countries share two features, *Terminology* and *Basis of cooperation*. Civil- and military actors have similar terminology within both countries, which is not shared with LLM countries. In the case of *Basis of cooperation*, CIMIC is initiated based on *complementary strengths*, in which the initiation process is task oriented. This is a clear difference from a law-based approach to cooperation which is the case in countries with LLM. Cooperation is *circumstantial* in both HLM countries, which means that it is the needs that arise with each incident that initiates and forms CIMIC.

HLM differences

As stated earlier, CIMIC is formed differently in the two HLM countries, particularly in the special areas of interest for this analysis, responsibility and resources (which include the key features *Usage of resources* and *Planning and development*). Responsibility for CBRN incident response in U.S.A. is clearly divided between civil and military areas of responsibility. Areas of responsibility in Israel are, on the other hand, delegated, which means that tasks of various stages of CBRN incident response are allocated to both civil and military agencies. A further difference between these countries regarding responsibility is a legal requirement for mutual support which may be used to initiate CIMIC in Israel. No such legal requirement exists in U.S.A. which means that cooperation is based on an informal responsibility to provide mutual support. In Israel, planning and development of resources, and the use of these resources, are *joined/linked* and *intertwined*, while the same areas are *separate* and *duplicated* in U.S.A. Israel's form of CIMIC is predominately **Cooperation**, but CIMIC in U.S.A. cannot be categorized according these forms.

LLM similarities

CIMIC in the two LLM countries is, although not identical, similar with a tendency towards the **Autonomous actors** form. Germany and Sweden share *Basis of cooperation*, *Communication Interoperability*, *Planning and development* and *Responsibility*, where only *Responsibility* is not associated with the **Autonomous actors** form of CIMIC.

Both Germany and Sweden have legal requirements for mutual support between civil- and military agencies (*Amtshilfe* in the case of Germany, and *Law of Accident Protection* in Sweden). These laws form CIMIC in both countries, in which the *Basis of cooperation* and *Responsibility* are formed in similar ways. In both Sweden and Germany, *legal requirement* is the initial reason for cooperation, and responsibility to handle CBRN incidents is *shared* between civil- and military agencies.

The studied LLM countries have similar processes for planning and development of CBRN equipment, and this is done separately amongst civil- and military agencies. The system of resources (*Usage of resources*) differs between Germany and Sweden, where the latter has a greater level of interdependency while interdependency characterizes the former. Set directives to the armed forces of both countries are the main reason why *Usage of resources* differs between the countries, as the sole task of the GAF is defense while SAF has a wider set task that includes cooperation with civil actors.

Conclusion to the first analysis discussion

Based on the countries included in this study, the forms of CIMIC differ between countries that have high- and low levels of militarization. Countries with low levels of militarization have a tendency towards the **Autonomous actors** form, while one of the countries with a high level of militarization (Israel) has a **Cooperation**-like form of CIMIC. The fact that U.S.A. is lacking a clear form of CIMIC makes it difficult to draw general conclusions as to what form of CIMIC countries with a high level of militarization have.

5.2. Military-like CIMIC

The first research question, which covers the traits that should be prevalent in CIMIC in countries with HLM, leads to a series of theoretical discussions, which results in a few characteristics that would be expected in a military-like CIMIC. In short, these characteristics are hierarchical form of organization, with a top-down approach and delegated

responsibilities, where the basis of cooperation within civil- and military agencies is based on SOP's. In the template used to analyze forms of CIMIC, it is the **Regulation** form.

CIMIC does not have a clear hierarchical form in any of the countries studied, even though there is a greater tendency towards it in HLM countries. These countries share only one *Key feature* belonging to the **Regulation** form, which is similar *Terminology*. In both countries similar terminology has been promoted at the federal level of governance, with one example being Israeli MoD that led a forum to make sure that similar terminology is being used by agencies (Rafalowski 2018). The NIMS doctrine pushes for the same implementations in U.S.A. (Little 2018). Of the four key features that are of special focus in this study (*Basis of cooperation*, *Responsibility*, *Usage of resources* and *Planning and development*), only *Responsibility* has met the criteria for **Regulation**. As described above, it is in Israel where areas of responsibility are delegated between civil- and military agencies.

5.3. General commonalities

Although the purpose of this study is to compare similarities and differences within HLM and LLM countries, it is interesting to point out other commonalities regarding key features, which are independent of the level of militarization of countries:

- U.S.A. and Germany where *Usage of resources* is *independent*.
- U.S.A. and Germany where *Degree of flexibility* is *low*.
- Israel and Sweden where *Usage of resources* is *interdependent*.
- Israel and Sweden where *Degree of flexibility* is *medium-high*.
- Germany, Sweden and U.S.A. where *Hardware interoperability* is *low*.
- Germany, Sweden and U.S.A. where *Planning and development* is *separate*.
- Israel, Sweden and U.S.A. where *Basis of communication* is, mainly or partly, *relational*.

6. Discussion

While the previous chapter has presented similarities, differences and tendencies in forms of CIMIC in the studied countries, the focus of this chapter is to present possible and plausible reasons for why these occur.

Before starting the discussions regarding conclusions based on collected data, it is important to point out that it is less than optimal to base a study like this on only four cases. This research should therefore be considered as an initial study in the topic, and the method and template developed for this project to study CIMIC should be used and verified with a greater number of cases. Non-democratic countries and/or developing countries would be recommended for this, due to the fact that all cases used in this study are democratic and classified as being high income OECD countries (OECD 2018).

6.1. Analysis findings

As mentioned earlier, it is difficult to draw conclusions based on a comparison of the forms of CIMIC in countries with high- and low levels of militarization. This is because HLM countries do not have similar forms of CIMIC. Israel has a clear **Cooperation** form with some tendencies toward the **Regulation** form, while the form in U.S.A. is not consistently in line with any one of the three forms.

Historical factors that have led to the form of government in U.S.A. (Federalist Republic), may be an explanatory factor for this result. Because U.S.A. is composed of semi-independent states, each of which has the authority to constitute its own rules and laws, crisis-management procedures initiated at the federal level may encounter obstacles at the state level. An exception to this system of independence is the use of similar terminology, in the sense of specialized vocabulary, by both civil and military agencies which has been incorporated into the crisis management system. In a system in which top-down influence is obstructed while greater autonomy is given to the state level of governance, the implementation of common use and planning of resources becomes more complicated. Evidence of this can be seen in the key- and sub-features *Planning and development*, *Usage of resources* and *Hardware interoperability*. The absence of a joint approach towards planning and development is created by a high level of independence of local governments and agencies. Because decisions are made from the bottom up, a joint approach to planning and development does not exist. The combination a large number of independent actors and

the lack of joint planning and development results in equipment being duplicated and a lack of hardware interoperability. These conclusions are supported by the case of Germany, which has a similar form of governance (Federalist Republic) and where the above-mentioned key- and sub-features are the same.

The lack of legal requirement for cooperation is a second possible explanatory factor for the absence of a uniform form of CIMIC in U.S.A. A relatively high level of state autonomy (i.e. each state's ability to make its own decisions as to how to manage crises) in combination with the absence of legal requirements for CIMIC leads to a cooperation based on complementary strengths and informal responsibility to offer support. The result of all these aspects in U.S.A. is a mix of the three forms of CIMIC.

Israel is the country that has the clearest form of CIMIC (**Cooperation**), and the fact that a country with such high levels of militarization (4,75% of GDP) so clearly has a different form of CIMIC than **Regulation** is a strong argument that there is little or no relationship between militarization and the hierarchical form of CIMIC (World Bank 2018). A possible explanation for Israel's form of CIMIC is a high level of perceived threat of an imminent attack using CBRN substances, leading to the conclusion that close cooperation between civil and military agencies is the most effective way to utilize available resources and manage incidents.

LLM countries are mostly a mixture between the CIMIC forms of **Cooperation** and **Autonomous actors** with tendencies toward the latter. As stated earlier, both countries share the majority of *Key features*, which may indicate a relationship between the **Autonomous actors** form of CIMIC and low levels of militarization.

Israel and Sweden, both countries where *Usage of resources* is *interdependent* and with a higher *Degree of flexibility*, have relatively small populations which may be an explanatory factor for these similarities. Interviewed experts from these countries shared an understanding that working in smaller countries that naturally have fewer organizations within the CBRN crisis management system eases cooperation between civil and military agencies. In contrast, the countries that have the highest population share a *low Degree of flexibility* and have *Usage of resources* that are *independent*. A possible connection between these similarities and the form of government in these countries (U.S.A. and Germany) has been covered above, but a link between these results and the size of population should be considered, due to the contrast between countries with large and small populations.

As described in the previous chapter, none of the countries covered in this study fit the profile of the **Regulation** form of CIMIC. A possible reason for this is a system of checks and balances which is implemented in most democracies, with the aim of restricting military influence within domestic matters. Future research should study a possible connection between forms of CIMIC and forms of government, with a special focus on young democracies in which these systems of checks and balances are less sophisticated. The results from this study disprove the hypothesis set in the Theory chapter, meaning that even if future studies conducted in countries with other forms of government would show tendencies toward the **Regulation** form of CIMIC, militarization (in the form of military spending) will not be able to be used as the main explanatory factor. This does not mean that it is not possible for countries to have CIMIC that follows the **Regulation** form, only that other potential explanatory factors should be investigated.

In conclusion, based on the cases involved in this study, the form of CIMIC in countries is related to some degree to levels of militarization of the country. That the role of the military has different roles within countries may therefore, based on this conclusion, also be connected to a certain degree to the level at which countries are militarized. With this stated, three things are important to take in account. First, other factors like threat perception, forms of government, size of population and legal requirements for cooperation are also to be considered as explanatory factors for how CIMIC is formed in countries. Second, conclusions made will most probably be altered, or at least modified, as additional countries are studied. Finally, the method and template developed and used in this study will likely be modified with the use of additional cases, which may have an effect on the conclusions drawn in this study.

6.2. Discussion of research questions

As discussed in *Purpose and research questions* in the Introduction chapter, the three research questions that direct this study are:

1) What traits should be prevalent in civil-military cooperation in militarized countries, according to existing research?
2) In what way can the Forms of Governance Theory be used as a base for the creation of a new model which defines ideal types, and enables the comparison and analysis, of civil-military cooperation?

3) How, if at all, does the form of civil-military cooperation dealing with CBRN-related issues differ between countries that have high- and low levels of militarization?

The aim of the research questions in this study is to shed more light on various aspects of CIMIC. While the purpose of the first research question is to add to the theoretical discussion regarding militarization (in the context of CIMIC), the aim of the second is to contribute to the methodological toolbox in how to compare CIMIC in countries. Conclusions drawn regarding the third research question are intended to add understanding in the degree to which militarization is an explanatory factor in how CIMIC is formed within countries. Taken together, these three questions serve to address the purpose of this study, which is examining whether or **not** the role that the military has in a society depends on the level of militarization of the country.

In regards to the first research question, a theoretical form of CIMIC (**Regulation**) is identified in the Theory chapter. This is based on conclusions drawn from previous research and structured according to Governance Theory. Empirical data collected for this study does not support the existence of a relationship between militarization and the **Regulation** form of CIMIC, even in countries with high levels of militarization, thus disproving the hypothesis. Future research should further investigate this matter with the study of countries that have forms of government other than liberal and ethnic democracies as well as countries that are not classified as high-income OECD nations.

The background to the second research question is the lack of a model with which to compare CIMIC between countries. As this is a critical task of this study, a template has been developed based on Governance Theory using the concepts of **Forms** and *Key features*. The analytical tools, including newly developed ideal types of CIMIC, that were initially developed have in the duration of this study been modified due to an evolving understanding of how CIMIC is structured in different countries, and this process of refining should continue in future studies. The template may be used for various types of studies involving civil and military cooperation and may be modified based on needs, as it is not specific to CIMIC for CBRN incident management. This creates the opportunity for new studies in the field of CIMIC, including the role of the military within societies. As the military has an increasingly important role in crisis management, the possibility of now providing data and evidence on which to base future decisions is timely.

Regarding the third and final research question, the analysis of collected data shows that the forms of CIMIC during CBRN incident response differ between countries with high levels of militarization and those with low levels of militarization. Dissimilar forms of CIMIC between studied HLM countries leads to the necessity of including additional cases in future studies in order to draw more accurate conclusions regarding the relationship between increased militarization and CIMIC. A number of conclusions regarding various commonalities among HLM and LLM countries, as well as commonalities that are not connected to these groupings, have been drawn.

As no clear similarities in civil-military cooperation are apparent between countries with high levels of militarization, it is difficult to draw definite conclusions based on the aspects that have been studied as to what implications increased militarization may have on the role of the military within domestic issues. This suggests that other explanations must be taken into consideration. Findings suggest, based on the case of Israel, that as the level of threat perception increases and the dependency on and integration of the military and military assets in crisis management increases, a more organized and uniform form of CIMIC in regards to CBRN events emerges.

At a point in time when Europe is becoming more militarized, the results of this study provide a starting point for the discussion of the effects of increased militarization on civil-military cooperation. The findings suggest that the form of CIMIC during CBRN incident response in a country is not dependent on the level of militarization (measured by military spending) of that country. This means that cooperation between civil and military agencies during CBRN incident response cannot be expected to experience major changes solely due to increased military spending. However, an increase in threat perception may lead to a changed form of CIMIC, with a shift toward the form of **Cooperation** being the most likely.

In conclusion, this study has added a hypothetical form of militarized civil-military cooperation to the theoretical discussion concerning militarization. It has initiated the study of the factors, including militarization, which may form CIMIC. Finally, and most importantly, it has initiated the development of a method and a template which enables the comparison of CIMIC, allowing for deeper and more comprehensive analysis of civil and military cooperation.

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