

**INFORMATION WARFARE AND REALPOLITIK –
UNDERSTANDING INFORMATION WARFARE
THROUGH POLITICAL REALISM**

Santeri Kytöneva
Master's thesis
Philosophy
Department of Social
Sciences and Philosophy
University of Jyväskylä
Spring 2022

JYVÄSKYLÄN YLIOPISTO

Tiedekunta Humanistis-yhteiskuntatieteellinen	Laitos Yhteiskuntatieteiden ja filosofian laitos
Tekijä Santeri Kytöneva	
Työn nimi Information Warfare and Realpolitik – Understanding Information Warfare through Political Realism	
Oppiaine Filosofia	Työn tyyppi Maisterintutkielma
Ajankohta Kevät 2022	Sivumäärä 62 sivua ja kansilehti
Ohjaaja – Supervisor Onni Hirvonen	
Tiivistelmä Maisterintutkielmassa selvennän käsiteanalyysin avulla informaatioidankäynnin käsitettä. Vertailen Yhdysvaltojen ja Venäjän tutkimuskirjallisuudessa esiintyviä käsityksiä informaatioidankäynnistä. Työssä esitetään, että informaatioidankäynnin käsitteen määrittelyssä ja käytössä on merkittäviä eroja. Informaatioidankäynnin käsitteen tarkastelun lisäksi työssä esitellään poliittista realismia ja perustellaan neoklassisen poliittisen realismin teorian tarjoavan selitysvoimaisia käsitteitä myös informaatioidankäynnin tutkimukseen. Tutkielmassa esitän kaksi esimerkkitapausta, jotka sitovat informaatioidankäynnin ilmiön ja poliittisen realismin teoriaperinteen yhteen. Esimerkkitapaukset osoittavat, että informaatioidankäynti määritellään tarkastelluissa valtioissa eri premisseistä lähtien eri tavoin. Tämä käsitteellinen hajaannus johtaa erilaisiin lopputulemiin valtioiden päätelmissä ja siten myös poliittisissa toimenpiteissä.	
Asiasanat: informaatioidankäynti, poliittinen realismi, neoklassinen realismi, poliittinen filosofia, yhteiskuntafilosofia, Yhdysvallat, Venäjä	
Säilytyspaikka Jyväskylän yliopisto	
Muita tietoja	

UNIVERSITY OF JYVÄSKYLÄ

Faculty Humanities and Social Sciences	Department Social Sciences and Philosophy
Author Santeri Kytöneva	
Työn nimi - Title Information Warfare and Realpolitik – Understanding Information Warfare through Political Realism	
Subject Philosophy	Level Master's thesis
Time Spring 2022	Number of pages 62 pages and a cover page
Supervisor Onni Hirvonen	
Abstract <p>In my master's thesis I provide a clarifying philosophical analysis on the concept of information warfare. I compare different definitions given in the United States' and Russian research literature on the concept. My analysis argues that there are prevalent differences in the usage and the definitions of information warfare between these two states.</p> <p>In addition to clarifying the concept of information warfare, I discuss political realism and justify the application of neoclassical realism to the study of information warfare. My analysis provides two illustrative examples of applying neoclassical realism to the study of contemporary information warfare. I argue that information warfare is defined differently from state-specific premises in the two states, leading to differing usage of the concept. This dynamic nature of the concept leads to different outcomes in the inferences of the states, leading to differences in political measures.</p>	
Keywords: information warfare, political realism, neoclassical realism, political philosophy, United States, Russia	
Depository University of Jyväskylä	
Additional information	

TABLE OF CONTENTS

1	INTRODUCTION.....	4
2	INFORMATION WARFARE.....	10
2.1	Politics and information warfare.....	10
2.2	Root definitions: information and information environment.....	13
2.3	Information warfare accompanying other forms of warfare.....	14
2.4	Information weapons.....	15
2.5	Russian theoretical views on information warfare.....	16
2.6	The United States' theoretical views on information warfare.....	21
2.7	Chapter summary.....	24
3	POLITICAL REALISM.....	26
3.1	Main assumptions of political realism.....	26
3.2	Forms of political realism.....	28
3.2.1	Classical realism.....	28
3.2.2	Structural realism.....	29
3.2.3	Neoclassical realism.....	32
3.3	Morality and political realism.....	34
3.4	State and political realism.....	38
3.5	Power in political realism.....	39
3.6	Constructivism and neoclassical realism.....	41
3.7	Chapter summary.....	42
4	CASE ANALYSIS.....	44
4.1	Applying neoclassical realism to two example cases.....	44
4.2	The Mueller reports.....	46
4.3	Doctrine of Information Security of the Russian Federation.....	49
4.4	Conclusions from the example cases.....	51
4.5	Chapter summary and possibilities for further research.....	54
5	CONCLUSION.....	56
	REFERENCES.....	59

1 INTRODUCTION

In the pages that follow, I will provide a philosophical analysis on the concept of information warfare. On the one hand, the aim is to clarify the concept of information warfare. On the other hand, I argue for the plausibility of applying neoclassical realism as a valid theoretical approach to the study of information warfare. In this sense, the broader argument presented in this thesis can be classified as applied political philosophy.

Much talk surrounds the topic of information war. In the March of 2022, the British government granted the British Broadcasting Company (BBC) 4.1 million British pounds in additional funding to fight Russian disinformation (The United Kingdom's Government Digital Service 2022). In response at a briefing in the April of 2022, the Spokeswoman of the Russian Foreign Ministry, Maria Zakharova claimed the British government was sponsoring information war waged against Moscow (The Ministry of Foreign Affairs of the Russian Federation 2022). This is one of the many examples of information warfare being brought to the public attention. The war in Ukraine since 2014 and the United States presidential election of 2016 have brought to the surface increasing claims of state-sponsored hostility in the information environment. The volume of writings on the topic between Russia and the West has increased even more so in 2022 due to the ongoing war in Ukraine. Information warfare is a concept encompassing different areas of our public discussion ranging from military topics, cyber intrusions, and internet trolls to international relations.

The precise definitions of information warfare and its actors, however, remain elusive. Explicating the definition of information warfare is required on many fronts to bridge the deep rifts that have widened in recent times between states and their citizens. Careful analysis of the concept is required to avoid making mistaken generalizations and to bring clarity to the public discussion. Understanding the nature of information warfare can strengthen the foundations for developing societal skills to

combat the malicious use of false information. These practical issues surrounding information warfare reveal the need to develop a clear understanding on what the concept actually refers to. Elucidating this phenomenon with the means of philosophical analysis can bring us to the roots of the concept and combat the ambiguity surrounding it. Conceptual analysis can offer us valuable new understanding on applying existing theories of international relations into the contemporary study of information warfare.

Information warfare owes its conceptual roots to propaganda, a concept originated in the 17th century to denote the transmitting of cardinal messages (Pörsti 2017, 7). Methods of propaganda were later developed into the manipulation of masses through psychological means, with the development culminating in effective means used in the first and the second world wars (Pörsti 2017, 8–9). Information warfare as a concept is firmly rooted in the 1990s military scientific theorizing surrounding psychological and information operations.

The concept of information warfare has become prominent in the recent years. In the 21st century the United States elevated information operations to an increasingly central role in their military doctrine (Ventre 2016, 28). It was already speculated by John Arquilla and David Ronfelt (1993) and N. A. Kostin (1997) that in future warfare the control of information will play a greater role and information operations could be employed to even avoid armed conflicts entirely. The United States' military doctrine makes a distinction between information operations and information warfare. Information operations is a broader concept than information warfare. Information operations are intended to be conducted during both peace and wartime. (Armistead 2004, 18–19.) Similarly, in Russian military doctrine the concept of information warfare has remained very central for a long time. Roots of contemporary Russian information warfare date back to the 1950s and the concept of reflexive control, which relates to understanding the thought processes of the other party to deceive them and achieve certain aims (Thomas 1996, 8; Vasara 2020).

Russian conception of information warfare is described as more holistic, especially among Western scholars (Thomas 2019). Importantly, as Juha Kukkola (2020) and Timothy L. Thomas (2019) have noted, looking at Russian strategies and theories through Western conceptions is problematic. This thesis is at the same risk of showing some inherent bias as any other academic text written from a certain cultural background. However, the aim of this thesis is not to answer a question related to any country's specific security strategy. The aim is to clarify the nature of information warfare to develop understanding regarding the concept from a philosophical perspective.

Carl von Clausewitz (1780–1830) linked politics and war together in his influential definition of war given in the first volume of *On War* (2010, originally released in 1832). According to his classical definition, war is an extension of politics. War must

have a certain political goal it aims to achieve. Clausewitz (2010, 65–66) also sees war as unpredictable and costly for the parties involved. This means that the threshold to start a war is generally high. These classical insights also hold solid ground in the sphere of information warfare. All the source texts are observed from a viewpoint that is not motivated by any outside organizations or affections. The reader will be the final judge on whether this goal succeeds or not. In this philosophical work, I will elaborate the multi-faceted concept of information warfare and focus on the possibility of understanding contemporary state-level information warfare through the lens of political realism.

The main research question is threefold, also forming the structure of the thesis:

- What is information warfare?
- How can political realism be applied to the study of information warfare?
- What features of information warfare does the application of neoclassical realism highlight? Here the analysis focuses on two example cases: *The Report On The Investigation Into Russian Interference In The 2016 Presidential Election* (Mueller 2019) and *The Doctrine of Information Security of the Russian Federation* (2016).

The method of the thesis is philosophical analysis. The argument regards the nature of information warfare, the use of this concept, and the possibility of studying the underlying phenomena scientifically using neoclassical realism as a theoretical framework. This philosophical analysis offers a clarifying view on the seemingly incompatible political dynamics of two states in an informational conflict. In the example cases it can be observed that the objectives of Russian information warfare are closely guided by the perception of an active foreign informational threat. On the other hand, the United States perceives Russian actions as hostile. The philosophical analysis aims to clarify the elusive concept of information warfare and explain the difficulties inherent in developing a united theory of the phenomena.

Here I subscribe to a similar conception of philosophical research as put forward by Martha Nussbaum (1947–) in the introduction of her book *Hiding from Humanity: Disgust, Shame, and the Law* (2009). She clarifies the role of philosophical research in areas intersecting the empirical sciences. Her philosophical analysis aims to explicate thought-content and the genesis of certain emotions (Nussbaum 2009, 13–18). Similarly, although I study information warfare, the aim here is to explicate the parts that constitute the phenomenon bringing forward its genesis. Similarly, to Nussbaum's philosophical proposal, I also propose a philosophical analysis with strong links to the empirical literature. The research problem at hand rises from the need to understand

information warfare precisely at the state-level. The philosophical aim here is to explicate the concept and clarify the difficult and widely utilized concept. The method of the thesis, philosophical conceptual analysis, is well suited to developing a precise understanding surrounding the concept of information warfare.

The thesis consists of three main parts. The first main part (Chapter 2) will focus on defining the concept of information warfare. The chapter aims to narrow down the foundational features of information warfare and give a general definition that combines and compares aspects of research literature from Russia and the United States. The main sources under study regarding the definitions of information warfare are academic sources written after the year 1990 by prominent researchers with backgrounds in military science. This comparative structure highlights different starting premises of definitions in different nation states and differences in the usage of the concept of information warfare.

The third chapter will tie together the theoretical framework of political realism and information warfare. Reasons for approaching information warfare from the point of view of political realism are the following: although this connection has not been extensively studied, it is argued here that concepts such as balance of power in the tradition of political realism have explanatory strength also in the context of information warfare. My analysis argues that the theoretical framework of political realism is well suited to study political power dynamics underlying information warfare, when taking into consideration the key theoretical limitations. In the third chapter, I set the groundwork for testing the plausibility of neoclassical realism as a theoretical approach. This is one of the prolific ways to grasp information warfare as the object of scientific study, but certainly not the only one. The chapter will also briefly consider the role of morality in political realist tradition and explore how this plays a role within the study of information warfare. In the tradition of political realism, politics is seen as an independent field of study separate from ethics. This thesis will apply the political realists' theoretical framework to the clarify the dynamics of information warfare. Both the second and the third chapter aim to justify the application of political realistic assumptions to the domain of information warfare.

The fourth chapter will provide two examples that highlight different practical understandings of information warfare: One from the United States election of 2016 and the role of the accused foreign interference by Russia. The second one will evaluate Russia's official view on its information security. The main source for the first example will be *Report on the Investigation into Russian Interference in the 2016 Presidential election (Mueller 2019)*, more commonly known as the *Mueller reports*. The main source for the second example case is *the Doctrine of Information Security of the Russian Federation (2016)*. The aim is to clarify the political dynamics of information warfare between

these two states bringing forward understanding from the earlier philosophical conceptual analysis. It is noteworthy that these examples serve merely as illuminating contemporary documents bringing forward elements of information warfare. The work at hand is not an empirical case study. The highly different nature of these documents means that they are not directly comparable. Rather than aiming to infer conclusions from state policies of the selected countries, the examples merely shine light on different aspects regarding the usage of the concept of information warfare. The example cases tie together the earlier two chapters, information warfare and political realism. Through the illustrative examples it will be shown that some of the insights made in the tradition of political realism also apply to the realm of information warfare with certain limitations. Clarifying this link between political realism and informational conflicts can bring up insights regarding the nature of information warfare and open possibilities for further research.

The study at hand concerns the nature of information warfare, making philosophical conceptual analysis the most suitable for answering the research questions. This study is centered on academic research from Russian' and the United States' authors. I will approach the earlier three research questions from academic sources owing their origin to the military scientific debate from the 1990s onward and the rich theoretical debate in the tradition of the political realism. The sources are selected based on their quality, relevance, and influence within the scientific debates. To ensure reliability I aspire at the highest transparency possible regarding the source material. In order to combat selection bias, I aim to make transparent decisions regarding what material to utilize and explicate the reasoning behind choosing certain sources.

The study aims to shine light on how the differing definitions of information warfare between Russia and the United States shape policies and the official usage of the concept. This point of view has not been extensively studied before. I will argue that understanding the perceptions and starting assumptions is critical to understanding state-level information warfare and the subsequent policy formation. The approach taken in the thesis conceptualizes states as actors following the tradition of political realism. The assumption here is that the official state documents reflect (at least partly) the intentions of the state in question.

Different strands of political realism are centered around studying power relations between states. Underlying the work at hand is an assumption that some of the same mechanisms regarding power relations clarified in the works of political realism are also present in the dynamics of information warfare. One of the goals of the thesis is to participate in the methodological discussion on the possibility of applying political realists' theoretical work to the study of information warfare. The aim is not to create a new universally applicable strand of realism with a different conclusion to the existing ones. An understanding of information warfare is context-dependent and

changing. Information warfare can, nonetheless, be separated from the accompanying forms of war and made an independent object of study. In the thesis I untangle relevant definitions of the concept of information warfare while arguing for the plausibility of neoclassical realism as a suitable theoretical framework for studying contemporary cases of information warfare.

This study may be read as giving an overview that includes the historical roots of the key concepts, and the main goal is not to define exclusively differences regarding strategies of certain states. The goal is centered around best clarifying the phenomenon that is the subject of the study: information warfare. I argue that information warfare should be understood from state-specific premises, taking into consideration the conceptions of the decision-makers. Information warfare consists of parts that are bound to change, but it can be made an object of scientific research. One of the ways to do this is to utilize neoclassical realism as a theoretical approach.

From the political realist perspective, politics is grounded in practice, and wars occur when interests clash in unsolvable ways and when political will is imposed violently on the opposing party. Viewpoints falling under the category of political realism are a mixed bag and it might well be that insights offered by classic writers need some revising in order to apply to the context of twenty-first century information warfare.

The main argument presented in the thesis is the following: information warfare is a dynamic political concept, which is defined and understood differently in by different states. Accordingly, the concept cannot be understood as a stable constant. Rather, I argue that the analysis of information warfare should be approached from state-specific premises that closely tie to the perceptions of the current central political actors. Development of technology and geopolitical climates guide the means and aims of information warfare. The philosophical aim of the thesis is to clarify the nature of information warfare and justify a political realist perspective to approaching information warfare in international politics.

2 INFORMATION WARFARE

2.1 Politics and information warfare

The aim in this chapter is to, first, identify the key features of the concept of information warfare. Secondly, the chapter clarifies the definition of information warfare in the United States' and Russian research literature. The review of these sources is limited in its scope and should not be taken as an exhaustive compilation of all the different scholarly viewpoints on information warfare. The sources are selected due to their relevance in world politics and on the military scientific discussion on information warfare.

The justification for choosing to focus on Russia and the United States is the following. Information warfare is a dynamic concept that is defined and used differently in the research literature of these two states. Comparison of the definition of information warfare sets the grounds for the following investigation, which uses political realists' assumptions as a theoretical framework to evaluate the political dynamics at play during information warfare. Both the United States and Russia are relevant states to study due to their central role in international politics and their richness in high-quality theoretical work on the topic of information warfare. I will bring to surface differing conceptions on information warfare by theoreticians in these states. Ideological tensions between these two states during the 20th century also makes this comparison important. In addition, there are other states to consider in further research, for example, the increasing geopolitical role of China and India brings these two to the forefront. The role of non-governmental actors in information warfare also requires additional research.

To ensure reliability, I aim at the highest transparency possible regarding the source material. The United States and Russia also hold differing interests in the information environment, this will be illustrated by the examples in the fourth chapter. The concluding aim of the chapter at hand is to identify some of the key foundational features of the concept of information warfare to provide ground for the analysis in the following third and fourth chapters. The synthesis of differing viewpoints of scholars will aid in giving the best possible definition of information warfare in the context of this thesis.

To begin with, the reasoning behind choosing to use the concept of information warfare needs to be clarified. Here a good starting point is the distinction between warfare and war. According to Johan M.G. van der Dennen's (2005) literature review on the concept of war, much of the complexity surrounding the definitions of war rises from the variety of different aspects and perspectives that can be emphasized. War in the context of this thesis is defined as an extension of politics fought with different means between two or more groups of participants, following the definition given by Clausewitz (2010). Oxford English Dictionary (2021a) also defines war in this way as a hostile contention between two or more parties. Warfare emphasizes the means and techniques used in wars. This definition follows the usage found for example in the United States Department of Defense released Joint Publication (JP 3-13 2014). This definition of warfare is also in line with the Oxford English Dictionary (2021b) where the action of engaging in war is emphasized in the concept of warfare. Study of information warfare focuses here on the nature of it and the means of how its conducted. War, on the other hand, refers to an ongoing conflict between two or more parties. The reasons for choosing to use the concept of information *warfare* rather information *war* are due to the difficulties related to defining the boundaries of war in an informational setting. As this thesis aims to study the phenomenon at the most general philosophical level, investigating the general characteristics of warfare and general understanding of what constitutes warfare is more suitable. Another advantage of using the concept of information warfare instead of war is avoiding the issue of having to define when the war ends and between who is it waged. Information warfare can be seen overlapping both early and late parts of war understood in the traditional sense, or it can be even conducted during peacetime.

Information warfare consists of operations that have the nature of being more aggressive and quickly over or they can be ongoing and longer in time. The concept of information warfare also cuts across different strategic cultures and into theoretical discussion on the problems of war. One of the most influential definitions of war, already discussed earlier, that war is an extension of politics, is about defining war as extreme means of politics with a certain defined goal in mind (Clausewitz 2010).

Philosophy of war is a whole separate field of study with questions tying into the justification and the nature of war. These philosophical questions are underlying this work, and the work of the scholars cited, but they will be demarcated out and left open for further research because this discussion is not at the center of this thesis. The following sections look at influential contemporary definitions given to information warfare by Russian and the United States' scholars with military backgrounds. The underlying reasoning behind this approach is that in order to get to the root of what information warfare means, the concept should be analyzed in its practical use in different settings. The philosophical investigation ends up clarifying the possibility of studying information warfare at the structural state-level of analysis.

The role of politics in information warfare is intricate and intertwined with discourse on who the main actors in the political setting are. In the context of this thesis, following the tradition of political realism, states are considered the main actors due to their perceived hegemony and their ability to employ military power. These factors are also relied on in the research literature surrounding political realism and reflected in the official texts (see, e.g. Mueller 2019; JP 3-13 2014; Doctrine of Information Security of the Russian Federation 2016), which are analyzed in the fourth chapter. The claim that states are the main actors in international politics is an open question that is also a focal point in the critique of political realism (Pashakhanlou 2018; Wagner 2007). The critique will be briefly considered in the third chapter. The theoretical implications of considering states as the main actors in international politics and information warfare will be returned on in the following third chapter.

There are many political factors at play during an interstate informational conflict. At state-level analysis the main factors tie into what political realism highlights: state interests and power capabilities. My analysis argues that consideration should also be given to the constructivist side of the coin, which relates to ideas and perceptions of the individual actors that form the state. At the level of the individual cognitive subject, questions of psychological aspects on the means of influencing individuals come forward. Psychological understanding should be applied to answer questions on how the cognitive subjects will respond to asserted informational-psychological pressure. These psychological factors shape the individual's orientation towards new information and determine how it modifies their behavior. Reprogramming of thoughts and planting seeds of thought are some of the techniques which are at play here. In this sense, information warfare is about bringing information weapons at the level of cognitive subjects and the political goals at the state-level together.

Two paths for research thus open: developing understanding on the psychology of the individual actors in great detail by going to the basic unit level or at the state-level clarifying the structural factors related to the political dimension of information

warfare. There are therefore internal psychological dispositions and system level factors at play during information warfare. The focus here is on the second option: state-level analysis.

First, we will engage in defining information warfare through conceptual analysis. This investigation requires the analysis of definitions given to information warfare, consideration of key actors and drawing the line between information warfare and diplomatic activities. Drawing a hostile worldview of the international system could have its own effects and not every diplomatic everyday activity can be considered to be information warfare. The concept of soft power will be considered in the following chapter (3.5). Following these considerations will be an inspection into actual practices of information warfare (chapter 4). The problems inherent in defining information warfare require clarity at the most basic level, next we will consider the root definitions underlying the phenomenon.

2.2 Root definitions: information and information environment

Concepts such as data, information and knowledge relate to each other, but they vary in their structural composition. Data is often defined as raw material that has not yet been processed into information (Ventre 2016, 217). Data is composed of primitive observations that have been collected but not processed further. Information is then processed data placed in the right context and in an understandable form, making information meaningful to the recipient. The recipient can utilize information in shaping his or her actions (Ventre 2016, 218). Knowledge resides at a higher level than information, it is understanding on the underlying mechanisms of information organization. Recent and new developing information technologies create and process data in quantities unheard of before (Ventre 2016, 217). The analysis of information warfare commonly employs two concepts stemming from information: misinformation and disinformation. In the context of this thesis misinformation refers to accidentally shared false information. Disinformation (дезинформация) is a concept referring to deliberately shared false information owing its conceptual roots to the Russian discussion (Brantly 2021, 27).

Information environment is composed of the technologies where information is being transmitted and handled (Ventre 2016, 45). Information environment then consists of devices, networks and data. The official doctrine of Russian information security released in 2016 begins by defining the information environment or information sphere (информационная сфера) as a combination of information objects and systems, different networks and technologies related to processing and transmitting in-

formation. In this analysis, the term information environment will follow these definitions since they both refer to the same broad collection of devices, information systems and networks.

The relationship between the concepts of cyberspace and information environment is complex. In the context of this thesis information environment will be utilized in the broad sense defined earlier and understood as referring to the wide medium, where information is conveyed. Cyberspace means the narrower global digital domain where information is transmitted, exchanged, and controlled using mainly electronic information technological devices and it occupies a large part of information environment (Ventre 2016, 202). The relation between the concepts of cyberspace and the information environment is contested (see Kukkola 2020, 57–63), but here cyberspace is defined more narrowly as the man-made medium where information is stored and transmitted through information technological devices. Information environment can be seen as a new arena for contestation that is replacing the traditional fields of conflict (Ventre 2016, 17). Edward Waltz writes that beyond the traditional military realm, information space is becoming increasingly conflict ridden and this leads to the expansion of the realm where war is fought (Waltz 1998, 8).

With the information environment becoming an area of conflict, the potential effectiveness of operations conducted there also remains subject to debate (Waltz 1998, 9). Warfare in the sphere of the information environment can be seen as a powerful and influential way of achieving ends without using physical force. However, the effectiveness of information attacks cannot be exhaustively measured, therefore claims related to it are lacking in precise scientific validity. For example, in election settings showing that the actual set goals were achieved because of information warfare is extremely difficult to verify due to the complexity of human reasoning underlying the voting activity. The nature of information warfare brings forward a difficult in drawing a distinction between war and peacetime operations, which we will consider next.

2.3 Information warfare accompanying other forms of warfare

Information warfare accompanies different domains of warfare. This means information warfare can be combined with other domains of warfare, for example more traditional ground operations. In addition, the question of information warfare conducted as a separate, sole operational domain of warfare during a military operation, needs to be considered as part of defining the concept. Military scientific debate on the question can be demarcated into two viewpoints, first of which emphasizes more traditional forms of warfare such as land, air or naval, and sees information warfare as simply accompanying them. Waltz (1998, 9) argues that there exists a spectrum of

war forms that are characterized as mixes of operations. The aim of the operation shapes whether information warfare is primary or secondary accompanying form of war to achieve a certain goal. The second viewpoint is to see information warfare as a primary form of warfare in certain cases with specific means and objectives. Ryan Henry and C. Edward Peartree, with background in the United States military, wrote already in 1998 about the difficulties frequently present in theorizing about information warfare. They bring forward three principal sources of difficulty. The first, is the rapid technological change associated with information warfare (Henry & Peartree 1998, 126). Rapid developments in technologies imply constantly changing means associated with information warfare. This also changes the content of goals in information warfare due to shifting conceptions on limitations of what can be achieved. The second is the nature of information warfare as something that blurs the line between civil and military targets (Henry & Peartree 1998, 126). This feature ties closely into difficulties of more specifically defining what is seen as war. Information warfare is often conducted during both peacetime and wartime, which should be noted when theorizing about the phenomena. The final difficulty is uncertainty about information warfare itself (Henry & Peartree 1998, 126). Not everyone is keen on giving the concept a large role in theoretical discussion possibly because of the difficulties related to defining it.

Henry and Peartree (1998, 133) present a paralleling example of how earlier in history it was expected that artillery would revolutionize war, but much later it is still developing side by side with other forms of war. This example still serves as a warning to not set too high expectations on the development of new spheres of military action. The future is far from being easy to predict and totalizing possible future developments is very much prone to error. Therefore, as Henry and Peartree argue, we should proceed with caution regarding the future. Henry and Peartree elucidate that “the most durable military theory focuses less on the latest technology and more on the infinite complexity of the user” (Henry & Peartree 1998, 135). This thesis follows the guideline and focuses on bringing forward general features of information warfare with a specific focus on clarifying the concept at the state-level.

2.4 Information weapons

This section considers the means of information warfare that can be defined as information weapons. Thomas (2020, 139) argues that the Russian understanding of information weapons is much broader than that of the Western researchers. The nature of information weapons is closely connected to the difficulty of drawing a distinction between peacetime and war. Information weapons can be categorized in many ways,

but the main distinction to bring forward here is a split into defensive and offensive weapons.

Offensive information warfare may be conducted covertly or openly (Waltz 1998, 251). Broadly defined there are two basic aims: to gain or affect information. Technical attacks aim at informational systems, this can for example mean replacing or introducing false information into the target system or flooding the target with disruptive noise. Technical information weapons therefore may introduce bugs into the target systems, interfering with their functioning. Information can be destroyed directly or indirectly. Direct, more aggressive attacks are met with more aggressive counterattacks. Psychological information attacks on the other hand aim at values or perceptions of the targeted subjects. The goal is to undermine values of the target, aiming at cognitive and behavioral change in the target. Psychological attacks aim to influence and alter the individual's perception of the situation (Waltz 1998, 7).

Martin Libicki (2007, 50) notes that information can also be destroyed indirectly. One way to do this is by corrupting existing information by adding false information (Libicki 2007, 50). Misinformation then mixes up with real information and the distinction between the two is hard to make out. Adding noise to information is one way to reduce its reliability (Libicki 2007, 51). According to Libicki, the best way to defend in information warfare is to prepare for this type of noise. Defensive information warfare means preparing for any hostility aimed at friendly information. Operating on the expectation that all information is true may lead into problems. Expectations and underlying values of the actors evaluating information play a key role in the outcomes. Next, we will consider how information warfare is conceptualized in the selected Russian and United States' research literature.

2.5 Russian theoretical views on information warfare

Russian conception of information warfare is especially in Western scholars' writings described as more holistic (Thomas 1996; Libicki 2017, 51). Holistic in the context of information warfare means encompassing different elements of operations together. This means incorporating psychological and technical components together to achieve the most effective results. It can also be seen as effective combining of wartime and peacetime operations together, thus leading to blurring the lines between war and peace. Libicki (2017, 51) views that Russia is further advanced than the West in combining different components of information warfare together.

The online encyclopedia of the Russian Ministry of Defense (2021a) *defines information war (информационная война)* as an "open and acute conflict between states,

where dangerous informational means are used in the information sphere". The objects of information war are defined to be "control systems, decision-making, civil and military information infrastructure, weapon systems, societies and consciousness" (Russian Ministry of Defense 2021a). In the dictionary of Russian Ministry of Defense (2021b) there also exists a different entry for the concept of *information confrontation or counter-struggle* (информационное противоборство). Mari Ristolainen (2017) clarifies the translation of this term, noting that the word is repeatedly mistranslated into information warfare. Ristolainen (2017, 10–11) indicates that the term emphasizes the role of countering applied pressure or struggle. In the encyclopedia entry, information confrontations are seen as possibly escalating into larger scale information war (Russian Ministry of Defense 2021b).

Information war is defined in the encyclopedia as a large-scale informational conflict, but specific criteria or historical examples are not given. According to the encyclopedia, both concepts have their origin in the latter half of the 20th century (Russian Ministry of Defense 2021a & 2021b). Katri Pynnöniemi traces the roots of information-psychological warfare in Russian military theory to the essay written in 1906 by Vladimir Lenin titled *On Guerrilla Warfare* (Pynnöniemi 2019, 214). Aaron F. Brantly (2021) traces the origins of Russian information warfare even further to the Tsarist Russia. As noted by Carolina Vendal Pallin (2019, 203), the encyclopedia definition given by the Russian Ministry of Defense is difficult to grasp analytically due to its broadness. Therefore, further conceptual analysis is required. To begin with, we need to conceptualize the concept of reflexive control due to its prominent role underlying the Soviet thought on information warfare.

Reflexive control is closely related to Russian understanding of information warfare, it is a concept of understanding the cognitive processes of the other party in order to gain a tactical advantage. The concept of reflexive control appears extensively in the views of Russian researchers and military theorists. Work around reflexive control dates back to Soviet authors in the 1950's (Thomas 1996, 32). The conceptual roots tie to the development of cybernetics and system theory in the Soviet Union (see Vasara 2020 for recent in-depth work around the concept of reflexive control).

Understanding reflexive control is central to comprehending the information-psychological dimension of information warfare in Russian military thought. Reflexive control means understanding the thinking and decision-making process of the other party. Reflexive control requires a psychological model of the opponent. Its goal is to create an advantageous setting through the employment of different modelling strategies that make it possible to influence the target in desired manner. Related closely to achieving this goal is the active use of information, supplying the target with false information or partly true information in the right settings. (Vasara 2020.)

Reflexive control can be understood at the smallest unit level of cognitive subjects. At this level it is the use of covert means to alter cognitive subjects' informational frame. Methods of control aim at information superiority over the opponent. Understanding the opponent's thought processes and reactions plays a central role in achieving information superiority in a deliberate manner. Reflexive control underlying information operations means influencing the enemy into doing something that is in fact in favor of the influencer, in such a way that the enemy is not aware of this (Ventre 2016, 41).

Reflexive control aimed at individuals can also be employed by non-governmental actors. Examples can be found in electoral settings, where individuals may be subjected to influencing acts which aim at getting the subject to vote for one candidate over another. The target of influencing values is not a material change in the world but rather it is aimed at the worldviews of the targeted individuals. This influencing is done in the information environment. Worldview is the main target of these attacks rather than material change through more traditional means of warfare although the way in which these two are intertwined together is multifaceted. Another view is to see attacks at the information level to accompany conventional operations of warfare (Waltz 1998, 9). The aim is to concentrate on orienting the subject in a new way. This highlights the overlap between the concepts of reflexive control and information warfare. Reflexive control means getting someone to perform an act that they think is beneficial for themselves but what they are doing is in fact beneficial for the party who employed the means of control.

In 1996 Thomas introduced a theoretical distinction between psychological aspects and military-technical components regarding the Russian concept of information warfare. According to Thomas, both factors are at play in the Russian military's perception of information warfare. He roots this distinction into definitions of information warfare provided by two authoritative Russian officers at the General Staff Academy (Thomas 1996, 26-27). Thomas also notes the increasing interest in information systems in Russia, which he links to the possibility of another arms race in the sphere of information weaponry (Thomas 1996, 33).

Russian military scholar A. V. Manoilo (2005) argues that the term information-psychological warfare was transferred from the United States military circles to the Russian discussion. Manoilo (2005) defines information-psychological warfare as a political conflict extending to the use of information weapons. Political conflict extends to warfare over values and the perceptions of individuals. The main features to consider in Russian information warfare vary from technical to psychological aspects.

Thomas (1996, 26) defines the goal of information warfare as gaining or maintaining an informational advantage over the opponent. Specific pressure aimed at in-

formational systems of the opposing side is applied to achieve this goal. Gaining informational advantage and applying informational pressure can then help in achieving political goals without the need to employ the use of military power.

For S. P. Rastorguev (1958–2017), another prominent Russian researcher on the topic and Doctor of Technical Sciences with a military background, information warfare is about getting the enemy to willingly remove their protecting shell (2003). Success in information warfare comes without the target realizing that he or she has been under attack. Rastorguev defines information self-learning systems as the basic units of his theory. Information warfare follows from informational conflicts that these systems inflict to one another overtly and covertly. Information weapon, as defined by Rastorguev, transmits an input into a self-learning information system that will generate changes in its behavior and cognition. Rastorguev's view is in line with the earlier definition given to information weapons. Self-learning information systems rely on information in their operation and are constantly evolving organism-like structures. Providing corrupted information to an information system will then lead to it malfunctioning. This description highlights the dynamic nature of information warfare, which should be considered when developing theories of it.

Russian Lieutenant General and Doctor of Military Sciences N. A. Kostin in an article released in 1997 notes that the development of information technologies is increasingly determining outcomes of historical rivalry in the international arena. Kostin defines information warfare as "the use of special methods for exerting pressure on the information medium of the opposite side, as well as protecting its own in the interest of attaining the goals set" (Kostin 1997, 53). Kostin's definition of information warfare links it closely to achieving certain political goals, this follows the Clausewitzian definition of war.

For Kostin information warfare is waged both during peace and wartime (Kostin 1997, 53). This claim is not contradictory if we distinguish information warfare from war fought with traditional military means. Then the claim is merely on the possibility of conducting information warfare as an independent operational domain. Kostin however does not formulate clear criteria on information war, which goes back to the earlier problem of defining clear-cut lines demarcating information war. Kostin asserts that information warfare needs a lot of preparation, and it should be systematically grounded on knowledge (Kostin 1997, 53). This call for systematicity seems to suggest that states or other entities with well-organized military power would be the main actors in the sphere of information warfare. Theory of information warfare would then be a collection of knowledge that forms a system encompassing all of the different features of it (Kostin 1997, 53). Kostin stresses that this is not a task that can be taken up by a single science, rather it is a joint effort between different disciplines (Kostin 1997, 53). Kostin emphasizes the large role of military science in this endeavor,

which is in line with the tradition of Russian military thought on the concept of information warfare.

Objective of information warfare according to Kostin is to protect your own information while inflicting the maximum threat to the other sides' information as the means to achieve certain political goals (Kostin 1997, 53-54). This broad ideal type definition is also given in the research literature originating from the United States (Libicki 2007, 20). The objective of information warfare defined broadly is therefore commonly shared in the research literature.

Kostin (1997, 54) distinguishes between political, economic, cultural, militaristic and informational factors at play in information warfare. With the term informational, Kostin refers to technical measures in the information environment. Kostin claims that political factors are especially important in defining the contents of information warfare. Kostin (1997, 54) therefore stresses the large role that political goals and narratives play in the sphere of information warfare.

According to Kostin (1997), information warfare is conducted through an information medium. Information medium is more abstract and broader than the information environment defined earlier, but the medium encompasses the information environment. Success in information warfare requires concentrating powers into the right place at the right time. According to Kostin (1997, 58-59), activeness is especially important in information warfare: active defending and persuasion. Kostin (1997, 58-59) observes that distinctive to information warfare is the unpredictable nature of it, which rewards surprising and quick operations. He proceeds to expound that effective top-down organization and quick strikes can turn the tides in favor of the attacker. Deceptive attacks and purposefully keeping their intention hidden is characteristic to information warfare. (Kostin 1997, 58-59.) Kostin (1997) also stresses the importance of command-control agencies and their effective communication (see also Arquilla & Ronfieldt 1993).

In summary, the Russian conception of information warfare is foremost holistic. The usage of the information war (информационная война) is prominent, the concept is not seemingly avoided as is the case especially in some of the United States' more recent documents. This will be returned on in the fourth chapter of the thesis with the selected example cases. The Russian concept of information warfare remains relevant both in the official documents and the military scientific debate, regardless of the newer overlapping concepts such as hybrid or cyber warfare. Another prominent feature of the Russian research literature is the close focus on the psychological aspects of information warfare. These psychological factors are closely related to influencing the values of the enemy. This feature can be traced to the state's strategic culture and the development of concepts such as reflexive control as clarified above. As a no sur-

prise most of the scholars writing on the topic of information warfare come from military scientific background themselves, and the narrative surrounding theorizing on information warfare is still reminiscent of the Cold war dividing line between the West and the former Soviet Union.

2.6 The United States' theoretical views on information warfare

Next, we will focus explicitly on the conception of information warfare originating from United States' sources, emphasizing the differences compared to the earlier Russian definitions. Martin Libicki (1952-), a scholar from the United States with extensive military and research background on information warfare, provides the following ideal-type definition: "Information warfare is the use of information to attack information" (Libicki 2007, 20). This definition given in 2007 offers a broad perspective, one which we will elaborate in this section. Another scholar writing on the topics of cyber and information warfare, Daniel Ventre analyses the United States' military doctrines, offering clarification on the means of information warfare. Military doctrines of the United States list psychological operations, electronic warfare, military deception, operations security, information assurance and computer network attacks as components of information warfare (Ventre 2016, 22). Ventre (2016, 28) states that the term information warfare is no longer used in the military doctrine of the United States after the year 2007. After this year the concept of information operations was taken up, and it remains to be used extensively (Ventre 2016, 28). Ventre observes from the analysis of military doctrines between 2010-2015 that the concept of information warfare is used rarely in the more recent versions.

In the 2010's information operations remained a concept used and defined actively, and it still plays a central role in some of the United States military documents. Noteworthy is also the increasing role of cyber-related concepts, which means concepts such as cyberwar and cyber operations gaining eminence in the official documents and the military scientific debate. (Ventre 2016, 32-33.) Still, cyber-related concepts are mainly focused on as a component part of controlling the information environment (Ventre 2016, 40). Concepts on information and cyber warfare tend to overlap in some areas (Ventre 2016, 9). Cyber-related concepts place emphasis mainly on computer networks and the related means, whereas information warfare also compasses psychological and political aspects more broadly.

Information operations, a key concept in the recent United States military documents, are defined as actions that are undertaken to affect information and information systems of the enemy and/or to defend friendly information systems (Ventre

2016, 40). Therefore, information operations can be considered either offensive or defensive. Defensive operations relate to the integration and coordination of “policies, procedures, operations, personnel and technologies to protect and defend our own information and information systems” (Ventre 2016, 41). They ensure access to the required information for operational action and prevent the enemy from exploitation acts.

Offensive information operations on the other hand are deception, attacks to destroy information, and psychological operations. These measures fall under the concept of information operations in JP 3-13 (JP 3-13 2014). Ventre (2016, 41) also establishes the following: “The expression ‘psychological operations’ was replaced by ‘military information support operations’ (MISOs) in JP 3-13.2, modified in December 2011.”

In order to understand the roots of the conception of information warfare in the United States military setting it is worth returning to a classic text written by RAND analysts and scholars John Arquilla and David Ronfeldt, who define the concepts of netwar and cyberwar in a 1993 article titled “*Cyberwar is Coming!*”. The article has come to be widely cited among scholars on the topic of information warfare. Arquilla and Ronfeldt predicted in 1993 that netwar and cyberwar will be at the roots of new alternatives in how societies wage war against each other (Arquilla & Ronfeldt 1993, 27). Both concepts revolve around information, at a deeper level both netwar and cyberwar being “forms of war about knowledge” (Arquilla & Ronfeldt 1993, 27). This war over forms of knowledge overlaps with the Russian conception of psychological warfare. The vision of the authors was inspired by the Mongol way of war during the 12th and 13th century. The Mongols managed to dominate the battlefield information and central for their success was remaining hidden and knowing exactly their enemy’s location (Arquilla & Ronfeldt 1993, 24). The scale of information during the Mongol’s wars was of course different to the contemporary setting. However, the domination of the information environment still holds similar implications today in achieving set political goals through warfare.

Arquilla and Ronfeldt define netwar as a conflict involving information exchange. The goal in netwars is to redefine what the target population knows or thinks. Netwars aim to modify the public opinion or the opinions of the diplomatic elite. Netwars are distinguished by them specifically targeting information and communication systems (Arquilla & Ronfeldt 1993, 28). Netwars take place between governments or non-governmental actors (Arquilla & Ronfeldt 1993, 29). This comes very close to psychological warfare as defined in Russian research literature.

“Netwars are not real wars, traditionally defined. But netwar might be developed into an instrument for trying, early on, to prevent a real war from arising.” (Arquilla & Ronfeldt 1993, 30.)

Similarly, to earlier presented Kostin's conception of information warfare, Arquilla and Ronfeldt defend the possibility of net wars being waged covertly, and thus possibly even preventing a more traditional application of military force. In short, some of the prominent authors (Kostin 1997, Arquilla & Ronfeldt 1993) see information warfare having a role explicitly as a separate domain of warfare. It can be inferred that one of the key foundational features of the concept is then the difficulty of exactly defining boundaries between war and peacetime operations.

Cyberwar, according to Arquilla and Ronfeldt, is "conducting, and preparing to conduct, military operations according to information-related principles" (Arquilla & Ronfeldt 1993, 30). Arquilla and Ronfeldt (1993, 34) define cyberwar around the means and thought processes surrounding the conflict rather than it being dependent and related to technology. Their definition differs in this way from the contemporary discussion on cyberwar, which often emphasizes the technological aspects of the concept. Arquilla and Ronfeldt's concepts have been influential in more recent developments of information warfare related concepts. Since their seminal work, the United States' scholars have studied cyberwar extensively.

Both netwar and cyberwar as defined by Arquilla and Ronfeldt include elements of information warfare. Cyberwar may introduce possibilities of defeating the enemy without the need to destroy the opposing force entirely (Arquilla & Ronfeldt 1993, 44). Information warfare like netwar is about sophisticated methods of delivering tailored information to the target. Remarks by Arquilla and Ronfeldt highlight the overlap between the concepts of cyberwar and netwar, as defined by them, and information warfare. The prominent role of cyber-related concepts is also characteristic to the United States' scholarly discussion already in the 1993.

Aforementioned scholar Libicki (2017, 49) in his more recent essay *The Convergence of Information Warfare* argues that information warfare should be considered an independent part of military operations. This view goes against separating different military branches as is done in official doctrines of the United States military such as the JP 3-13 (JP 3-13 2014). It also brings the discussion on information warfare back closer to the Russian theoreticians' views. Libicki (2017, 50) gives the following three reasons for why a more unified view on information warfare should be adopted. Firstly, different elements of information warfare can use the same techniques. Secondly, strategic aspects related to these elements are converging. Thirdly, Libicki claims that especially Russia is further in combining elements together. (Libicki 2017, 50.) Libicki notes that it is highly unlikely that a cyberattack will not have any information operation accompanying it. Libicki expects information operations to accompany and be in conjunction with cyber-attacks (Libicki 2017, 51). This brings us closer to the holistic view characteristic to the Russian conception of information warfare. It also once again highlights the role of political goals guiding information warfare. It

can be inferred that the conceptions of information warfare of the United States and Russia have much in common under the surface as will be explicated in the following summary section.

2.7 Chapter summary

Conclusions that follow from the literature review above are the following: Firstly, the concept of information warfare encompasses a dynamic and a broad phenomenon. Existing research literature highlights and emphasizes different features of the concept ranging from technical components to psychological aspects. The historical roots that are found especially in the military setting are central to understanding the development of the concept. This is also brought to the surface by the fact that most of the research literature on the topic comes from authors with military backgrounds.

Secondly, although states are not the only actors in the information environment, they are given a primary role in the scientific literature written on information warfare. Therefore, warranting more attention to especially bigger states' actions is justified. The concept of information warfare is therefore often utilized in state-centric context. This can be understood from the earlier noted military roots of the concept and political developments surrounding the two states studied in this thesis. The argument of states being the most powerful actors in the information environment can be challenged on the basis of non-governmental actors gaining a larger role. However, the state-centric focus gains support in the shade of systematic theorizing. States also uphold the ability to employ military capabilities. The concept of information warfare is utilized especially in informational conflict situations between states. This key point will be explored in the following chapter when considering the compatibility of political realist thinking as a theoretical framework.

Thirdly, drawing the line between information warfare and peacetime is very difficult. My analysis argues that it is better to make a distinction between peacetime and wartime operations. Thus, information war is fought with certain political aims during both peace and wartime. The target could be an individual soldier and/or civilian or an institution. The effectiveness of information attacks varies between targets and depends on the state structure of the target society. Some states are more resilient to information attacks than others. At the individual level, some factors can be highlighted for playing a role regarding the methods and effectiveness of operations. These include for example the educational levels and individual temperaments. At societal level, the structure of organization plays a role. These are the limiting factors that need to be noted when aiming to make generalized claims regarding information warfare.

In summary, information warfare can be understood as composed of several distinct forms and methods that constitute a broader phenomenon. It can be approached from different viewpoints emphasizing technical or psychological aspects. In my thesis this phenomenon will be approached emphasizing the psychological aspects, which are tied to the aim of influencing the target's ability and/or will in decision-making. The role of decision-making is approached at state-level structural analysis. This relates to understanding the purpose of information as guiding decision-making (Libicki 2007, 53). Goal of attacking information processes is then to mislead decision-making. Offensive information attacks are about disrupting and inflicting damage on the target's decisions. Attacking information alters the other party's decision-making, giving an informational advantage to the attacker. Expectations and perceptions when evaluating information play a key role in the outcomes. There are differences in how the concept is used in the United States and Russian research literature, but the key foundational features that define information warfare are present in both.

3 POLITICAL REALISM

3.1 Main assumptions of political realism

Political realism refers to a collection of viewpoints emphasizing pragmatism and the role of power dynamics as the driving factors in politics. This chapter will first consider the general features of viewpoints falling under the categorization of political realism. Secondly the chapter will consider the ethical implications of upholding political realism as a broad viewpoint regarding morality, politics and human nature. These assumptions will be explored through concepts central to all different forms of political realism: morality, power and state. Finally, the chapter finishes with a justification of applying neoclassical realism as a theoretical framework to study information warfare.

Central to different variants of political realism is the assumption about politics being in essence a struggle for power and security in a world filled with uncertainty (Taliaferro, Lobell & Ripsman 2009, 4). Realists see international politics ultimately as a conflictual struggle of maintaining states' security. Realism as a philosophical position can already be read in Thucydides (472 BC–400 BC), who maintained in *The history of the Peloponnesian war* (2009) that the stronger do what they want at the cost of the weaker (see also Lobell 2010). The reasoning characteristic to political realism has deep roots in theorizing outcomes of conflicts and policy formation. With certainty, some overlap between the thoughts presented by classical authors such as Thucydides and the contemporary realists does exist, but the finer details differ greatly. Steven E. Lobell (2010) offers the following useful categorization into three different strands of realism: classical realism, structural realism and neoclassical realism. Differences among political realists rise from whether the cause of inevitable uncertainty regarding security lies in human nature (classical realism) or the anarchical structure of the

international system (structural realism). Disagreements also reside within the structural realists' school of thought, whether the international system drives states to aggressive expansive policies or to secure survival through more defensive aims and to hold security as the primary factor. Neoclassical realism is the newest strand of realism offering a middle ground between classical and structural realism. It incorporates factors related to human psychology whilst giving primacy to structural features of the international system. These three strands of realism and their roots will be explained further in the following section.

Taliaferro, Lobell and Ripsman (2009, 14–15) identified three core assumptions of political realism. Firstly, variants of political realism are group centric. Secondly, politics is seen as a constant struggle among interest groups. Lastly, power is the central component in order to achieve and secure goals in international politics. (Taliaferro, Lobell & Ripsman 2009, 14.) Robert Gilpin (1930–2018) provides a similar characterization of political realism as a philosophical disposition. He describes three assumptions that are central to political realism. Firstly, the disposition to view the conflictual nature of international affairs. Secondly, group-centricity being the essence of social reality. Thirdly, primacy of power and security in human motivation driving the political life. (Gilpin 1984, 290.) These core assumptions are taken here to be definite of political realism broadly as a philosophical disposition.

Political realists debate the contents and the role of power immensely. Disagreements take place on the definition and the quantification of power. Political realists have also been criticized for not being able to define power clearly and unambiguously (Wagner 2007). Debates also take place regarding the international balance of power, whether the structure of the international system is multipolar or unipolar and what consequences this holds for the likeliness of conflicts and therefore the quality of international relations (Snyder 1991; Wagner 2007; Mearsheimer 2001; Waltz 2010). All these issues cannot be exhaustively explored here, but the analysis does build on this rich theoretical debate. The aim here is not to create a new or to fully commit to a particular existing theory of political realism. In this study, political realism is defined as a collection of various theoretical assumptions presented earlier in this section (i.e. Gilpin 1984, 290, Taliaferro, Lobell & Ripsman 2009, 14–15) that offer a great starting ground for applied problem-based approaches (in section 4). Therefore, the approach in this thesis is applying these assumptions and insights central to political realism in the manner of a toolset to study information warfare. The goal is to develop an argument that can stand on its own, building from the earlier insights from both the classical realists (Morgenthau 1960; Gilpin 1984), structural realists (Waltz 2010; Mearsheimer 2001) and newer insights by neoclassical realists (Ripsman, Taliaferro & Lobell, 2016). Most central and usable strand of political realism in the context of this

thesis regarding the study of information warfare is neoclassical realism. Reasons for this will be elaborated on after attending to the key strands of political realism.

3.2 Forms of political realism

3.2.1 Classical realism

One of the most prominent thinkers falling under the school of thought labeled as classical realism is Hans Morgenthau (1904–1980), and the characterization of classical realism presented here draws from his work. Morgenthau roots the desire to gain and hold power in human nature and aims to create a systematic political theory on these grounds. Morgenthau (1960) presents in his classic book *Politics among nations: The struggle for power and peace*, first released in 1948, six principles characterizing political realism.

The first of the six principles states that politics can be studied objectively, therefore setting the grounds for scientific inquiry (Morgenthau 1960, 4). The second principle holds that the main concept of study in politics is “interest defined in terms of power” (Morgenthau 1960, 5). Morgenthau emphasizes that the conceptions of power are not fixed (Morgenthau 1960, 8). Definition of power in political realists’ thought is a key topic that will be returned on in the following section (3.5). According to the third principle, interests vary between different states and cultural context. Fourthly, although classical realism recognizes the existence of moral principles, it does not aim to universalize them into guiding politics (Morgenthau 1960, 10). Morgenthau sees an existing tension between the individual following their moral command and, on the contrary, taking the most successful political action. The individual may place morality higher than the world, but a state cannot do this according to Morgenthau (1960, 10). The fifth principle follows the fourth, stating that states should not be expected to act following universal moral laws (Morgenthau 1960, 11). Morgenthau (1960) claims that good and pure motives do not necessarily bring morally superior policies to practice. Nations can be judged on a level playground as pursuing power. Therefore, they can be seen to pursue policies that have understandable aims, this is at the root of studying politics. The final principle regards the autonomy of politics as a separate sphere of study. This means maintaining politics as an independent field of study separate from moral philosophy (Morgenthau 1960, 12).

Morgenthau (1960) views that foreign policy actors may not be aware of all the implications and the underlying reasoning behind their actions. Statesmen and their supporters may be blind to the implications and the actual character of the policies they are driving (Morgenthau 1960, 39). Central driving factor for classical realists in

policy formation remains the psychological craving for security through holding power. In addition to expansionist policies, status-quo policies aim to keep the same distribution of power (Morgenthau 1960, 42). States do not always oppose change, only undesirable change in distribution of power is avoided.

3.2.2 Structural realism

Kenneth Waltz (1924–2013) back in his originally 1979 released book *Theory of International Politics* took a step away from Morgenthau's classical realism and pointed attention towards the structure of the international system (Waltz 2010). According to Waltz (2010) the structure of international structure is anarchic, and this is one of the primary factors in driving states behavior. Focus is therefore shifted on the role that the structure of the international system plays rather than focusing on domestic factors or individual actors. Structural realism is thus different from classical realism, which focuses on the psychological aspects related to human behavior. Structural realists see the international system as a structure formed by rational states motivated by their self-interest in security. Structural realist theories identify domestic factors as being less important in explaining a particular state's behavior. Instead, structural features are seen as the primary guiding factors in states' behavior. Structural realism takes as a starting point of analysis the states' material power relative to others in the international system. To understand different theories of structural realism, we should turn our attention to a differentiation into offensive and defensive realism.

Jack Snyder (1951–) originally introduces a distinction into two strands of structural realism, which he coined aggressive and defensive realism in his book titled *Myths of Empire* (1991). Aggressive realism will be referred from this point on as offensive realism because this term has become the standard in the structural realist research literature (Lobell 2010). This distinction into offensive and defensive realism is useful for emphasizing different modes of reasoning in the way that structural realist theoreticians have presented their arguments. Offensive and defensive realists often share the same assumptions on questions regarding the underlying factors that are driving states behavior, but they disagree on the conclusions. Defensive realists describe more moderate behavior and hold the view that states act rationally to maximize security. One of the key problems they see with aggression is that it will generate a response from the other party. Defensive realists maintain that states are generally more secure when they maintain the status-quo.

According to defensive realists, such as Waltz (2010), the anarchical structure of the international system leads to states adapting defensive and moderate strategies. States seek to maximize security and preserve their existing power. Security is the first key priority for states. Defensive realists argue that offence provokes counterbalancing and that the cost of expansion is generally very high. Defensive realists see states

as being fairly secure in maintaining their place in the international system, because according to them the international system encourages moderation rather than conquest. From a defensive realist's point of view conquest rarely pays off. Reasoning is that aggression will provoke alliance formation, defenders in a war usually fight harder and educated people are difficult to exploit to thrive for aggressive expansion.

John Mearsheimer's (1947-) contributions in *The Tragedy of Great Power Politics* (2001) remain especially central for the offensive realist line of thought. Mearsheimer (2001, 11), in contrast to defensive realists, suggests that states are inclined to aggressive behavior due to the structure of the international system. The nature of international politics is ruthless, and Mearsheimer (2001, 11) argues that it will remain that way because the structure creates incentives for states to gain power at the expense of others.

Mearsheimer (2001) as an offensive realist assumes that the goal of every state is also to maximize its share of the world power. According to Mearsheimer (2001, 11) there are very rarely states that are status-quo powers. All states are competing for power to retain their position and relevance in the realm of international politics. The reason for this behavior lies in the structure of the international system, this assumption is shared with defensive realists (e.g. Waltz 2010) but the conclusion that the offensive realists (e.g. Mearsheimer 2001) come to is different. This reasoning regarding the guiding role of the international system makes both offensive and defensive realism forms of structural realism.

Waltz (2010) and Mearsheimer (2001) both assume that the international system is anarchic. For Mearsheimer (2001) the thirst for power is not satisfiable, whereas for Waltz (2010) it is. For Waltz the main interest of states is maintaining security and balancing power. Mearsheimer's claim on the other hand is that states aim to maximize their power.

Mearsheimer ties his theory closely to the security dilemma originally stated by John Herz (1908-2005) in his article *Idealist internationalism and the Security Dilemma* (1950). Security dilemma was further developed by Robert Jervis (1940-) in an article titled *Cooperation under the Security Dilemma* (1978). Security dilemma refers to a situation where one state is improving its security by furthering its military capabilities and consequently this lowers the security of other states. Outcome is unintended hostility when, in fact, according to defensive realists, both states should be content with mutual security. States that are satisfied with the current situation may signal this to other states in a similar position, which can prevent hostility spirals between states who originally did not intend any harm to each other.

However, according to Mearsheimer's (2001) theory, states cannot fully trust each other. If you cannot trust anyone else to cooperate, then you also should not fully cooperate, which leads back to the security dilemma. Common goal of mutual peace

between states is not enough to encourage total cooperation if the parties involved suspect the possibility of reaching it. In a state of total trust in collective security there would be no need to maintain an army (Jervis 1978, 176). Security dilemma follows from the fact that when a state increases security, the security of others is decreased (Jervis 1978, 170). This is different to domestic security, where it is possible to increase security without increasing the threat at the same time (Jervis 1978, 170).

According to offensive realists, selfish interests dominate, but this does not mean that states cannot form alliances. National interests are self-determined by the states because it benefits to be self-sufficient when others cannot be fully trusted. Losing in short term means that the state may not be around long term. More power means extra slack, and therefore the most powerful states can afford more risks. (Mearsheimer 2001, 18.)

The hegemon is the most powerful state in the current world order, who dominates the international system. The concept of hegemon usually refers to worldwide domination, but according to Mearsheimer it is possible to assign this status in smaller regional areas. Therefore, he makes a distinction between regional and global hegemony. Mearsheimer observes that it is nearly impossible for any state to achieve global hegemony. (Mearsheimer 2001, 21–22.) The regional hegemon state will go far to maintain the distribution of power in its favor.

Problematic for Mearsheimer's theory is his narrow conception of power. Mearsheimer makes a distinction between potential power that is based on the size and wealth of state's population and the actual power that is employable (Mearsheimer 2001, 23). Offense-defense balance is the key factor for offensive realists in determining whether states favor attacking or not. There is always uncertainty in the international system, leading to a lack of trust between states. Mearsheimer's offensive realism emphasizes that an atmosphere of distrust clouds the international system. This leads to states being suspicious of each other's motives.

Richard Harrison Wagner (2007) criticizes structural realism noting that changing the offense-defense balance cannot explain the increasing likelihood of war. Wagner claims that anarchical structure of the international system and the related security dilemma alone do not imply that war will occur. According to Wagner, these assumptions lack explanatory strength on why wars occur at all. (Wagner 2007, 28.) Furthermore, according to Wagner, many of the most violent conflicts seem to happen inside states domestically rather than internationally between states (Wagner 2007, 34).

The explanatory power of structural realist theories rests on the assumptions regarding the polarity of the international system. For both Waltz and Mearsheimer, multipolar international structure is the most war prone. Bipolar structure is more stable due to there being less opportunities for conflict (Mearsheimer 2001, 75). The concept of unipolarity has proven to be problematic for both Waltz's and

Mearsheimer's theories, therefore providing grounds for critique as shown by Arash Heydarian Pashakhanlou (2018, 29–42). William Wohlforth (1959–) argues that structural realism deals poorly with change, he emphasizes that bigger systematic changes can very rarely be explained in monocausal manner (Wohlforth 1995, 92–94).

3.2.3 Neoclassical realism

Neoclassical realism was introduced by Gideon Rose (1963–) in a review article *Neoclassical Realism and Theories of Foreign Policy* (1998). In this article Rose (1998, 146) classifies various contemporary thinkers into a new collection of viewpoints which he coins neoclassical realism. Classical realism is a broad concept, and therefore Rose sees it justified to create a new term by adding a prefix in the mix, thus resulting in the concept of neoclassical realism. Rose notes that neoclassical realism aims at creating a theory of foreign policy (Rose 1998, 153). This is something Waltz (2010) maintained that his structural realism does not aim to do. Neoclassical realism embodies theoretical assumptions from both classical and structural realism.

Lobell (2009, 43) elaborates that a key starting point of neoclassical realism is to identify the most important decision-makers. He explicates that locating foreign policy executives at the most critical decision-making positions is the key to finding the right state-specific variables (Lobell 2009, 43, 56). This means that the states are not treated merely as black boxes in the manner of structural realism. In addition to structural factors, also the psychological human factors coming from the tradition of classical realism are considered. Neoclassical realism puts weight on the domestic pressures placed on the shoulders of foreign policy actors. Group-centricity remains central to neoclassical realism due to it considering states to be the most important actors in international politics. Neoclassical realists aim to formulate theories of foreign policy. Both internal (domestic actors) and external (structure of the international system) variables are included in this aim.

Neoclassical realism takes into account the fact that there is no perfect link between material power and policy behavior. This highlights the difficulty that political decision-makers face in converting the material capabilities into actual foreign policy. Perceptions of the foreign policy executives matter in shaping their behavior in addition to the measured quantities of material resources. Leaders are also not able to simply assert their power as they wish. Countries with different state structures act differently, they vary in their allocation of state resources to foreign policy and in the political leaders' ability to convert these resources into desired behavior (Rose 1998, 147).

Central to neoclassical realists' incorporation of both domestic and international factors is the emphasis on the claim that idealistic factors cannot surpass the limits set by the structural and material limitations of the system (Rose 1998, 151). Structural

factors, however, are not necessarily visible to foreign policy actors themselves (Rose 1998, 151) or they may not even be guiding the actions of state actors. The relationship is a very complex one. Nation states respond to the external environment by seeking to control and shape their relative position of power in the long run (Rose 1998, 152).

Rose describes neoclassical realists as falling between pure structural theorists and constructivists (Rose 1998, 152). This relationship between neoclassical realism and constructivism has been later explored in greater detail (Barkin 2010). Ripsman, Taliaferro and Lobell (2016, 175) note that neoclassical realism is distinctively different from ideal theory. Their argument is mainly tied to the fact that material assumptions still set the ground assumptions that neoclassical realism is built on. Ideal factors, for example related to decision-makers perceptions, are included as components in neoclassical realist's analysis, but they are not primary as they would be in ideal theories.

Ripsman, Taliaferro and Lobell (2016) develop neoclassical realism towards a unified theory with great ambitions in their 2016 released *Neoclassical realist theory of international politics*. At the same time, they look to develop it as a theory of foreign and international politics. The grander formation of the theory would require more pages to go through and thus be open to more criticism. However, this thesis does not share or build on such great ambition. Instead, my analysis utilizes both classical and structural realists' assumptions in the formation of the main argument. It is argued in chapter 4 that neoclassical realism is the most usable strand of realism in the study of information warfare. As a theory of foreign policy, neoclassical realism aims to explain the foreign and security policy of states (Lobell 2009, 43). State is seen as an intervening variable between the international system and foreign policy, and it composes of relevant domestic actors (Lobell 2009, 45). Threats, in turn, originate from within the domestic setting or the international system (Lobell 2009, 46).

Nicholas Ross Smith (2018, 745) argues that neoclassical realism has strong usability especially in problem driven study settings. Theorists falling under the classification of neoclassical realism choose from a very diverse range of variables that they operationalize. This selection process deviates from a theory that explicitly connects variables, thus narrowing down clearly what to choose. This makes neoclassical realism not a unified approach, especially since in the context of this thesis it is applied to a whole different setting, namely information warfare.

Neoclassical realism is a dynamic approach, meaning it can incorporate both structural and psychological factors. Neoclassical realism is grouping of works that try to combine structural and domestic factors of foreign policy in order to understand foreign policy outcomes (Smith 2018, 748). Chaotic nature of foreign policy and information warfare set the limits to what can be said and systematized into knowledge. The changing features of the political setting make operationalizing all the variables

involved extremely unlikely. By the time the work is done, the result will be very complex, and the outcomes could have already changed. Responsibility then rests on the shoulders of the researchers to operationalize the most central variables and leave something out, and this operationalizing needs to be well justified.

3.3 Morality and political realism

The summary of political realists' line of thought has brought several problems to the forefront which I will consider in the following sections. The aim is also to shift focus back on the topic of information warfare in the light of political realist thought. Next, the problem of politics and morality intertwining together will be considered briefly. I will explicate the reasoning underlying the *amoral position* held by political realists. Political realists consider politics as an independent field of study, separate from the study of ethics. Secondly, the tradition of political realism can be best understood when taking into consideration the background assumptions on which the different strands of realism are built on. Thirdly, the short exploration can shed light on whether the issues related to information warfare can be explored upholding the political realists' stance on morality.

The tradition of political realism is often defined as contrasting moral idealism. Moral idealism can be defined as a viewpoint emphasizing higher moral ideals in guiding political action. In her essay *Moral idealism and political realism* (2004) Simone de Beauvoir (1908–1986) offers a critique of both moral idealism and political realism. Beauvoir uses the play written by Sophocles (2003) titled *Antigone* to parallel the viewpoints of political realism and moral idealism. According to Beauvoir, in the play *Antigone* represents moral idealism and Creon represents political realism. The moral idealist, Antigone, argues that inner moral principles should absolutely guide the actions of citizens. Antigone goes against the law of the city in order to bury his dead brother, arguing that she is morally obliged to do so. Creon, in turn, opposes Antigone's reasoning. Creon is guided by the material state interests and obliged to act guided by them.

Beauvoir (2004, 175–179) depicts that both viewpoints in their extremes hold problems. Beauvoir critiques moral idealism for turning ethics into following absolute and dogmatic rules. This makes some practical situations impossible to deal with and disconnects ethics and practical lived experience. Critique of political realism is that the political realist becomes merely a technical subject. Political realist at the extreme end does not see the human side of his actions but rather he sees only the technical side. At the same time when deeming something is impossible, the political realist

participates in making it impossible. (Beauvoir 2004, 175–179.) These defining differences come down to a differing view on the human nature and the realm of politics, which tie into a question on the relation between politics and ethics, a theme we will consider next.

Reinhold Niebuhr (1892–1971) also discusses in detail the tension between politics and ethics, which according to him reveals an irreconcilable conflict (1960). He defines politics as the realm of conflicts. Characteristic to politics, according to Niebuhr, is the fact that when discursive reason is not enough, then the only remaining choice is to resort to violence. Violence can be symbolic, structural, cultural, or even in extreme cases physical. This brings us once again close to the definition of war given by Clausewitz (2010) of seeing war as a continuation of politics with more violent means.

Niebuhr (1960, 23) notes that irresponsible power must be brought under control with coercive violence, introducing new elements of injustice in the place of the ones abolished. Niebuhr does not believe common moral goodwill to be a strong enough force to prompt people holding a great amount of power into necessarily distributing it out more evenly (Niebuhr 1960, 23). This goes in line with the critique of pure moral idealism by Beauvoir. Niebuhr (1960, 24) also argues that the individual is always operating in nonideal conditions and carrying a historical load on his shoulders, and thus he needs to be content with a more modest goal than creating the ideal society. The aim of collective life, according to Niebuhr, is to create a society that is pragmatically the best possible in the surrounding imperfect conditions, rather than aiming to fulfill an abstract ideal of the perfect society.

Niebuhr is also critical of extreme political realism. The problem with extreme political realism, according to him, is that it would enslave society to constant warfare. He argues that endless balancing of power would lead to a situation of endless wars. Society would become trapped in a cycle of social conflict through the means of coercion. Moral idealist argues that peace can be achieved through considering mutual interests through the means of rational and voluntary adjustment. (Niebuhr 1960, 128.)

Niebuhr and Beauvoir both held viewpoints in the middle ground between the two extremes of political realism and moral idealism on the question of how politics and morality are linked together. The more pessimistic view of human nature held by Niebuhr brings him closer to political realism than Beauvoir. An adequate view on the relation between politics and morality must recognize the shortcomings of both schools of thought, pure moral idealism and extreme political realism, as highlighted by Niebuhr (1960) and Beauvoir (2004). Niebuhr holds a view that human society will most likely never escape social conflict entirely. The goal is to minimize the injustices in the world, making the conditions as good as possible, this is what we should aim for, according to Niebuhr. Pragmatic issues raise questions that are more political than

ethical regarding the means to achieve certain political aims. Niebuhr nonetheless rightly emphasizes that morality still plays a significant role in politics and the formation of political goals (Niebuhr 1960, 131). The positions that Niebuhr and Beauvoir criticize are those of extreme political realism and extreme moral idealism, here I advocate for a more moderate view of political realism. This thesis does not aim to offer an exhaustive answer to the question on the relation between politics and morality. Importantly this section however has highlighted that political realism does not necessarily imply immoralism. A middle ground *amoral position* between the two extremes is taken in this thesis. Exploration of this link between morality and politics has importantly highlighted the role that the often-implicit image of human nature plays in thinking at the level political decision-making. In the case of information warfare, the conception of the perceived target cognitive subject plays a role in the formation of policy and the means to achieve it.

Earlier discussion in this section has highlighted the two ends of spectrum when considering the role of morality in politics. Next, we will consider the more specific characteristics of views falling under political realism as defined in the context of this thesis in the previous section. Various viewpoints defined as political realism do not ignore ethics totally, but they do not assign ethics the primary role in politics. This means that moral principles are secondary for political realists in driving the developments in international politics, and in the context of this thesis, conflicts between states in the information environment.

Political realists do recognize the existence of moral principles. Certain tensions between morality and politics are present and also related to the legitimate exercise of power. Dialectic between the exercise of power and morality is an inherent feature of politics. J. Samuel Barkin (1965-) defines political morality as a concept related to how we judge our state's role and other states' foreign policies (Barkin 2010, 92). Political moralities also change over time (Barkin 2010, 92). They are closely related to information warfare in the formulation of a political narrative on the situation surrounding the informational setting.

In this thesis I make a distinction between immoralism and amoralism. Immoralism is the complete lack of regard for moral weight when evaluating the role that morality plays for example in a certain political question. Amoralism means the viewpoint that brackets morality outside of political analysis and if morality does play any role, the role it plays is only secondary in politics. Amoralism is therefore agnostic on the contestation of defining the right kind of morality in politics. Tradition of political realism as characterized above is amoralistic. Moralism, which is the opposing view, means seeing politics as conforming to ethics. This view is characteristic to moral idealism as earlier defined. Therefore, moralists consider ethics primary to politics.

It is important to emphasize that political realism as defined in this thesis does not imply immoralism. The *amoral position* is taken here due to it accounting for the role of morality through the critique of extreme political realism. In the context of the approach taken here, the pragmatic issues related to information conflicts are defined primarily political. There is no doubt, that morality plays a role in these issues, because ethics and politics do intersect and are both grounded in our political life. Political realism, as defined in this thesis, recognizes the existence of moral principles and the fact that politics has to be legitimized. This legitimization involves morality. Morality cannot be severed from reality. Amorality does not directly imply that morality is not considered. From a political realist's point of view however ethics and morality are secondary to politics following the earlier theoretical assumptions (Gilpin 1984, 290; Taliaferro, Lobell & Ripsman 2009, 14).

William Galston (1946–) explored the differences between political moralism and political realism by taking a more social philosophical approach compared to Niebuhr and Beauvoir. Galston's approach follows a distinction into political moralism and political realism. Galston credits this distinction to Bernard Williams's (1929–2003) work (Galston 2010, 387; Williams 2008). Moralism as earlier defined means placing the ethical prior the political, whilst political realism is seeing politics separate from the ethical (Galston 2010, 387). For political realists, the morality of the individual and the political morality are two different things, and to what degree they are separate varies within the group of realists (Galston 2010, 392). Representatives of political theories based on moralism see political morality and individual morality linked together, therefore making political philosophy close to applied moral philosophy. This is similar to the discussion explored earlier regarding political realism and moral idealism.

Galston, clarifying the viewpoint of political realists, wrote that the standards for evaluating politics for realists rise from inside politics rather than them being external moral standards (Galston 2010, 388). While commenting Williams's work, Galston notes that Williams held a view that a situation of one-sided terror is not a political relation. Rather, it is a problematic situation which gives a rise to political relation that inherently requires open communication between the parties involved. (Galston 2010, 389.) Those who see politics as a separate field of study, political realists, put institutions close to the center of understanding politics. Practical view of institutions characterizes political realism, these institutions create an arena where contestation takes place (Galston 2010, 392–393). This also underlies the state-centricity which was earlier defined as one of the key assumptions of political realism.

Behind Galston's line of thought lies a critique aimed at ideal theorists: political theorists should focus more on addressing shared problems rather than the fine details related to ideal theory (Galston 2010, 394). Galston (2010, 398) also notes that political

realists, more so than moralists, consider the sphere of passions and emotions underlying human action. Returning to the earlier three strands of realism, in classical and neoclassical realism the effects of passions and emotions play a significant role in understanding politics. Taking into account the sphere of passions and emotions then makes it challenging for politics to remain in some ways perfectly rational for realists. The assumption related to rationality will be explored in the later section (3.6) on constructivism and neoclassical realism. In summary political realists subscribe to the following theoretical assumptions: an amoralist view on the relation between politics and morality, they give material factors primacy and emphasize state-centricity in the study of politics.

3.4 State and political realism

As this thesis focuses on state-level analysis, giving a definition to the concept of state is important. Taliaferro, Lobell and Ripsman (2009, 1) define state in the following way: “states are composed of decision-makers and institutions that act on their behalf”. This definition of state is one of the many possible, but it will be followed here due to its compatibility with the political realist approach taken. States can be seen as having interests of their own, but these are stemming from the groups and individuals who compose the state (Gilpin 1981, 16; Taliaferro, Lobell & Ripsman 2009, 1).

States are composed of relevant domestic actors (Lobell 2009, 45). Inner competition is present in domestic politics and between the inner state groups. States are representative of the group of actors that wield and hold the power (Lobell 2009, 51). Internal competitors shape the complex domestic setting that actors wielding the power aim to control.

An assumption which ties into political realism is that states act internationally for domestic reasons. In the tradition of political realism, state actors are committed to bettering the security or relative power of the state in order to secure their legitimacy and fulfill their political role (Morgenthau 1960). Legitimacy of the state plays a significant role in whether the foreign policy actors can harness the power capabilities of the state to achieve their goals either domestically or internationally.

Following the assumption presented by classical realists on states being ultimately selfish characterizes political realism well (Morgenthau 1960; Niebuhr 1960, 56). Conflicting interests between states then makes developing the international system free of conflicts extremely unlikely. State defined as a group of key decision-making actors and institutions is taken here as the basic understanding of what states as agents consist of.

Defining state as composed of central decision-makers opens possibilities in the study of perceptions of the decision-makers and the structural factors of the international system. States are studied in the context of information warfare here due to them being central actors in it. State actors uphold capabilities in the sphere of information environment, and they are in a central role for formulating international contracts.

3.5 Power in political realism

The concept of power plays a key role in the tradition of political realism. Political realists' theories highlight the balance of power as a key variable (Wohlforth 1995, 95). Definition of power given here will consider what is necessary for applying political realists' theories to study information warfare. Covering all the discussion surrounding the concept of power is beyond the reach and not the aim of this thesis. Instead, this section focuses on giving an overview of the central themes relating to power in the political realistic tradition. The phenomena underlying the concept of power are embedded in many places and relates to terms also under scrutiny in this thesis such as influence, coercion, superiority and control.

Robert A. Dahl (1915–2014) aims at a formal and a rigorous definition of power by defining power as a relation between actors. As Dahl (1957, 201) notes at the beginning of his influential article *The Concept of Power* first published in 1957, much of social theory and many classics have utilized and theorized the concept of power, but it has remained ambiguous and hard to define. Dahl gives the following formal definition of power with appeal to intuitive understanding of the concept.

“My intuitive idea of power, then, is something like this: A has power over B to the extent that he can get B to do something that B would not otherwise do.” (Dahl 1957, 203–204.)

Wielding power in this sense means the ability to affect the actions of others to achieve the desired outcome. There are several ways to do this, and this is where the different forms of power in Dahl's definition come into play. This classic relational definition of power is taken as the basic starting point here, while also considering the different aspects of power relevant in the context of information warfare.

Barkin (2010, 17) also defines political realism to be centered around power politics. The first claim Barkin (2010, 18) makes regarding power in the context of political realist tradition is that power politics is relative. This means that power is meaningful relative to other agents, lining it close to Dahl's definition. On the difficulty of measuring power, Barkin specifies that there is no exact physical definition of power down to the watt to be found in classical realism (Barkin 2010, 18). According to Barkin even

though different authors wrote much about power in their political realist studies, they in fact wrote about relative power. Secondly, Barkin notes that the objects of power are agents and their actions, which means that power is about getting others to do what is desired and not about destroying the other party. (Barkin 2010, 19.) Thirdly, Barkin highlights the constructivist side of political realism by noting the following: “power politics for realists is social, or in other words corporate” (Barkin 2010, 20). Interests and agency are credited to institutions rather than individuals (Barkin 2010, 20). Philosophical questions on the agency of institutions will not be explicated in the context of this thesis.

Wohlforth (1995, 127) argues for adapting a more perceptual account of power than Dahl. He points the reader’s attention towards perceptions of power, arguing that this will bring us to the level of decision-makers’ assessments (Wohlforth 1995, 97). These assessments of power are what matters in the employment of foreign policies, which are always oriented towards the future. What matters is how the decision-makers evaluate their power. This, once again a constructivist feature, highlights the perceptions of the decision-makers. Measuring power capabilities with high precision is extremely difficult, from this then follows, what matters are the perceptions held by the key actors (Wohlforth 1995, 98). When rational actors are confronted with new information, re-evaluation of their own behavior follows, and this may lead to changes in it. As clarified in the section 2.6, one of the goals of information warfare is to influence the perceptions of decision-makers. This feature links the conceptions of power centrally to the setting of information warfare.

Earlier exploration on the concept of power has been centered on force and the ability to get the other party to act in a certain way. However, a helpful distinction can be made into soft and hard power. Joseph S. Nye Jr. (1937–) introduced the concept of soft power, which can be shortly defined as attractive and friendly power, in the 1990 book titled *Bound to Lead*. Coercion on the other hand is linked to hard power, meaning mainly material economic and military capabilities, which literature on power balances of the international politics has mainly focused on. Attraction and willful cooperation are in close contact with soft power. (Nye 2004, 1–2.) In international politics a state may obtain what it desires through the admiration and imitation of another state without employing any means of hard power. Soft power is also about mutual preferences that tie into culture, political values and foreign policies (Nye 2004, 6–11). Key to wielding soft power is knowing the context, what the target audience wants and influencing it. Getting the desired outcome without coercion is also at the root of information warfare. Understanding what the other party sees favorable and explicating the underlying thought processes is linked to reflexive control defined in the second chapter of the thesis. Libicki defines the concept of friendly conquest as the possibility of providing an attractive domain in the information environment which may lead to

the other party giving up information willingly, and therefore also the control of it, for example in favor of a service (Libicki 2007, 3). Eriksson and Giacomello note the fact that soft power is not only used for good, but that it also opens up possibilities for deception and propaganda (Eriksson & Giacomello 2006, 231).

A difficulty with the concept of soft power is that it is even harder than to quantify than hard power. Hard power can be calculated, for example in the amount material military resources. Overemphasis of hard power can, however, be misleading. Military resources also do not directly translate into power capabilities, therefore high-quality analysis on the military capabilities of the state in question needs to be incorporated to provide well justified conclusions. The measurable and perceived conceptions held by state actors are intertwined with the relational aspects of power. Aspects of power and its distribution in the information environment explored earlier make defining power complicated. These difficulties surrounding hard power lead to this thesis also implementing and following the relational definition of power. This highlights the need to consider different aspects of power and incorporate them into the analysis of information warfare.

Central insights developed on the concept of power can be summarized as the following: the actor's conception of power balance shapes their actions. The aim of information warfare and politics is often to shift the balance of power and the perceptions of it into favorable direction. Different views on the importance of providing explicit definition of power are found inside the tradition of political realism. In viewpoints classified as political realist, primacy is given to the interests that rise from material reality. They are found in the material definition of power as capabilities and resources. Especially the structural realist tradition lines with the material concept of power but neoclassical realism also incorporates the ideational features of soft power.

3.6 Constructivism and neoclassical realism

The following section explores the link between constructivism and political realism. The connection is important to consider due to it bringing further rationale into the suitability of neoclassical realism as a theoretical framework in the context of this thesis. Barkin (2010, 3) opposes defining constructivism as a methodological or ontological position contrasting materialism or rationalism. Instead, the definition of constructivism given by Barkin (2010) incorporates different aspects of political realism and constructivism together, rather than seeing them as opposing each other. This broadens the definitions of political realism and constructivism. Barkin defines constructivism to be centered around intersubjectivity and political realism to be centered around

power politics (Barkin 2010, 9). The brief exploration in this section will follow Barkin's definition. Barkin (2010) argues that constructivism and classical realism are in fact internally consistent approaches.

Barkin (2010) was also motivated to remove boundaries that harm the progress in research. According to him focusing on strict paradigms does not give us the best conditions for conducting problem-based research. It can hurt the research by drawing unnecessary distinctions and camps. Political realism defines itself in opposition to ideal theories in social philosophy, as was shown in the earlier discussion on morality, but Barkin claimed that this is a dialectical definition, which means there is a generative tension present (Barkin 2010, 6). This study builds on Barkin's insight of seeing political realism in a constructive relation between ideal theories. Barkin argues for mixing and matching paradigms to give the best possible answers to research questions at hand (Barkin 2010, 12). Although Barkin objects commitment to strict paradigms in research, in the thesis I aim to explicate theoretical commitments of neoclassical realism in order to bring forward the limitations and the possibilities of studying information warfare at the philosophical level.

Idealism that Barkin conceptualizes is linked to political and social philosophy, this meaning he defines idealism as a social theory that looks at the importance of ideals as the primary foundational features of social and political behavior (Barkin 2010, 31). Ideas are therefore given the primary role in motivating human behavior. However, as Barkin wrote: "There is no clear dividing line between ideas and physical material in social science, and to speak of the two in opposition has the effect of creating a false dichotomy" (Barkin 2010, 32). This thesis takes the same stance as Barkin in the sense that strict materialism is not definitive of political realism (Barkin 2010, 34). Power politics in the political realists' thought is contextual and relative (Barkin 2010, 35). This was argued in the earlier section on the definition of power, and it removes the need for exhaustive grounding of power strictly in material capabilities. Central to classical and neoclassical realism is also the use of reason to understand the world, not the assumption that the world is a totally reasonable place (Barkin 2010, 53). More specifically, the focus in the following analysis (chapter 4) will be on the strand of realism, namely neoclassical realism, that incorporates factors from constructivism as defined by Barkin (2010).

3.7 Chapter summary

In the chapter at hand, I have discussed the key concepts of power and state. Theoretical issues regarding the relation between morality and politics were also considered. I concluded that the critique of the most extreme form of political realism put forward

by Niebuhr (1960) and Beauvoir (2004) should be considered. This leads to the thesis advocating a more moderate position of political realism regarding the role that morality plays in politics.

Here, I have defined the main features of political realism as a philosophical disposition and identified the most central strands of political realism that can be used as theoretical approaches. In conjunction with the chapter 2, I have brought together aspects of information warfare and theories of political realism. The focus will now shift on to testing neoclassical realism as a theoretical approach to the study of contemporary information warfare. The following fourth chapter of analysis brings forward recent events and official documents.

The role of states as actors in the information environment was explicated, offering further rationale into applying central insights of political realism to also study information warfare. The chapter focused on modifying theoretical assumptions of political realism to apply them in the different setting of information warfare. The following analysis will combine the insights developed in the earlier second chapter and the third chapter at hand. The third chapter has set the groundwork for testing the plausibility of neoclassical realism as an approach to studying information warfare.

4 CASE ANALYSIS

4.1 Applying neoclassical realism to two example cases

This chapter addresses aspects of information warfare present in two example cases. The first case is the suspected foreign interference in the United States presidential election of 2016. Rather than aiming to exhaustively analyze the situation surrounding the election, this chapter will zoom in on the official *Report On The Investigation Into Russian Interference In The 2016 Presidential Election (Mueller 2019)* also commonly referred to as *The Mueller report*. The Mueller report is about the possible information operations conducted by Russia before and during the United States presidential election of 2016. The report was released in two volumes to the public in 2019 with some of the text classified. The second case is the official view of Russia on information security, which will be analyzed through the official 2016 released document titled *The Doctrine of Information Security of the Russian Federation (2016)*. The doctrine is the most recent official strategic planning document on Russia's national interests and threats it faces in the information environment. It is important to clarify that these example cases are not strictly comparable. Rather these examples were chosen because they bring forward different aspects of state-centric information warfare.

These example texts were chosen because they reflect the rationale of the decision-making of Russia and the United States, following neoclassical realist approach. The analysis focuses on the narrative surrounding information warfare and the conceptualization of the informational tension between these two states, the United States and Russia, transmitted from these texts. The investigation uncovers a drastically different conception of the contemporary informational tension and differing usage of the concept of information warfare between the United States and Russia. My analysis

argues that the differences are rooted in differing starting premises and political interests between the two states that also underlie the usage of the concept of information warfare. Neoclassical realism as a theoretical framework highlights certain factors underlying the informational conflict between these two states. These factors are the following: geopolitical situation, military threat perception, perceived hostility towards the values of the state, and perceived foreign aggression. Further research should be conducted thematically and qualitatively on these variables. The texts here merely present an example, which supports the philosophical conceptual analysis and brings together the three earlier chapters. The value of these two particular example cases comes from them providing ground for the earlier philosophical clarification of the concept of information warfare.

Limitations in the scope of this research come from the link between the official texts and the actual decision-making of the states. The correspondence between the texts and the actions of the foreign policy actors is imperfect, but it is assumed here that the text reflect the opinions of rational actors. Imperfectness comes forward due political decision-making being subject to time pressure and limited information of the particular situation at hand. Foreign policy experts behind the reports and doctrines may not directly have a say in the choices made by actors in the office. As Barkin (2010, 53) advocates following the tradition of classical realism, we can use reason to understand the world even if we do not directly assume that the world is a totally reasonable place. It is also important to stress that the examples illuminated are particular cases.

Following the definition of information warfare given earlier, this analysis rests on the assumption that the purpose of information targeted by different hostile means is to guide decision-making. Goal of attacking information processes is to mislead decision-making. Reasons for choosing these two example cases are the following: Firstly, the chosen cases are paradigmatically significant. They hold importance in both the academic and the public discussion. Both cases also reflect the conceptions of the central state decision-making actors well. Secondly, the cases bring forward differing interests in the informational environment. These interests hold importance for the future of the international relations between the states involved. Thirdly, the extensive work on information warfare by the Russian and United States' scholars illuminates the importance of the topic for these states. The scholars cited in chapter two have conducted high-quality work on the concept of information warfare, which has provided background for this chapter and the strategic culture of these two states.

Ripsman, Taliaferro, and Lobell (2016, 123) emphasize the importance of tracing the foreign policy decisions back to the actual decision-makers for establishing reliability in study. In order to successfully utilize neoclassical realism as a theoretical

framework, the analyzed text material should reflect the key rationale behind the actual decision-making. Determining the key decision-makers is difficult without being deeply embedded in the culture of the research case. *The Mueller report (2019)* and *the Doctrine of Information Security of the Russian Federation (2016)* are chosen here as the key sources because they bring forward the conceptions of the central political actors.

The definitions of information warfare given earlier in the thesis can be summarized in the following way: Information warfare means attacking information with information with the intent of guiding decision-making of the other parties into desired direction. Information warfare at the state-level is conducted in accordance with political goals following the Clausewitzian definition of war. In the example cases provided, there are certainly elements of information warfare.

4.2 The Mueller reports

The Mueller (2019) reports concern the possible information operations conducted before and during the United States presidential election of 2016. The following analysis focuses on the official document with some of the text retracted due to it being classified. Analysis focuses on the conceptualized narrative of active information warfare conducted towards the United States. Aim of the example case in this section is to provide a view on how the informational conflict between Russia and the United States is perceived in this document from the perspective of the United States. The Mueller report (2019) is split into two volumes. The first volume is focused on Russia's interference in the 2016 presidential election and its connection to the campaign of Donald Trump. The second volume addresses Trump's actions towards the investigation. The focus here will be on the first volume as it is more relevant for this study due to its focus on states as actors.

The first page of the first volume states that:

"The Russian government interfered in the 2016 presidential election in sweeping and systematic fashion." (Mueller 2019, 1)

It is worth highlighting that the words systematic and government are used. Government refers to a group of actors involved in central policy formation, in this thesis I have used and defined these actors under the concept of state.

"The report describes actions and events that the Special Counsel's Office found to be supported by the evidence collected in our investigation. In some instances, the report points out the absence of evidence or conflicts in the evidence about a particular fact or event. In other instances, when substantial, credible evidence enabled the Office to reach a conclusion with confidence, the report states that the investigation established that certain

actions or events occurred. A statement that the investigation did not establish particular facts does not mean there was no evidence of those facts.” (Mueller 2019, 2)

On the second page of the report, a difference in tone is clear compared to the first cited claim. The first volume states that it aims to describe “... the factual results of the Special Counsel’s investigation of Russia’s interference in the 2016 presidential election and its interactions with the Trump Campaign” (Mueller 2019, 2). The term factual is used to refer to something that has sufficient and strong supporting evidence to it. Emphasis is on finding strong evidence rather than speculation, which makes sense since the text is a report on the official investigation.

“In connection with that analysis, we addressed the factual question whether members of the Trump Campaign ‘coordinat[ed]’ – a term that appears in the appointment order – with Russian election interference activities. (Mueller 2019, 2)”

A key factor to consider is that the report focuses on the interaction between the Trump’s campaign associates and foreign individuals with ties to the state of Russia. Therefore, the report may not entirely reflect the perceptions of the real decision-makers as is desired from the context of studying informational tensions between the United States and Russia. However, the aim of this chapter is to merely explicate the narrative that can be read from the report and bring forward an example of state-sponsored information warfare. The report takes a stance on the actions of Russia. The juridical aspects related to the actions of Trump’s campaign associates are left out of the analysis here because these questions are in the sphere of law and domestic politics. It can be briefly noted, however, that the reports do not end up in strictly condemning the actions of Donald Trump as illegal nor fully releasing him from the accusations.

The term information warfare is only used once in the two volumes and highlighted by quotation marks.

“The IRA [the Internet Research Agency] later used social media accounts and interest groups to sow discord in the U.S. political system through what it termed ‘information warfare.’” (Mueller 2019, 4)

This section of the report paints a view of information warfare as something systematic and related, in the context of the 2016 elections, only to Russia’s actions. This is in line with the second chapter of the thesis and what Ventre (2016, 28) writes about the United States military doctrines moving away from the concept of information warfare. The underlying phenomenon is still kept as something serious and central in the military doctrines of the United States, but different concepts such as information operations, strategic communication, and informational influencing are used. The concept of information warfare does not fit well into the current narrative military strategies of the United States.

The Internet Research Agency (IRA) is painted as a key actor in conducting Russian interference operations before, during, and after the presidential elections of 2016. The IRA (Агентство интернет-исследований) is an enterprise closely connected to the so-called Russian internet trolls. Their main office is in Saint Petersburg and has been subject to investigative journalism on the issue of its employees systematically spreading disinformation online. The connection from IRA to the Russian government in the Mueller (2019) report is determined through Yevgeni Prigozhin, who is asserted to have ties to the Russian President Vladimir Putin. The report follows on this with an exploration of contacts between Russia and the Trump campaign team, but detailed exploration of these contacts is not the focus of the analysis.

“At the same time that the IRA operation began to focus on supporting candidate Trump in early 2016, the Russian government employed a second form of interference: cyber intrusions (hacking) and releases of hacked materials damaging to the Clinton Campaign.” (Mueller 2019, 4)

The report also makes a distinction between election interference and more technological means of information warfare. Therefore, a distinction illuminated earlier in the thesis into technical and psychological aspects of information warfare seems to be present implicitly in the report. In the report the technical aspects are assimilated to cyber intrusions and hacking. This is also in line with definitional features of information warfare considered in chapter two.

The following actions of the IRA are noted in the report:

“The IRA conducted social media operations targeted at large U.S. audiences with the goal of sowing discord in the U.S. political system. These operations constituted ‘active measures’ (активные мероприятия), a term that typically refers to operations conducted by Russian security services aimed at influencing the course of international affairs.” (Mueller 2019, 14)

“Collectively, the IRA’s social media accounts reached tens of millions of U.S. persons. Individual IRA social media accounts attracted hundreds of thousands of followers. For example, at the time they were deactivated by Facebook in mid-2017, the IRA’s ‘United Muslims of America’ Facebook group had over 300,000 followers, the ‘Don’t Shoot Us’ Facebook group had over 250,000 followers, the ‘Being Patriotic’ Facebook group had over 200,000 followers, and the ‘Secured Borders’ Facebook group had over 130,000 followers.” (Mueller 2019, 26)

Actions described above fall under the definition of information warfare with the aim of creating disorder. According to the Mueller reports, Russia is engaged in activities that can be seen as furthering informational tensions and degradation of relations between the United States. Explanation can be probed from motives that are at the root of political realism, the structural pressure guides states into certain behavior, and resisting this tension is in some cases highly unlikely. This then leads to actions that were earlier defined as information warfare.

“In sum, the investigation established that Russia interfered in the 2016 presidential election through the ‘active measures’ social media campaign carried out by the IRA, an organization funded by Prigozhin and companies that he controlled. As explained further in Volume I, Section V.A, *infra*, the Office concluded (and a grand jury has alleged) that Prigozhin, his companies, and IRA employees violated U.S. law through these operations, principally by undermining through deceptive acts the work of federal agencies charged with regulating foreign influence in U.S. elections.” (Mueller 2019, 35)

Calling out the other party for violating a law is a key factor in the report. In this citation Russians are accused of breaking the United States law. It is also claimed in the Russian doctrine of information security, which will be analyzed next, that foreign states are breaking international law in the informational environment. Quite complicatedly in both cases, it seems that the opposing party is accused of breaking a certain law, but guilt is never admitted. Libicki (2021, 24) speculates the concern of treating information warfare as a crime, stating that states see it as unacceptable behavior, but it is not seen as a strong enough violation of state interests to warrant a violent response. In addition, on the part of the accused state, admitting guilt would undermine its objectives in information warfare, therefore maintaining a cloud of distrust by denying the accusations can be justified. This also offers an explanation on why concluding facts on law-breaking behavior of certain state actors in an investigation may not lead to further actions.

4.3 Doctrine of Information Security of the Russian Federation

The Doctrine of Information Security of the Russian Federation (2016) consists of official views on the national security of the Russian Federation in the information environment. The doctrine is relevant for confirming the differences in the underlying conceptions of information warfare. The doctrine reflects official guidelines and values on the current situation and future threats from the Russian standpoint. It is one of the most important official documents on Russia’s policies in the information sphere (Pallin 2019). Noteworthy however is the fact that the doctrine does not present any offensive measures of Russia in the information environment. The official Russian position is that it does not interfere in other countries affairs using information operations (Pallin 2019, 203). This official position, however, contradicts the research literature considered in the section 2.5 of the thesis.

Already in the section 8 of the doctrine the importance of “preserving cultural, historical, spiritual and moral values of the multinational people of the Russian Federation” is appraised (Doctrine of Information Security of the Russian Federation 2016, section 8). This implies that protecting the Russian identity and values is seen as critical for information security. The main threats towards Russian information security in the doctrine are later considered to be other states. The doctrine does not name any

specific states, but the state-centricity of the document makes the theoretical framework of neoclassical realism well justified in this particular example case.

In the 11th and the 12th sections of the doctrine it is stated that activities against the aforementioned foundations of the Russian federation are intensifying. The doctrine defines state bodies as the targeted institutions. This feature once again highlights the state-centricity of the official view. It can be inferred that the perception of a threat, coming from the foreign states, plays a significant role in the contemporary Russian policy formation on information security. Written in the 12th section, young people especially are at risk from what is perceived to be harmful foreign informational influence. The way in which these sections are formulated implies a foreign informational threat to what are seen as Russian spiritual and moral values. The doctrine does not give an exhaustive definition on these values, but it implies that they are being targeted by foreign states seeking to control the information environment. These implications can be interpreted as serious considerations of systematic informational pressure being put on Russia.

In the Mueller report, explicit attention was focused on Russia as an aggressor in the information environment. In the doctrine, coming from the official Russian viewpoint, on the other hand, the foreign states are left undefined. This can be explained by the fact that the focus of the doctrine is on defining namely the policy of the Russian federation in the information environment. More explicit mentions of states can be found from the statements of foreign ministry of Russia; however, these are generally quite short and may not fully reflect the decision-makers rationale. The official doctrine is therefore better as a source. *The National Security Strategy of the Russian Federation (2021)* explicitly names the United States as a harmful actor undermining Russian values. The shift in the official rhetoric of the Russian Federation is noteworthy and opens venues for further research.

Section 15 of the information security doctrine asserts that conflicts in the information environment are increasing, and this is seen as a risk to stability. The doctrine stresses a need for global guidelines in the information environment to secure stability. This is also underlined in section 19, which claims that certain states, without naming any, desire to control the information environment. In the following sections 20–24 the importance of maintaining information security is closely tied to stability of the state. The threats undermining information security are seen as internal and external, the individuals and society need to be protected from them according to the official doctrine. Neutralization of informational and psychological impact are listed as important measures.

It is also important to observe that the doctrine emphasizes strategic partnership and cooperation in the sphere of information environment as well. However, it is stated that the current distribution of resources in the information environment does

not necessarily ensure safe and stable functioning. The concepts which are used – interests of states, states as actors in the information environment – in the doctrine link it well to political realists’ line of thought. Neoclassical realism comes forward as a political realist theory with great usability due to its ability to incorporate state specific premises into the analysis. Compared to the earlier perspective from the standpoint of the United States, the Russian view is different. These differences come forward from different values and perceptions underlying the states’ interests. If once again returning to Clausewitz’s (2010) classical definition, wars are fought to resolve political conflicts.

The doctrine lists in great detail the objectives and directions of Russian information security, which reflect well the opinions of state's decision-makers. The means to achieve these objectives are left out of the reach for the document, however. The official view present in the doctrine is characterized by the following features: firstly, foreign states are seen threatening Russian values and stability. Secondly, it defines Russian spiritual and moral values as something unique and valuable that need to be protected. Thirdly, the doctrine asserts that especially younger people are at risk of being influenced by harmful foreign sources. Fourthly, the role of Russia is portrayed as defensive rather than active and offensive in the information environment.

The narrative surrounding information warfare is understood differently in the two example cases. We can conclude that differing political perceptions of the contemporary setting play a key role in this. The view presented in the doctrine can be contrasted to the view commonly presented in the West, where Russia is generally seen as the main aggressor.

The importance of preserving national identity from the Russian point of view plays a significant role in the formulation of foreign policies and ultimately the objectives of psychological operations that are a central part of information warfare. Using neoclassical realist approach and then emphasizing the difference in policy makers perceptions explains the difference in policy outcomes between countries by taking into account the strategic culture and by incorporating both ideal and primarily material factors into its analysis. Understanding these dynamic factors also requires immersion in the culture that is defining the object of study.

4.4 Conclusions from the example cases

In conclusion, we can infer that the perceptions of the state actors play a significant role in information warfare. One difficulty that comes forward when applying neoclassical realism to the study of information warfare is the difficulty of measuring states’ power capabilities. This is due to the nature of information warfare itself, and

it forces us to focus on the perceptions of the decision-makers. Information warfare at the state-level is closely intertwined with the underlying political values of the states. This inherently Clausewitzian conception of war underlies many of the definitions of information warfare clarified in chapter two. Taking these implications into consideration, the study of information warfare needs to consider the case-specific political interests and the initial strategic culture of the state under scrutiny in great detail. The example cases illuminate domestic factors, underlying values, and perceptions of the decision-makers playing a key role in the claims of the two states analyzed. The example cases show a difference in how the concept of information warfare is understood and used between the two states.

Answer to the third research question, on the application of neoclassical realism as a theoretical framework to the study of information warfare, can be summarized in the following way: The example cases held features of information warfare that fit well into the theoretical assumptions of neoclassical realism. Both the structural factors of the international system and the psychological factors underlying the state actors' conceptions need to be considered in the study of information warfare at the state-level. The limitations of utilizing neoclassical realism tie into the first research question on the nature of information warfare as a shifting political concept. Different state-specific and dynamic positions on the contemporary informational struggle and the underlying values make developing a universal theory of information warfare highly ambitious and unlikely. This is because different states hold differing views on contemporary political questions and utilize the concept of information warfare in different ways. Following from this, applying theories of political realism to the study of information warfare needs to be approached as problem-based, highlighting the particularity of cases and utilizing different combinatorial factors in the analysis of the cases. One of the main conclusions drawn from the example cases is that the theoretical framework provided by neoclassical realism is well suited to study the phenomenon of information warfare, when taking into consideration case-specific features.

Practical implications of the example cases bring to surface the degradation of the relations between Russia and the United States already before 2016. It is important to illuminate the deeply segregated and differing conceptions of an active informational conflict shaping the outcomes of foreign policies. Both example cases stress seeing the other party as the aggressor, which also in more traditional means of warfare can be utilized as a strong tool to drive aggressive policy formulation and raise the national spirit of the citizens. More importantly it is a sign of radically different political goals. The analysis shows that the way in which the concept of information warfare is utilized varies greatly. This is what makes it a political and dynamic concept. The second chapter clarified the central role of politics in information warfare.

In this thesis I have argued that neoclassical realism is a theoretical approach well suited to problem-based studies with states as the actors. Chaotic nature of foreign policy formation and information warfare raise difficulties on developing grand theories. Changing features of the political setting make it so that the researchers aim to operationalize all variables involved would take a tremendous amount of time. By the time the work is done, the result will be very complex and possibly the outcomes may have already changed due to ongoing system changes.

Responsibility then rests on the shoulders of the researchers to operationalize the central variables and leave something out; these operations need to be well justified. Neoclassical realist analysis incorporates constructivist categories, but primacy is still given to material interests rather than ideas. Linking international and domestic factors is critical for accurate conclusions. With the application of right variables, neoclassical realism produces relevant research also on the underlying political dynamics of information warfare. Theorists falling under the classification of neoclassical realism choose from a very diverse range of variables that they operationalize. This selection process deviates from a theory that explicitly connects variables, thus narrowing down clearly what to choose. This makes neoclassical realism not a unified approach, especially since in the context of this thesis it is applied to a whole different setting, namely information warfare. These considerations have led to the adaptation of neoclassical realism as a problem-based approach to be utilized accordingly.

The differences in the actions of Russia and the United States can be understood from the different political and strategic background of the states. Therefore, a deeper understanding of the strategic culture of the state under scrutiny should be developed. This is especially important when approaching a case from a different cultural background.

The example cases highlight that material military threats from the North Atlantic Treaty Organization (NATO) expansion guide the conceptions of Russian decision-making actors. Same applies the other way around with Russian military presence and actions playing a role in the policy formation of NATO countries. There are also strategic reasons for framing the other party as an aggressor, making it easier to justify one's own actions. Views that characterize political realism – on the human nature, and politics being conflictual struggle – suggest that the current segregated situation between Russia and the United States will not change anytime soon, and material factors which tie into the military capabilities and possible threats to national interests are still present. As long as there are differing cultural and moral values that are placed on a superior pedestal, tension which may lead to informational conflict, or a more severe military escalation is ever present.

4.5 Chapter summary and possibilities for further research

Summarizing, neoclassical realism accentuates psychological and structural factors that both need to be considered in the state-level research of information warfare. Applying neoclassical realism as a theoretical approach surfaced an example of state-level information warfare as state-sponsored systematic interference in elections (Mueller 2019). The second example brought forward the importance of decision-makers' conceptions through *the Doctrine of information security of the Russian federation* (2016). One of the theoretical frameworks that can be utilized to study state-level information warfare is neoclassical realism. These examples have provided some illustrative starting ground in bringing theories of international relations and the study of information warfare together.

Understanding the assumptions and the reasoning underlying informational conflicts opens possibilities to also solve them diplomatically. Although in severe cases of conflicting interests in the information environment, diplomatic solutions seem unlikely. In these cases, implementing justified legal measures on state-level information warfare can offer solutions. To alleviate tension and decreasing conflict more research needs to be done from the point of view of the different strategic cultures, in this case the United States and Russia. Another approach that is called for, is developing further clarification of concepts in Russian thinking from their starting points, not from the Western lens. The perspective of Russian information warfare can be best understood from its own starting premises. Knowledge gained from further exploring information warfare can help in relieving ideological tensions between states.

Next, I will discuss possible venues for future research. To verify how the concept of information warfare is used in different settings, more case specific examples should be provided. Further empirically backed case analysis should be done to strengthen neoclassical realists' theoretical claims. In addition to case examples, qualitative analysis surrounding the concepts and variables of the text material can give grounds to more systematic and empirically backed arguments. Neoclassical realism as a developing theoretical framework requires further historically backed empirical studies to strengthen the validity of the approach.

In the thesis I have focused on the strengths of neoclassical realism as an approach to the study of information warfare. It is important to also bring forward one weakness of political realism, applied to the study of information warfare, more broadly: That is the role of non-governmental actors in the information environment. Accounting for non-governmental actors remains problematic for theories of political realism. In the future they should be studied from another theoretical point of view.

From a philosophical perspective, the concept of information warfare is closely intertwined to questions related to both philosophy of war and philosophy of information. Exploring both fields of philosophy in the future can offer progress in the study of information warfare as well. Further research on the link between morality and politics can also offer value into understanding practical relations between states. Moreover, philosophical work on the scientific limits of what can be said and systematized into knowledge has value in setting the grounds for theoretical work. Philosophical concept analysis has much to offer to the field of international relations on epistemological and ontological grounds, clarifying the question of what can be inferred from a single particular case and systematized into knowledge.

5 CONCLUSION

In the context of international politics, differing definitions and conceptions are underlying the usage of the concept of information warfare. The first example case showed that the United States perceived Russian actions in the information environment before and during the presidential elections of 2016 as systematic interference. The second example case indicated the objectives of Russian information security to be closely guided by the perception of an active informational threat coming from foreign states. *The Doctrine of Information Security of the Russian Federation (2016)* also highlights the importance of preserving one's own spiritual and moral values from the Russian point of view. The combination of these two example cases served as an illustrative investigation into the practical implications of the tension surrounding contemporary information warfare between states. In the thesis I have shown, on the one hand, information warfare is a dynamic political concept, which is defined and understood differently in certain states. On the other hand, it was shown above that neoclassical realism as a theoretical framework emphasizes important features of power dynamics that also apply in the sphere of information warfare. The development of information technologies and the changing geopolitical interests guide the means and the aims of information warfare; therefore, the analysis of information warfare can (and should) be approached from state-specific premises closely tied to the conceptions of central political actors.

In the thesis I have explicated foundational features of information warfare and additionally concluded that these aspects need to be considered state-specifically to study the phenomenon. Information warfare encompasses psychological and technical measures, and its targets vary from civilians to soldiers. Key findings clarifying the nature of information warfare are the following. Firstly, the concept of information warfare is constantly evolving especially in the military settings, where often the main goal is to provide strategic guidelines and present effective operational means. The concept encompasses the real phenomenon of influencing the values and decision-

making of the other party. Concepts related to the study of information warfare at the state-level are then constantly evolving and subordinate to political goals. In the context of an academic study, it is illuminating to study states as actors and approach the concept of information warfare from state-specific premises. The shifting concept creates epistemic challenges for empirical researchers, as well as for everyday political discussion. As there is no one accepted meaning of information warfare and different elements of the concept can be emphasized, it becomes difficult to distinguish precisely the phenomenon that is studied or discussed.

Secondly, states are not the only actors in the information environment, however they still play a key role as strategic actors. Therefore, extra attention should be focused on states and especially the most influential ones. Focusing on power relations as highlighted by the tradition of political realism can offer insights into the dynamics of state-level information warfare as well. Information warfare at the state-level is conducted to achieve certain political goals, making the Clausewitzian definition of war stand well against the test of time even in the context of information warfare.

Thirdly, drawing the line between information warfare and peacetime is very difficult. My analysis argues that rather it is better to look at a distinction between peacetime and wartime operations. Thus, information warfare is waged with certain political aims during both peace and wartime. Defining different phases of war and the transition into war requires further research.

Fourthly, information warfare closely ties to other forms of warfare such as psychological- or cyber operations. The target of psychological operations could be an individual or a society, but the concept of information warfare lends itself well to state-level conflicts. The effectiveness of information warfare varies between targets, depending on the resilience to information attacks of the target society. At the individual level, some factors can be highlighted for playing a role in determining the methods and effectiveness of operations. These include for example educational levels and individual personality traits.

The main philosophical argument on applying theories of political realism to the study of information warfare is the following: Information warfare, at the state-level of analysis, can only be understood from state-specific premises, and state-level information warfare is subordinate to political goals. One of the possible ways in the effective study of information warfare is to utilize the theory of neoclassical realism as a theoretical framework. Of course, it is not the only way, and the correspondence of the theory with the selected source material depends on the conducted empirical research and the formulated research question. Another finding was that information warfare is a dynamic political concept, which means it should not be studied as a stable constant. Importantly, although information warfare remains a difficult concept to grasp, state-level perspective brings clarity to informational tension between states.

This is also why developing research on state-centric theories, such as neoclassical realism, and information warfare as a concept is valuable. Based on the developed understanding of information warfare, we can societally develop practical measures that are required to combat harmful influencing operations. Preparing our institutions and individuals for information warfare requires us first to understand the genesis and the practical usage of the concept.

Classical insights on the nature of war by authors such as Clausewitz (2010) or Sun Tzu (1990) still hold explanatory power on the discussion surrounding the nature of war. Information warfare contains many old and seemingly timeless aspects, but at the same time many new features are introduced by the dynamic political setting that is constantly evolving, alongside the development of new technologies. The strength of neoclassical realism as an approach is that, although it builds on earlier research, it can also take into consideration the dynamic of how the structure affects the actor and thus shapes their decision-making. This dynamic characterizes the difficulty of developing theories of social sciences more broadly: First, the situation alters the factors surrounding individual actors. Following these newly introduced factors the actors constantly modify their decision-making and behavioral dynamics. In other words, the structure affects the actor who also shapes the structure.

To successfully study information warfare, we need to develop understanding from the perspective of the culture that is defining information warfare. This means studying the concepts in their own context, which is the only way to understand the actual reasoning behind the usage of the concepts. I have aimed to offer a valuable overview of the actual usage and definitions of the concept of information warfare. These insights are a necessary step in understanding the root causes of the seemingly irreconcilable conflicts between states in the information environment. The difficulty of clarifying the state-level informational struggle stays with us, as do the shifting political concepts. The task of bringing clarity to state-level information struggle remains greatly important for better public discussion and decision-making, especially on the topics of international law and security. A clear understanding of the multifaceted nature of information warfare is especially relevant if we wish to develop (national and international) legal measures in the information environment. My analysis has clarified the concept of information warfare, highlighted how it gets differing interpretations, and shown how neoclassical realism provides an important perspective to the study of information warfare.

REFERENCES

- Arquilla, J. & Ronfeldt, D. (1993) *Cyberwar is Coming!*, *Comparative Strategy*, Vol 12, No. 2, Spring 1993, pp. 141–165.
- Barkin, J. S. (2010). *Realist constructivism: Rethinking international relations theory*. New York: Cambridge University Press.
- Beauvoir, S. d. (2004). *Moral idealism and political realism (1945)* / introduction by Sonia Kruks. In Beauvoir, S. d., Simons, M. A., Timmermann, M. & Mader, M. B. (2004). *Philosophical writings*. Urbana: University of Illinois Press. 165–193.
- Brantly, A. F. (2021). *A Brief History Of Fake – Surveying Russian Disinformation From The Russian Empire Through The Cold War And To The Present*. In Whyte, C., Thrall, A. T. & Mazanec, B. M. (Eds.), *Information Warfare in the Age of Cyber Conflict (27–41)*. Oxon: Routledge.
- Clausewitz, C. v. (2010). *On war: Volume I*. Floating Press.
- Dahl, R. A. (1957). *The Concept of Power*. *Behavioral Science*, 2:3 (1957:July) 201–215.
- Dennen, J. V. (2005). *On war: Concepts, Definitions, Research Data: A short literature review and bibliography*.
- Doctrine of Information Security of the Russian Federation. (2016). Доктрина информационной безопасности Российской Федерации Дата подписания 5 декабря 2016 г. Опубликован 6 декабря 2016 г. Received from <https://rg.ru/2016/12/06/doktrina-infobezobasnost-site-dok.html> November 1, 2021.
- Eriksson, J. & Giacomello, G. (2006). *The Information Revolution, Security, and International Relations: (IR)relevant Theory?* *International Political Science Review*, 27(3), 221–244.
- Galston, W. A. (2010). *Realism in political theory*. *European Journal of Political Theory* 9 (4), 385–411.
- Gilpin, R. (1981). *War and change in world politics*. Cambridge; New York: Cambridge University Press.
- Gilpin, R. (1984). *The Richness of the Tradition of Political Realism*. *International Organization*, Vol. 38, No. 2 (Spring, 1984), 287–304.
- Henry, R. & Peartree, C. E. (1998). *Military Theory and Information Warfare. Parameters*, Autumn 1998, 121–135.
- Herz, J. (1950). *Idealist Internationalism and the Security Dilemma*. *World Politics*, 2(2), 157–180. doi:10.2307/2009187
- Jervis, R. (1978). *Cooperation Under the Security Dilemma*. *World Politics* 30(2): 167–214.
- Joint Forces Staff College (U.S.), United States. National Security Agency/Central Security Service & Armistead, L. (2004). *Information operations: Warfare and the hard reality of soft power*. Washington, D.C.: Brassey's.
- JP 3-13 (2014). Joint Chiefs of Staff, the U.S. Department of Defence. *Information operations Joint Publication 3-13*. https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_13.pdf. Accessed 20 August 2021.

- Kostin, N. A. (1997). General Principles of Information Warfare Theory. *Military Thought (Voennai mysl')* Vol 6 no 3. 1997. 53–60.
- Kukkola, J. (2020). Digital Soviet Union The Russian national segment of the Internet as a closed national network shaped by strategic cultural ideas. *National Defence University Series 1: Research Publications No. 40*
- Libicki, M. C. (1995). *What is Information Warfare?*, Directorate of Advanced Concepts, Technologies, and Information Strategies (ACTIS), Washington, National Defense University, August 1995.
- Libicki, M. C. (2007). *Conquest in Cyberspace – National Security and Information Warfare*, Cambridge University Press, New York 2007.
- Libicki, M. C. (2017). The convergence of information warfare. *Strategic Studies Quarterly*, 11(1), 49–65.
- Libicki, M. C. (2021). The Convergence of Information Warfare. In Whyte, C., Thrall, A. T. & Mazanec, B. M. (Eds.), *Information Warfare in the Age of Cyber Conflict* (15–26). Oxon: Routledge.
- Lobell, S. E. (2009). Threat assessment, the state, and foreign policy: a neoclassical realist model. In S. E. Lobell, N. M. Ripsman & J. W. Taliaferro (Eds.), *Neoclassical realism, the state, and foreign policy* (42–75). Cambridge, UK; New York: Cambridge University Press.
- Lobell, S. E. (2010). *Structural Realism/Offensive and Defensive Realism. The International Studies Compendium Project*, Oxford: Wiley-Blackwell, 2010. 6651–6669.
- Manoilo, A. V. (2005). Information-psychological warfare: factors determining the format of modern armed conflict. Received from <https://psyfactor.org/lib/psywar35.htm> September 09, 2020.
- Maoz, Z. (2002). Case study methodology in international studies: From storytelling to hypothesis testing. In F. P. Harvey & M. Brecher (Eds.), *Evaluating methodology in international studies* (161–186). Ann Arbor: University of Michigan Press.
- Mearsheimer, J. J. (2001). *The Tragedy of Great Power Politics* (New York: Norton)
- Morgenthau, H. J. (1960). *Politics among nations: The struggle for power and peace* (Third edition, revised and reset.). New York: Alfred A. Knopf.
- Mueller, R. S. (2019). *Report On The Investigation Into Russian Interference In The 2016 Presidential Election Volume I of II Special Counsel Robert S. Mueller, III Submitted Pursuant to 28 C.F.R. § 600.8(c)* Washington, D.C. March 2019
- National Security Strategy of the Russian Federation. (2021). Указ Президента Российской Федерации от 02.07.2021 № 400 "О Стратегии национальной безопасности Российской Федерации" Стратегия национальной безопасности. Received from <http://publication.pravo.gov.ru/Document/View/0001202107030001> May 12, 2022
- Niebuhr, R. (1960). *Moral Man and Immoral Society*. NY: Charles Scribner's Sons.
- Nussbaum, M. C. (2009). *Hiding from Humanity: Disgust, Shame, and the Law*. Princeton University Press.

- Oxford English Dictionary (2021a). "war, n.1." OED Online, Oxford University Press, June 2021, www.oed.com/view/Entry/225589. Accessed 20 August 2021.
- Oxford English Dictionary (2021b). "warfare, n." OED Online, Oxford University Press, June 2021, www.oed.com/view/Entry/225718. Accessed 20 August 2021.
- Pallin, C. V. (2019). Russian information security and warfare. In R. E. Kanet (Ed.), *Routledge Handbook of Russian Security* (203–213). Routledge Handbooks Online.
- Pashakhanlou, A. H. (2018). The Past, Present and Future of Realism. In Orsi, D., J.R. Avgustin & M. Nurnus (Eds.), *Realism in Practice An Appraisal. E International Relations* (29–42). [www.E-IR.info](http://www.e-ir.info) Bristol, England. <http://www.e-ir.info/wp-content/uploads/2018/01/Realism-in-Practice-E-IR.pdf>
- Pörsti, J. (2017). *Propagandan lumo: Sata vuotta mielten hallintaa*. Kustannusosakeyhtiö Teos.
- Pynnöniemi, K. (2019). Information-psychological warfare in Russian security strategy. In R. E. Kanet (Ed.), *Routledge Handbook of Russian Security* (214–226). Routledge Handbooks Online.
- Rastorguev, S. P. (2003). *Philosophy of information war*. Философия Информационной Войны, Издательство: Вузовская книга, МПСИ 2003 г.
- Ripsman, N. M., Taliaferro, J. W. & Lobell, S. E. (2016). *Neoclassical realist theory of international politics*. New York, NY: Oxford University Press.
- Ristolainen, M. (2017). Should 'RuNet 2020' Be Taken Seriously? Contradictory Views about Cybersecurity between Russia and the West. In J. Kukkola, M. Ristolainen and J.P. Nikkarila (Eds.), *Game Changer: Structural Transformation of Cyberspace* (7–26). *Puolustusvoimien tutkimuslaitos, Julkaisuja 10*, Tampere: Juvenes Print.
- Rose, G. (1998). Neoclassical Realism and Theories of Foreign Policy. *World Politics*, vol. 51, no. 1 (1998), 144–172
- Russian Ministry of Defense (2021a). "информационная война." Министерство обороны Российской Федерации, Минобороны России, <https://encyclopedia.mil.ru/encyclopedia/dictionary/details.htm?id=5211@morfDictionary> Accessed 2 November 2021.
- Russian Ministry of Defense (2021b). "информационное противоборство." Министерство обороны Российской Федерации, Минобороны России, <https://encyclopedia.mil.ru/encyclopedia/dictionary/details.htm?id=5221@morfDictionary> Accessed 2 November 2021.
- Smith, N. R. (2018). Can Neoclassical Realism Become a Genuine Theory of International Relations? *The Journal of Politics* 2018 80:2, 742–749.
- Snyder, J. L. (1991). *Myths of empire: Domestic politics and international ambition*. Cornell University Press.
- Sophocles, Gibbons, R. & Segal, C. (2003). *Antigone*. Oxford University Press.
- Sun-tzu. (1994). *The Art of War*. Oxford: Clarendon Press. Translated by Lionel Giles. The Project Gutenberg EBook #132. https://www.utoledo.edu/rotc/pdfs/the_art_of_war.pdf

- Taliaferro, J. W., Lobell, S. E. & Ripsman, N. M. (2009). Introduction: Neoclassical realism, the state, and foreign policy. In S. E. Lobell, N. M. Ripsman & J. W. Taliaferro (Eds.), *Neoclassical realism, the state, and foreign policy* (1–42). Cambridge, UK; New York: Cambridge University Press.
- The Ministry of Foreign Affairs of the Russian Federation. (2022). Брифинг официального представителя МИД России М.В.Захаровой, Москва, 20 апреля 2022 года. Received from https://mid.ru/ru/press_service/spokesman/briefings/1810165/ May 10, 2022
- The United Kingdom's Government Digital Service. (2022). Press release BBC gets emergency funding to fight Russian disinformation. Received from <https://www.gov.uk/government/news/bbc-gets-emergency-funding-to-fight-russian-disinformation> May 10, 2022
- Thomas, T. L. (1996). Russian Views on Information-based Warfare. Foreign Military Studies Office, Fort Leavenworth, KS. July 1996. Article Appeared in the 1996 Special Edition of *Airpower Journal*, pp. 26–35.
- Thomas, T. L. (2019). Russian Military Thought: Concepts and Elements. The MITRE Corporation. <https://www.mitre.org/sites/default/files/publications/pr-19-1004-russian-military-thought-concepts-elements.pdf>
- Thomas, T. L. (2020). Information Weapons: Russia's Nonnuclear Strategic Weapons of Choice, *The Cyber Defence Review*, Summer 2020.
- Thucydides. (2009). *The history of the Peloponnesian war*. Translated by Richard Crawley. The Project Gutenberg eBook #7142. <https://www.gutenberg.org/files/7142/7142-h/7142-h.htm#link2HCH0017>
- Vasara, A. (2020). *Theory of Reflexive Control Origins, Evolution and Application in the Framework of Contemporary Russian Military Strategy*. National Defence University, Helsinki.
- Ventre, D. (2016). *Information warfare (Revised and updated second edition)*. London, England; Hoboken, New Jersey: iSTE.
- Wagner, R. H. (2007). *War and the state: The theory of international politics*. Ann Arbor: University of Michigan Press.
- Waltz, E. (1998). *Information warfare: Principles and operations*. Boston: Artech House.
- Waltz, K. N. (2010). *Theory of international politics (Repr.)*. Long Grove (Ill.): Waveland Press.
- Williams, B. & Hawthorn, G. (2008). *In the beginning was the deed: Realism and moralism in political argument*. Princeton University Press.
- Wohlforth, W. C. (1995). Realism and the End of the Cold War. *International Security*, Winter, 1994–1995, Vol. 19, No. 3, 91–129.